TABLE 36082.4n
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS

35 Lbs. per Sq. Ft. Live Load (Supporting Gypsum Wallboard Ceiling)

For Use in Snow Load Zone 3

DESIGN CRITERIA: Strength-35 Ibs. per sq. ft. live load plus 10 Ibs. per sq. ft. dead load determines fiber stress. Deflection—For 35 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 240.

RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.

HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)									
(inches)	**(inches)**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**
2 x 6	12.0	5-10 0.15	6-8 0.23	7-6 .32	8-2 .42	8-10 .53	9-6 .64	10-0 .77	10-7 .90	11-1 1.04	11-7 1.18
	16.0	5-0 .13	5-10 .20	6-6 .27	7-1 .36	7-8 .46	8-2 .56	8-8 .66	9-2 .78	9-7 .90	10-0 1.02
	24.0	4-1 .10	4-9 .16	5-4 .22	5-10 .30	6-3 .37	6-8 .45	7-1 .54	7-6 .64	7-10 .73	8-2 .83
2 x 8	12.0	7-8 .15	8-10 .23	9-10 .32	10-10 .42	11-8 .53	12-6 .64	13-3 .77	13-11 .90	14-8 1.04	15-3 1.18
	16.0	6-7 .13	7-8 .20	8-7 .27	9-4 .36	10-1 .46	10-10 .56	11-6 .66	12-1 .78	12-8 .90	13-3 1.02
	24. 0	5-5 .10	6-3 .16	7-0 .22	7-8 .30	8-3 .37	8-10 .45	9-4 .54	9-10 .64	10-4 .73	10-10 .83
2 x 10	12.0	9-9 .15	11-3 .23	12-7 .32	13-9 .42	14-11 .53	15-11 .64	16-11 .77	17-10 .90	18-8 1.04	19-6 1.18
	16.0	8-5 .13	9-9 .20	10-11 .27	11-11 .36	12-11 .46	13-9 .56	14-8 .66	15-5 .78	16-2 .90	16-11 1.02
	24.0	6-11 .10	8-0 .16	8-11 .22	9-9 .20	10-6 .37	11-3 .45	11-11 .54	12-7 .64	13-2 .73	13-9 .83
2x 12	12.0	11-10 .15	13-8 .23	15-4 .32	16-9 .42	18-1 .53	19-4 .64	20-6 .77	21-8 .90	22-8 1.04	23-9 1.18
	16.0	10-3 .13	11-10 .20	13-3 .27	14-6 .36	15-8 .46	16-9 .56	17-9 .66	18-9 .78	19-8 .90	20-6 1.02
	24.0	8-5 .10	9-8 .16	10-10 .22	11-10 .30	12-10 .37	13-8 .45	14-6 .54	15-4 .64	16-1 .73	16-9 .83
(inches)	**(inches)**	**1300**	**1400**	**1500**	**1600**	**1700**	**1800**	**1900**	**2000**	**2100**	**2200**
2 x 6	12. 0	12-1 1.33	12-6 1.49	13-0 1.65	13-5 1.82	13-10 1.99	14-2 2.17	14-7 2.35	15-0 2.54	15-4 2.74	15-8 2.93
	16.0	10-5 1.15	10-10 1.29	11-3 1.43	11-7 1.57	11-11 1.72	12-4 1.88	12-8 2.04	13-0 2.20	13-3 2.37	13-7 2.54
	24.0	8-6 .94	8-10 1.05	9-2 1.17	9-6 1.29	9-9 1.41	10-0 1.53	10-4 1.66	10-7 1.80	10-10 1.93	11-1 2.07
2 x 8	12.0	15-11 1.33	16-6 1.49	17-1 1.65	17-8 1.82	18-2 1.99	18-9 2.17	19-3 2.35	19-9 2.54	20-3 2.74	20-8 2.93
	16.0	13-9 1.15	14-4 1.29	14-10 1.43	15-3 1.57	15-9 1.72	16-3 1.88	16-8 2.04	17-1 2.20	17-6 2.37	17-11 2.54
	24.0	11-3 .94	11-8 1.05	12-1 1.17	12-6 1.29	12-10 1.41	13-3 1.53	13-7 1.66	13-11 1.80	14-4 1.93	14-7 2.07
2 x 10	12.0	20-4 1.33	21-1 1.49	21-10 1.65	22-6 1.82	23-3 1.99	23-11 2.17	24-6 2.35	25-2 2.54	25-10 2.74	26-5 2.93
	16.0	17-7 1.15	18-3 1.29	18-11 1.43	19-6 1.57	20-1 1.72	20-8 1.88	21-3 2.04	21-10 2.20	22-4 2.37	22-10 2.54
	24.0	14-4 .94	14-11 1.05	15-5 1.17	15-11 1.29	16-5 1.41	16-11 1.53	17-4 1.66	17-10 1.80	18-3 1.93	18-8 2.07
2x 12	12.0	24-8 1.33	25-7 1.49	26-6 1.65	27-4 1.82	28-3 1.99	29-0 2.17	29-10 2.35	30-7 2.54	31-4 2.74	32-1 2.93
	16.0	21-5 1.15	22-2 1.29	23-0 1.43	23-9 1.57	24-5 1.72	25-2 1.88	25-10 2.04	26-5 2.20	27-2 2.37	27-10 2.54
	24.0	17-5 .94	18-1 1.05	18-9 1.17	19-4 1.29	20-0 1.41	20-6 1.53	21-1 1.66	21-8 1.80	22-2 1.93	22-8 2.07

For Sl: 1 inch = 25,4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.
NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4o
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
35 Lbs. per Sq. Ft. Live Load (Supporting Veneer Plaster Ceiling)
For Use in Snow Load Zone 3

DESIGN CRITERIA: Strength-35 Ibs. per sq. ft. live load plus 10 Ibs. per sq. ft. dead load determines fiber stress. Deflection—For 35 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 360.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)									
(inches)	**(inches)**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**
		5-10	6-8	7-6	8-2	8-10	9-6	10-0	10-7	11-1	11-7
	12.0	.22	.34	.48	.63	.79	.96	1.15	1.35	1.55	1.77
		5-0	5-10	6-6	7-1	7-8	8-2	8-8	9-2	9-7	10-0
	16.0	.19	.30	.41	.54	.68	.83	1.00	1.17	1.35	1.53
		4-1	4-9	5-4	5-10	6-3	6-8	7-1	7-6	7-10	8-2
2 x 6	24.0	.16	.24	.34	.44	.56	.68	.81	.95	1.10	1.25
		7-8	8-10	9-10	10-10	11-8	12-6	13-3	13-11	14-8	15-3
	12.0	.22	.34	.48	.63	.79	.96	1.15	1.35	1.55	1.77
		6-7	7-8	8-7	9-4	10-1	10-10	11-6	12-1	12-8	13-3
	16.0	.19	.30	.41	.54	.68	.83	1.00	1.17	1.35	1.53
		5-5	6-3	7-0	7-8	8-3	8-10	9-4	9-10	10-4	10-10
2 x 8	24. 0	.16	.24	.34	.44	.56	.68	.81	.95	1.10	1.25
		9-9	11-3	12-7	13-9	14-11	15-11	16-11	17-10	18-8	19-6
	12.0	.22	.34	.48	.63	.79	.96	1.15	1.35	1.55	1.77
		8-5	9-9	10-11	11-11	12-11	13-9	14-8	15-5	16-2	16-11
	16.0	.19	.30	.41	.54	.68	.83	1.00	1.17	1.35	1.53
		6-11	8-0	8-11	9-9	10-6	11-3	11-11	12-7	13-2	13-9
2 x 10	24.0	.16	.24	.34	.44	.56	.68	.81	.95	1.10	1.25
		11-10	13-8	15-4	16-9	18-1	19-4	20-6	21-8	22-8	23-9
	12.0	.22	.34	.48	.63	.79	.96	1.15	1.35	1.55	1.77
		10-3	11-10	13-3	14-6	15-8	16-9	17-9	18-9	19-8	20-6
	16.0	.19	.30	.41	.54	.68	.83	1.00	1.17	1.35	1.53
		8-5	9-8	10-10	11-10	12-10	13-8	14-6	15-4	16-1	16-9
2x 12	24.0	.16	.24	.34	.44	.56	.68	.81	.95	1.10	1.25
(inches)	**(inches)**	**1300**	**1400**	**1500**	**1600**	**1700**	**1800**	**1900**	**2000**	**2100**	**2200**
		12-1	12-6	13-0	13-4	13-10	14-2	14-7	14-11	15-4	15-8
	12. 0	2.00	2.23	2.47	2.73	2.99	3.26	3.53	3.81	4.10	4.40
		10-5	10-10	11-3	11-7	11-11	12-4	12-7	12-11	13-3	13-7
	16.0	1.73	1.93	2.14	2.36	2.59	2.82	3.06	3.30	3.55	3.81
		8-6	8-10	9-2	9-6	9-9	10-0	10-4	10-7	10-10	11-1
2 x 6	24.0	1.41	1.58	1.75	1.93	2.11	2.30	2.49	2.69	2.90	3.11
		15-11	16-6	17-1	17-8	18-2	18-9	19-3	19-9	20-3	20-8
	12.0	2.00	2.23	2.47	2.73	2.99	3.26	3.53	3.81	4.10	4.40
		13-9	14-4	14-10	15-3	15-9	16-3	16-8	17-1	17-6	17-11
	16.0	1.73	1.93	2.14	2.36	2.59	2.82	3.06	3.30	3.55	3.81
		11-3	11-8	12-1	12-6	12-10	13-3	13-7	13-11	14-4	14-8
2 x 8	24.0	1.41	1.58	1.75	1.93	2.11	2.30	2.49	2.69	2.90	3.11
		20-4	21-1	21-10	22-6	23-3	23-10	24-6	25-2	25-9	26-5
	12.0	2.00	2.23	2.47	2.73	2.99	3.26	3.53	3.81	4.10	4.40
		17-7	18-3	18-11	19-6	20-1	20-8	21-3	21-9	22-4	22-10
	16.0	1.73	1.93	2.14	2.36	2.59	2.82	3.06	3.30	3.55	3.81
		14-4	14-11	15-5	15-11	16-5	16-11	17-4	17-9	18-3	18-8
2 x 10	24.0	1.41	1.58	1.75	1.93	2.11	2.30	2.49	2.69	2.90	3.11
		24-8	25-7	26-6	27-4	28-3	29-0	29-10	30-7	31-4	21-1
	12.0	2.00	2.23	2.47	2.73	2.99	3.26	3.53	3.81	4.10	4.40
		21-5	22-2	23-0	23-9	24-5	25-2	25-10	26-6	27-2	27-10
	16.0	1.73	1.93	2.14	2.36	2.59	2.82	3.06	3.30	3.55	3.81
		17-5	18-1	18-9	19-4	20-0	20-6	21-1	21-8	22-2	22-9
2x 12	24.0	1.41	1.58	1.75	193	2.11	2.30	2.49	2.69	2.90	3.11

For Sl: 1 inch = 25,4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.
NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

TABLE 36082.4p
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
35 Lbs. per Sq. Ft. Live Load
For Use in Snow Load Zone 3

DESIGN CRITERIA: Strength-35 Ibs. per sq. ft. live load plus 15 Ibs. per sq. ft. dead load determines fiber stress. Deflection—For 35 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 180.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)									
(inches)	**(inches)**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**
2 x 6	12.0	5-6 .09	6-4 .15	7-1 .20	7-9 .27	8-5 .34	9-0 .41	9-6 .49	10-0 .58	10-6 .66	11-0 .76
	16.0	4-9 .08	5-6 .13	6-2 .18	6-9 .23	7-3 .29	7-9 .36	8-3 .43	8-8 .50	9-1 .57	9-6 .65
	24.0	3-11 .07	4-6 .10	5-0 .14	5-6 .19	5-11 .24	6-4 .29	6-9 .35	7-1 .41	7-5 .47	7-9 .53
2 x 8	12.0	7-3 .09	8-4 .15	9-4 .20	10-3 .27	11-1 .34	11-10 .41	12-7 .49	13-3 .58	13-11 .66	14-6 .76
	16.0	6-3 .08	7-3 .13	8-1 .18	8-11 .23	9-7 .29	10-3 .36	10-10 .43	11-6 .50	12-0 .57	12-7 .65
	24. 0	5-2 .07	5-11 .10	6-7 .14	7-3 .19	7-10 .24	8-4 .29	8-1 .35	9-4 .41	9-10 .47	10-3 .53
2 x 10	12.0	9-3 .09	10-8 .15	11-11 .20	13-1 .27	14-2 .34	15-1 .41	16-0 .49	16-11 .58	17-9 .66	18-6 .76
	16.0	8-0 .08	9-3 .13	10-4 .18	11-4 .23	12-3 .29	13-1 .36	13-10 .43	14-8 .50	15-4 .57	16-0 .65
	24.0	6-6 .07	7-7 .10	8-5 .14	9-3 .19	10-0 .24	10-8 .29	11-4 .35	11-11 .41	12-6 .47	13-1 .53
2x 12	12.0	11-3 0.09	13-0 0.15	14-6 0.20	15-11 0.27	17-2 0.34	18-4 0.41	19-6 0.49	20.6 0.58	21-6 0.66	22-6 0.76
	16.0	9-9 0.08	11-3 0.13	12-7 0.18	13-9 0.23	14-10 0.29	15-11 0.36	16-10 0.43	17-9 0.50	18-8 0.57	19-6 0.65
	24.0	8-0 0.07	9-2 0.10	10-3 0.14	11-3 0.19	12-2 0.24	13-0 0.29	13-8 0.35	14-6 0.41	15-3 0.47	15-11 0.53
(inches)	**(inches)**	**1300**	**1400**	**1500**	**1600**	**1700**	**1800**	**1900**	**2000**	**2100**	**2200**
2 x 6	12. 0	11-5 .85	11-11 .95	12-4 1.06	12-8 1.16	13-1 1.27	13-6 1.39	13-10 1.51	14-2 1.63	14-7 1.75	14-10 1.88
	16.0	9-11 .74	10-3 .83	10-8 .91	11-0 1.01	11-4 1.10	11-8 1.20	12-0 1.30	12-4 1.41	12-7 1.52	12-10 1.62
	24.0	8-1 .60	8-5 .67	8-8 .75	9-0 .82	9-3 .90	9-6 .98	9-9 1.07	10-0 1.15	10-3 1.24	10-6 1.33
2 x 8	12.0	15-1 .85	15-8 .95	16-3 1.06	16-9 1.16	17-3 1.27	17-9 1.39	18-3 1.51	18-9 1.63	19-2 1.75	19-7 1.88
	16.0	13-1 .74	13-7 .83	14-0 .91	14-6 1.01	14-11 1.10	15-5 1.20	15-10 1.30	16-3 1.41	16-7 1.52	17-0 1.62
	24.0	10-8 .60	11-1 .67	11-6 .75	11-10 .82	12-2 .90	12-7 .98	12-11 1.07	13-3 1.15	13-7 1.24	13-10 1.33
2 x 10	12.0	19-3 .85	20-0 .95	20-8 1.06	21-4 1.16	22-0 1.27	22-8 1.39	23-3 1.51	23-11 1.63	24-6 1.75	25-0 1.88
	16.0	16-8 .74	17-4 .83	17-11 .91	18-6 1.01	19-1 1.10	19-7 1.20	20-2 1.30	20-8 1.41	21-2 1.52	21-8 1.62
	24.0	13-7 .60	14-2 .67	14-8 .75	15-1 .82	15-7 .90	16-0 .98	16-6 1.07	16-11 1.15	17-4 1.24	17-9 1.33
2x 12	12.0	23-5 0.85	24-3 0.95	25-2 1.06	21-4 1.16	26-9 1.27	27-6 1.39	28-4 1.51	29-0 1.63	29-9 1.75	30-5 1.88
	16.0	20-3 0.74	21-0 0.82	21-9 0.91	22-6 1.01	23-2 1.10	23-10 1.20	24-6 1.30	25-2 1.41	25-9 1.51	26-4 1.62
	24.0	16-6 0.60	17-2 0.67	17-9 0.75	18-4 0.82	18-11 0.90	19-6 0.98	20-0 1.07	20-6 1.15	21-0 1.24	21-7 1.33

For Sl: 1 inch = 25,4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.
NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4q
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
35 Lbs. per Sq. Ft. Live Load (Supporting Gypsum Wallboard Ceiling)
For Use in Snow Load Zone 3

DESIGN CRITERIA: Strength-35 Ibs. per sq.ft. live load plus 15 Ibs. per sq.ft. dead load determines fiber stress. Deflection—For 35 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 240.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)									
(inches)	**(inches)**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**
2 x 6	12.0	5-6 .13	6-4 .19	7-1 .27	7-9 .36	8-5 .45	9-0 .55	9-6 .65	10-0 .77	10-6 .88	11-0 1.01
	16.0	4-9 .11	5-6 .17	6-2 .23	6-9 .31	7-3 .39	7-9 .48	8-3 .57	8-8 .66	9-1 .77	9-6 .87
	24.0	3-11 .09	4-6 .14	5-0 .19	5-6 .25	5-11 .32	6-4 .39	6-9 .46	7-1 .54	7-5 .63	7-9 .71
2 x 8	12.0	7-3 .13	8-4 .19	9-4 .27	10-3 .36	11-1 .45	11-10 .55	12-7 .65	13-3 .77	13-11 .88	14-6 1.01
	16.0	6-3 .11	7-3 .17	8-1 .23	8-11 .31	9-7 .39	10-3 .48	10-10 .57	11-6 .66	12-0 .77	12-7 .87
	24. 0	5-2 .09	5-11 .14	6-7 .19	7-3 .25	7-10 .32	8-4 .39	8-11 .46	9-4 .54	9-10 .63	10-3 .71
2 x 10	12.0	9-3 .13	10-8 .19	11-11 .27	13-1 .36	14-2 .45	15-1 .55	16-0 .65	16-11 .77	17-9 .88	18-6 1.01
	16.0	8-0 .11	9-3 .17	10-4 .23	11-4 .31	12-3 .39	13-1 .48	13-10 .57	14-8 .66	15-4 .77	16-0 .87
	24.0	6-6 .09	7-7 .14	8-5 .19	9-3 .25	10-0 .32	10-8 .39	11-4 .46	11-11 .54	12-6 .63	13-1 .71
2x 12	12.0	11-3 .13	13-0 .19	14-6 .23	15-11 .36	17-2 .45	18-4 .55	19-6 .65	20-6 .77	21-7 .88	22-6 1.01
	16.0	9-9 .11	11-3 .17	12-7 .23	13-9 .31	14-11 .39	15-11 .48	16-10 .57	17-9 .66	18-8 .77	19-6 .87
	24.0	7-11 .09	9-2 .14	10-3 .19	11-3 .25	12-2 .32	13-0 .39	13-9 .46	14-6 .54	15-3 .63	15-11 .71
(inches)	**(inches)**	**1300**	**1400**	**1500**	**1600**	**1700**	**1800**	**1900**	**2000**	**2100**	**2200**
2 x 6	12. 0	11-5 1.14	11-11 1.27	12-4 1.41	12-8 1.55	13-1 1.70	13-6 1.85	13-10 2.01	14-2 2.17	14-7 2.33	14-10 2.50
	16.0	9-11 .98	10-3 1.10	10-8 1.22	11-0 1.34	11-4 1.47	11-8 1.60	12-0 1.74	12-4 1.88	12-7 2.02	12-10 2.16
	24.0	8-1 .80	8-5 .90	8-8 1.00	9-0 1.10	9-3 1.20	9-6 1.31	9-9 1.42	10-0 1.53	10-3 1.65	10-6 1.77
2 x 8	12.0	15-1 1.14	15-8 1.27	16-3 1.41	16-9 1.55	17-3 1.70	17-9 1.85	18-3 2.01	18-9 2.17	19-2 2.33	19-7 2.50
	16.0	13-1 .98	13-7 1.10	14-0 1.22	14-6 1.34	14-11 1.47	15-5 1.60	15-10 1.74	16-3 1.88	16-7 2.02	17-0 2.17
	24.0	10-8 .80	11-1 .90	11-6 1.00	11-10 1.10	12-2 1.20	12-7 1.31	12-11 1.42	13-3 1.53	13-7 1.65	13-10 1.77
2 x 10	12.0	19-3 1.14	20-0 1.27	20-8 1.41	21-4 1.55	22-8 1.70	22-8 1.85	23-3 2.01	23-11 2.17	24-6 2.33	25-0 2.50
	16.0	16-8 .98	17-4 1.10	17-11 1.22	18-6 1.34	19-1 1.47	19-7 1.60	20-2 1.74	20-8 1.88	21-2 2.02	21-8 2.16
	24.0	13-7 .80	14-2 .90	14-8 1.00	15-1 1.10	15-7 1.20	16-0 1.31	16-6 1.42	16-11 1.53	17-4 1.65	17-9 1.77
2x 12	12.0	23-5 1.14	24-4 1.27	25-2 1.41	26-0 1.55	26-9 1.70	27-6 1.85	28-4 2.01	29-0 2.17	29-9 2.33	30-5 2.50
	16.0	20-3 .98	21-1 1.10	21-9 1.22	22-6 1.34	23-2 1.47	23-10 1.60	24-6 1.74	25-2 1.88	25-9 2.02	26-4 2.16
	24.0	16-7 .80	17-2 .90	17-9 1.00	18-4 1.10	18-11 1.20	19-6 1.31	20-0 1.42	20-6 1.53	21-1 1.65	21-6 1.77

For Sl: 1 inch = 25,4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.
NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4r
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
35 Lbs. per Sq. Ft. Live Load (Supporting Veneer Plaster Ceiling)
For Use in Snow Load Zone 3

DESIGN CRITERIA: Strength-35 Ibs. per sq. ft. live load plus 15 Ibs. per sq. ft.dead load determines fiber stress. Deflection—For 35 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 360.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)									
(inches)	**(inches)**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**
2 x 6	12.0	5-6 .19	6-4 .29	7-1 .41	7-9 .53	8-5 .67	9-0 .82	9-6 .98	10-0 1.15	10-6 1.33	11-0 1.51
	16.0	4-9 .16	5-6 .25	6-2 .35	6-9 .46	7-3 .58	7-9 .71	8-3 .85	8-8 1.00	9-1 1.15	9-6 1.31
	24.0	3-11 .13	4-6 .21	5-0 .29	5-6 .38	5-11 .48	6-4 .58	6-9 .69	7-1 .81	7-5 .94	7-9 1.07
2 x 8	12.0	7-3 .19	8-4 .29	9-4 .41	10-3 .53	11-1 .67	11-10 .82	12-7 .98	13-3 1.15	13-11 1.33	14-6 1.51
	16.0	6-3 .16	7-3 .25	8-1 .35	8-11 .46	9-7 .58	10-3 .71	10-10 .85	11-6 1.00	12-0 1.15	12-7 1.31
	24. 0	5-2 .13	5-11 .21	6-7 .29	7-3 .38	7-10 .48	8-4 .58	8-11 .69	9-4 .81	9-10 .94	10-3 1.07
2 x 10	12.0	9-3 .19	10-8 .29	11-11 .41	13-1 .53	14-2 .67	15-1 .82	16-0 .98	16-11 1.15	17-9 1.33	18-6 1.51
	16.0	8-0 .16	9-3 .25	10-4 .35	11-4 .46	12-3 .58	13-1 .71	13-10 .85	14-8 1.00	15-4 1.15	16-0 1.31
	24.0	6-6 .13	7-7 .21	8-5 .29	9-3 .38	10-0 .48	10-8 .58	11-4 .69	11-11 .81	12-6 .94	13-1 1.07
2x 12	12.0	11-3 .19	13-0 .29	14-6 .41	15-11 .53	17-2 .67	18-4 .82	19-6 .98	20-6 1.15	21-7 1.33	22-6 1.51
	16.0	9-9 .16	11-3 .25	12-7 .35	13-9 .46	14-11 .58	15-11 .71	16-10 .85	17-9 1.00	18-8 1.15	19-6 1.31
	24.0	7-11 .13	9-2 .21	10-3 .29	11-3 .38	12-2 .48	13-0 .58	13-9 .69	14-6 .81	15-3 .94	15-11 1.07
(inches)	**(inches)**	**1300**	**1400**	**1500**	**1600**	**1700**	**1800**	**1900**	**2000**	**2100**	**2200**
2 x 6	12. 0	11-5 1.70	11-11 1.91	12-4 2.11	12-8 2.33	13-1 2.55	13-6 2.78	13-10 3.01	14-2 3.25	14-6 3.50	14-10 3.75
	16.0	9-11 1.48	10-3 1.65	10-8 1.83	11-0 2.02	11-4 2.21	11-8 2.41	12-0 2.61	12-3 2.81	12-7 3.03	12-10 3.25
	24.0	8-1 1.21	8-5 1.35	8-8 1.49	9-0 1.65	9-3 1.80	9-6 1.96	9-9 2.13	10-0 2.30	10-3 2.48	10-6 2.65
2 x 8	12.0	15-1 1.70	15-8 1.91	16-3 2.11	16-9 2.33	17-3 2.55	17-9 2.78	18-3 3.01	18-9 3.25	19-2 3.50	19-7 3.75
	16.0	13-1 1.48	13-7 1.65	14-0 1.83	14-6 2.02	14-11 2.21	15-5 2.41	15-9 2.61	16-2 2.81	16-7 3.03	17-0 3.25
	24.0	10-8 1.21	11-1 1.35	11-6 1.49	11-10 1.65	12-2 1.80	12-7 1.96	12-11 2.13	13-3 2.30	13-7 2.48	13-10 2.65
2 x 10	12.0	19-3 1.70	20-0 1.91	20-8 2.11	21-4 2.33	22-0 2 .55	22.8 2.78	23-3 3.01	23-10 3.25	24-6 3.50	25-0 3.50
	16.0	16-8 1.48	17-4 1.65	17-11 1.83	18-6 2.02	19-1 2.21	19-7 2.41	20-2 2.61	20-8 2.81	21-2 3.03	21-8 3.25
	24.0	13-7 1.21	14-2 1.35	14-8 1.49	15-1 1.65	15-7 1.80	16-0 1.96	16-6 2.13	16-11 2.30	17-4 2.48	17-9 2.65
2x 12	12.0	23-5 1.70	24-4 1.91	25-2 2.11	26-0 2.33	26-9 2.55	27-6 2.78	28-3 3.01	29-0 3.25	20-9 3.50	30-5 3.75
	16.0	20-3 1.48	21-1 1.65	21-9 1.83	22-6 2.02	23-2 2.21	23-10 2.41	24-6 2.61	25-2 2.81	25-9 3.03	26-4 3.25
	24.0	16-7 1.21	17-2 135	17-9 1.49	18-4 1.65	18-11 1.80	19-6 1.96	20-0 2.13	20-6 2.30	21-1 2.48	21-6 2.65

For Sl: 1 inch = 25,4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.
NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4s
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS

40 Lbs. per Sq. Ft. Live Load
For Use in Snow Load Zone 4

DESIGN CRITERIA: Strength-40 Ibs. per sq. ft. live load plus 10 Ibs. per sq. ft. dead load determines fiber stress. Deflection—For 40 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 180.

RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.

HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)										
(inches)	**(inches)**	**300**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**	**1300**
2x6	12.0	5-6 0.11	6-4 0.17	7-1 0.23	7-9 0.30	8-5 0.38	9-0 0.47	9-6 0.56	10-0 0.66	10-6 0.76	11-0 0.86	11-5 0.97
	16.0	4-9 0.09	5-6 0.14	6-2 0.20	6-9 0.26	7-3 0.33	7-9 0.41	8-3 0.48	8-8 0.57	9-1 0.66	9-6 0.75	9-11 0.84
	24.0	3-10 0.08	4-6 0.12	5-0 0.16	5-6 0.22	5-11 0.27	6-4 0.33	6-9 0.40	7-1 0.47	7-5 0.54	7-9 0.61	8-1 0.69
2 x 8	12.0	7-3 0.11	8-4 0.17	9-4 0.23	10-3 0.30	11-1 0.38	11-10 0.47	12-6 0.56	13-3 0.66	13-10 0.76	14-6 0.86	15-1 0.97
	16.0	6-3 0.09	7-3 0.14	8-1 0.20	8-10 0.26	9-7 0.33	10-3 0.41	10-10 0.48	11-5 0.57	12-0 0.66	12-7 0.75	13-1 0.84
	24.0	5-1 0.08	5-11 0.12	6-7 0.16	7-3 0.22	7-10 0.27	8-4 0.33	8-10 0.40	9-4 0.47	9-9 0.54	10-3 0.61	10-8 0.69
2 x 10	12.0	9-3 0.11	10-8 0.17	11-11 0.23	13-1 0.30	14-1 0.38	15-1 0.47	16-0 0.56	16-10 0.66	17-8 0.76	18-6 0.86	19-3 0.97
	16.0	8-0 0.09	9-3 0.14	10-4 0.20	11-4 0.26	12-3 0.33	13-1 0.41	13-10 0.48	14-7 0.57	15-4 0.66	16-0 0.75	16-8 0.84
	24.0	6-6 0.08	7-6 0.12	8-5 0.16	9-3 0.22	10-0 0.27	10-8 0.33	11-4 0.40	11-11 0.47	12-6 0.54	13-1 0.61	13-7 0.69
2 x 12	12.0	11-3 0.11	13-0 0.17	14-6 0.23	15-11 0.30	17-2 0.38	18-4 0.47	19-6 0.56	20-6 0.66	21-6 0.76	22-6 0.86	23-5 0.97
	16.0	9-9 0.09	11-3 0.14	12-7 0.20	13-9 0.26	14-10 0.33	15-11 0.41	16-10 0.48	17-9 0.57	18-8 0.66	19-6 0.75	20-3 0.84
	24.0	8-0 0.08	9-2 0.12	10-3 0.16	11-3 0.22	12-1 0.27	13-0 0.33	13-9 0.40	14-6 0.47	15-3 0.54	15-11 0.61	16-6 0.69
(inches)	**(i nches)**	**1400**	**1500**	**1600**	**1700**	**1 800**	**1900**	**2000**	**2100**	**2200**	**2300**	**2400**
2 x 6	12 0	11-10 1.09	12-3 1.20	12-8 1.33	13-1 1.45	13-6 1.58	13-10 1.72	14-2 1.85	14-6 2.00	14-10 2.14	15-3 2.29	15-7 2.44
	16.0	10-3 0.94	10-8 1.04	11-0 1.15	11-4 1.26	11-8 1.37	12-0 1.49	12-3 1.61	12-7 1.73	12-11 1.85	13-2 1.98	13-5 2.11
	24.0	8-5 0.77	8-8 0.85	9-0 0.94	9-3 1.03	9-6 1.12	9-9 1.22	10-0 1.32	10-3 1.42	10-6 1.52	10-9 1.62	11-0 1.73
2x 8	12.0	15-8 1.09	16-2 1.20	16-9 1.33	17-3 1.45	17-9 1.58	18-3 1.72	18-9 1.85	19-2 2.00	19-8 2.14	20-1 2.29	20-6 2.44
	16.0	13-7 0.94	14-0 1.04	14-6 1.15	14-11 1.26	15-4 1.37	15-9 1.49	16-2 1.61	16-7 1.73	17-0 1.85	17-4 1.98	17-9 2.11
	24.0	11-1 0.77	11-5 0.85	11-10 0.94	12-3 1.03	12-6 1.12	12-11 1.22	13-3 1.32	13-7 1.42	13-10 1.52	14-2 1.62	14-6 1.73
2 x10	12.0	20-0 1.09	20-8 1.20	21-4 1.33	22-0 1.45	22-8 1.58	23-3 1.72	23-10 1.85	24-6 2.00	25-0 2.14	25-7 2.29	26-2 2.44
	16.0	17-3 0.94	17-11 1.04	18-6 1.15	19-1 1.26	19-8 1.37	20-2 1.49	20-8 1.61	21-2 1.73	21-8 1.85	22-2 1.98	22-8 2.11
	24.0	14-1 0.77	14-8 0.85	15-1 0.94	15-7 1.03	16-0 1.12	16-6 1.22	16-10 1.32	17-4 1.42	17-9 1.52	18-1 1.62	18-6 1.73
2x 12	12 0	24-3 1.09	25-2 1.20	26-0 1.33	26-9 1.45	27-7 1.58	28-3 1.72	29-0 1.85	29-9 2.00	30-5 2.14	31-1 2.29	31-10 2.44
	16.0	21-0 0.94	21-9 1.04	22-6 1.15	23-2 1.26	23-10 1.37	24-6 1.49	25-2 1.61	25-9 1.73	26-4 1.85	27-0 1.98	27-7 2.11
	24.0	17-2 0.77	17-9 0.85	18-4 0.94	18-11 1.03	19-6 1.12	20-0 1.22	20-6 1.32	21-1 1.42	21-7 1.52	22-0 1.62	22-6 1.73

For Sl: 1 inch = 25.4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.

NOTE: The modulus of elasticity, "*E*," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4t
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
40 Lbs. per Sq. Ft. Live Load (Supporting Gypsum Ceiling)
For Use in Snow Load Zone 4

DESIGN CRITERIA: Strength-40 lbs. per sq. ft. live load plus 10 lbs. per sq. ft. dead load determines fiber stress. Deflection—For 40 Ibs. per sq. ft. live load. Limited to span in inches divided by 240.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)										
(inches)	(inches)	300	400	500	600	700	800	900	1000	1100	1200	1300
2 x 6	12.0	5-6 0.14	6-4 0.22	7-1 0.31	7-9 0.41	8-5 0.51	9-0 0.63	9-6 0.75	10-0 0.88	10-6 1.01	11-0 1.15	11-5 1.30
	16.0	4-9 0.12	5-6 0.19	6-2 0.27	6-9 0.35	7-3 0.44	7-9 0.54	8-3 0.65	8-8 0.76	9- 1 0.88	9-6 1.00	9- 11 1.12
	24.0	3-11 0.10	4-6 0.16	5-0 0.22	5-6 0.29	5-11 0.36	6-4 0.44	6-9 0.53	7-1 0.62	7-5 0.71	7-9 0.81	8-1 0.92
2 x 8	12.0	7-3 0.14	8-4 0.22	9-4 0.31	10-3 0.41	11-1 0.51	11-10 0.63	12-7 0.75	13-3 0.88	13-11 1.01	14-6 1.15	15-1 1.30
	16.0	6-3 0.12	7-3 0.19	8-1 0.27	8-11 0.35	9-7 0.44	10-3 0.54	10-11 0.65	11-6 0.76	12-0 0.88	12-7 1.00	13-1 1.12
	24.0	5-2 0.10	5-11 0.16	6-7 0.22	7-3 0.29	7-10 0.36	8-4 0.44	8-11 0.53	9-4 0.62	9-10 0.71	10-3 0.81	10-8 0.92
2 x 10	12.0	9-3 0.14	10-8 0.22	11-1 0.31	12-1 0.41	14-2 0.51	15-1 0.63	16-0 0.75	16-11 0.88	17-9 1.01	18-6 1.15	19-3 1.30
	16.0	8-0 0.12	9-3 0.19	10-4 0.27	11-4 0.35	12-3 0.44	13-1 0.54	13-11 0.65	14-8 0.76	15-4 0.88	16-0 1.00	16-8 1.12
	24.0	6-6 0.10	7-7 0.16	8-5 0.22	9-3 0.29	10-0 0.36	10-8 0.44	11-4 0.53	11- 11 0.62	12-6 0.71	13-1 0.81	13-7 0.92
2 x 12	12.0	11-3 0.14	13-0 0.22	14-6 0.31	15-11 0.41	17-2 0.51	18-4 0.63	19-6 0 75	20-6 0.88	21-7 1.01	22-6 1.15	23-5 1.30
	16.0	9-9 0.12	11-3 0.19	12-7 0.27	13-9 0.35	14-11 0.44	15-11 0.54	16-11 0.65	17-9 0.76	18-8 0.88	19-6 1.00	20-3 1.12
	24. 0	7-11 0.10	9-2 0.16	10-3 0.22	11-3 0.29	12-2 0.36	13-0 0.44	13-9 0.53	14-6 0.62	15-3 0.71	15-11 0.81	16-7 0.92
(Inches)	(Inches)	1400	1500	1600	1700	1 600	1900	2000	2100	2200	2300	2400
2 x 6	120	11-11 1.45	12-4 1.61	12-8 1.77	13-1 1.94	13-6 2.12	13-10 2.30	14-2 2.48	14-6 2.66	14-10 2.85	15-3 3.05	15-7 3.25
	16.0	10-3 1.26	10-8 1.39	11-0 1.54	11-4 1.68	11-8 1.83	12-0 1.99	12-4 2.15	12-7 2.31	12-11 2.48	13-2 2.64	13-5 2.82
	24.0	8-5 1.03	8-8 1.14	9-0 1.25	9-3 1.37	9-6 1.50	9-9 1.62	10-0 1.75	10-3 1.89	10-6 2.02	10-9 2.16	11-0 2.30
2 x 8	12.0	15-8 1.45	16-3 1.61	16-9 1.77	17-3 1.94	17-9 2.12	18-3 2.30	18-9 2.48	19-2 2.66	19-7 2.85	20-1 3.05	20-6 3.25
	16.0	13-7 1.26	14-0 1.39	14-6 1.54	14-11 1.68	15-5 1.83	15-10 1.99	16-3 2.15	16-7 2.31	17-0 2.48	17-4 2.64	17-9 2.82
	24.0	11-1 1.03	11-6 1.14	11-10 1.25	12-2 1.37	12-7 1.50	12-11 1.62	13-3 1.75	13-7 1.89	13-11 2.02	14-2 2.16	14-6 2.30
2 x 10	12.0	20-0 1.45	20-8 1.61	21-4 1.77	22-0 1.94	22-8 2.12	23-3 2.30	23-11 2 48	24-6 2.66	25-0 2.85	25-7 3.05	26-2 3.25
	16.0	17-4 1.26	17-11 1.39	18-6 1.54	19-1 1.68	19-7 1.83	20-2 1.99	20-8 2.15	21-2 2.31	21-8 2.48	22-2 2.64	22-8 2.82
	24.0	14-2 1.03	14-8 1.14	15-1 1.25	15-7 1.37	16-0 1.50	16-6 1.62	16-11 1.75	17-4 1.89	17-9 2.02	18-1 2.16	18-6 2.30
2 x 12	12.0	24-4 1.45	25-2 1.61	26-0 1.77	26-9 1.94	27-7 2.12	28-4 2.30	29-1 2.48	29-9 2.66	30-5 2.85	31-2 3.05	31-9 3.25
	16.0	21-1 1.26	21-9 1.39	22-6 1.54	23-2 1.68	23-10 1.83	24-6 1.99	25-2 2.15	25-9 2.31	26-5 2.48	27-0 2.64	27-7 2.82
	24.0	i7-2	17-9	18-4	18-11	19-6	20-0	20-6	21-1	21-7	22-0	22-6

		1.03	1.14	1.25	1.37	1.50	1.62	1.75	1.89	2.02	2.16	2.30

For Sl: 1 inch = 25.4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m'.
NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4u
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
40 Lbs. per Sq. Ft. Live Load (Supporting Veneer Plaster Ceiling)
For Use in Snow Load Zone 4

DESIGN CRITERIA: Strength-40 Ibs. per sq. ft. live load plus 10 Ibs. per sq. ft. dead load determines fiber stress. Deflection—For 40 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 360.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)										
(inches)	(inches)	300	400	500	600	700	800	900	1000	1100	1200	1300
	12.0	5-6 0.22	6-4 0.33	7-1 0.46	7-9 0.61	8-5 0.77	9-0 0.94	9-6 1.12	10-0 1.31	10-6 1.51	11-0 1.72	11-5 1.94
	16.0	4-9 0.19	5-6 0.29	6-2 0.40	6-9 0.53	7-3 0.67	7-9 0.81	8-3 0.97	8-8 1.14	9-1 1.31	9-6 1.49	9-11 1.68
2x6	24.0	3-11 0.15	4-6 0.24	5-0 0.33	5-6 0.43	5-11 0.54	6-4 0.67	6-9 0.79	7-1 0.93	7-5 1.07	7-9 1.22	8-1 1.38
	12.0	7-3 0.22	8-4 0.33	9-4 0.46	10-3 0.61	11-1 0.77	11-10 0.94	12-6 1.12	13-3 1.31	13-10 1.51	14-6 1.72	15-1 1.94
	16.0	6-3 0.19	7-3 0.29	8-1 0.40	8-10 0.53	9-7 0.67	10-3 0.81	10-10 0.97	11-5 1.14	12-0 1.31	12-6 1.49	13-1 1.68
2 x 8	24.0	5-1 0.15	5-11 0.24	6-7 0.33	7-3 0.43	7-10 0.54	8-4 0.67	8-10 0.79	9-4 0.93	9-9 1.07	10-3 1.22	10-8 1.38
	12.0	9-3 0.22	10-8 0.33	11-11 0.46	13-1 0.61	14-1 0.77	15-1 0.94	16-0 1.12	16-10 1.31	17-9 1.51	18-6 1.72	19-3 1.94
	16.0	8-0 0.19	9-3 0.29	10-4 0.40	11-4 0.53	12-3 0.67	13-1 0.81	13-10 0.97	14-7 1.14	15-4 1.31	16-0 1.49	16-8 1.68
2 x 10	24.0	6-6 0.15	7-6 0.24	8-6 0.33	9-3 0.43	10-0 0.54	10-8 0.67	11-4 0.79	11-11 0.93	12-6 1.07	13-1 1.22	13-7 1.38
	12.0	11-3 0.22	13-0 0.33	14-6 0.46	15-11 0.61	17-2 0.77	18-4 0.94	19-6 1.12	20-6 1.31	21-6 1.51	22-6 1.72	23-5 1.94
	16.0	9-9 0.19	11-3 0.29	12-7 0.40	13-9 0.53	14-10 0.67	15-11 0.81	16-10 0.97	17-9 1.14	18-8 1.31	19-6 1.49	20-3 1.68
2 x 12	24.0	8-0 0.15	9-2 0.24	10-3 0.33	11-3 0.43	12-2 0.54	13-0 0.67	13-9 0.79	14-6 0.93	15-3 1.07	15-11 1.22	16-7 1.38
(inches)	(inches)	1400	1500	1600	1700	1 800	1900	2000	2100	2200	2300	2400
	12 0	11-10 2.17	12-3 2.41	12-8 2.65	13-1 2.91	13-6 3.17	13-10 3.43	14-2 3.71	14-6 3.99	14-10 4.28	15-3 4.57	15-7 4.88
	16.0	10-3 1.88	10-8 2.09	11-0 2.30	11-4 2.52	11-8 2.74	12-0 2.97	12-3 3.21	12-7 3.46	12-11 3.71	13-2 3.96	13-6 4.22
2 x 6	24.0	8-5 1.54	8-9 1.71	9-0 1.88	9-3 2.06	9-6 2.25	9-9 2.44	10-0 2.63	10-3 2.83	10-6 3.04	10-9 3.24	11-0 3.46
	12.0	15-8 2.17	16-2 2.41	16-9 2.65	17-3 2.91	17-9 3.17	18-3 3.43	18-9 3.71	19-2 3.99	19-7 4.28	20-1 4.57	20-6 4.88
	16.0	13-7 1.88	14-0 2.09	14-6 2.30	14-11 2.52	15-4 2.74	15-9 2.97	16-2 3.21	16-7 3.46	17-0 3.71	17-4 3.96	17-9 4.22
2 x 8	24.0	11-1 1.54	11-6 1.71	11-10 1.88	12-3 2.06	12-6 2.25	12-11 2.44	13-3 2.63	13-7 2.83	13-11 3.04	14-2 3.24	14-6 3.46
	12.0	20-0 2.17	20-8 2.41	21-4 2.65	22-0 2.91	22-8 3.17	23-3 3.43	23-10 3.71	24-6 3.99	25-0 4.28	25-7 4.57	26-2 4.88
	16.0	17-3 1.88	17-11 2.09	18-6 2.30	19-1 2.52	19-7 2.74	20-2 2.97	20-8 3.21	21-2 3.46	21-8 3.71	22-2 3.96	22-8 4.22
2 x10	24.0	14-1 1.54	14-7 1.71	15-1 1.88	15-7 2.06	16-0 2.25	16-6 2.44	16-10 2.63	17-4 2.83	17-9 3.04	18-1 3.24	18-6 3.46
	12 0	24-3 2.17	25-2 2.41	26-0 2.65	26-9 2.91	27-7 3.17	28-3 3.43	29-0 3.71	29-9 3.99	30-5 4.28	31-2 4.57	31-10 4.88
	16.0	21-0 1.88	21-9 2.09	22-6 2.30	23-2 2.52	23-10 2.74	24-6 2.97	25-2 3.21	25-9 3.46	26-4 3.71	27-0 3.96	27-7 4.22
2x 12	24.0	17-2 1.54	17-9 1.71	18-4 1.88	18-11 2.06	19-6 2.25	20-0 2.44	20-6 2.63	21-1 2.83	21-7 3.04	22-0 3.24	22-6 3.46

For Sl: 1 inch = 25.4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.
NOTE: The modulus of elasticity, "*E*," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4v
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
40 Lbs. per Sq. Ft. Live Load
For Use in Snow Load Zone 4

DESIGN CRITERIA: Strength-40 Ibs. per sq. ft. live load plus 15 Ibs. per sq. ft. dead load determines fiber stress. Deflection—For 35 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 180.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)										
(inches)	(inches)	300	400	500	600	700	800	900	1000	1100	1200	1300
	12.0	5-3 0.09	6-1 0.14	6-9 0.20	7-5 0.26	8-0 0.33	8-7 0.41	9-1 0.49	9-7 0.57	10-0 0.66	10-6 0.75	10-11 0.84
	16.0	4-6 0.08	5-3 0.12	5- 10 0.17	6-5 0.23	6- 11 0.29	7-5 0.35	7- 10 0.42	8-3 0.49	8-8 0.57	9- 1 0.65	9-5 0.73
2x6	24.0	3-8 0.07	4-3 0.10	4-9 0.14	5-3 0.19	5-8 0.24	6-1 0.29	6-5 0.34	6-9 0.40	7-1 0.46	7-5 0.53	7-9 0.60
	12.0	6-11 0.09	8-0 0.14	8-11 0.20	9-9 0.26	10-7 0.33	11-3 0.41	12-0 0.49	12-7 0.57	13-3 0.66	13-10 0.75	14-5 0.84
	16.0	6-0 0.08	6-11 0.12	7-9 0.17	8-6 0.23	9-2 0.29	9-9 0.35	10-4 0.42	10-11 0.49	11-6 0.57	12-0 0.65	12-6 0.73
2 x 8	24.0	4-11 0.07	5-8 0.10	6-4 0.14	6-11 0.19	7-6 0.24	8-0 0.29	8-6 0.34	8-11 0.40	9-4 0.46	9-9 0.53	10-2 0.60
	12.0	8-10 0.09	10-2 0.14	11-5 0.20	12-6 0.26	13-6 0.33	14-5 0.41	15-3 0.49	16-1 0.57	16-11 0.66	17-8 0.75	18-4 0.84
	16.0	7-8 0.08	8-10 0.12	9-10 0.17	10-10 0.23	11-8 0.29	12-6 0.35	13-3 0.42	13-1 1 0.49	14-8 0.57	15-3 0.65	15-11 0.73
2 x 10	24.0	6-3 0.07	7-2 0.10	8-1 0.14	8-10 0.19	9-6 0.24	10-2 0.29	10-10 0.34	11-5 0.40	11-11 0.46	12-6 0.53	13-0 0.60
	12.0	10-9 0.09	12-4 0.14	13-10 0.20	15-2 0.26	16-4 0.33	17-6 0.41	18-7 0.49	19-7 0.57	20-7 0.66	21-6 0.75	22-4 0.84
	16.0	9-3 0.08	10-9 0.12	12-0 0.17	13-1 0.23	14-2 0.29	15-2 0.35	16-1 0.42	17-0 0.49	17-9 0.57	18-7 0.65	19-4 0.73
2 x 12	24.0	7-7 0.07	8-9 0.10	9-9 0.14	10-9 0.19	11-7 0.24	12-4 0.29	13-1 0.34	13-10 0.40	14-6 0.46	15-2 0.53	15-9 0.60
(inches)	(inches)	1400	1500	1600	1700	1 800	1900	2000	2100	2200	2300	2400
	12 0	11-4 0.94	11-9 1.05	12-1 1.15	12-6 1.26	12-10 1.38	13-2 1.49	13-6 1.61	13-10 1.73	14-2 1.86	14-6 1.99	14-10 2.12
	16.0	9-10 0.82	10-2 0.91	10-6 1.00	10-10 1.09	11-1 1.19	11-5 1.29	11-9 1.40	12-0 1.50	12-4 1.61	12-7 1.72	12-10 1.83
2 x 6	24.0	8-0 0.67	8-3 0.74	8-7 0.82	8-10 0.89	9-1 0.97	9-4 1.06	9-7 1.14	9-10 1.23	10-0 1.31	10-3 1.41	10-6 1.50
	12.0	14-11 0.94	15-5 1.05	16-0 1.15	16-5 1.26	16-11 1.38	17-5 1.49	17-10 1.61	18-3 1.73	18-9 1.86	19-2 1.99	19-7 2.12
	16.0	12-11 0.82	13-5 0.91	13-10 1.00	14-3 1.09	14-8 1.19	15-1 1.29	15-5 1.40	15-10 1.50	16-3 1.61	16-7 1.72	16-11 1.83
2 x8	24.0	10-7 0.67	10-11 0.74	11-3 0.82	11-8 0.89	12-0 0.97	12-4 1.06	12-7 1.14	12-11 1.23	13-3 1.31	13-6 1.41	13-10 1.50
	12.0	19- 1 0.94	19-9 1.05	20-4 1.15	21-0 1.26	21-7 1.38	22-2 1.49	22-9 1.61	23-4 1.73	23- 11 1.86	24-5 1.99	24-11 2.12
	16.0	16-6 0.82	17-1 0.91	17-8 1.00	18-2 1.09	18-9 1.19	19-3 1.29	19-9 1.40	20-2 1.50	20-8 1.61	21-2 1.72	21-7 1.83
2 x10	24.0	13-6 0.67	13-11 0.74	14-5 0.82	14-10 0.89	15-3 0.97	15-8 1.06	16-1 1.14	16-6 1.23	16-11 1.31	17-3 1.41	17-8 1.50
	12 0	23-2 0.94	24-0 1.05	24-9 1.15	25-6 1.26	26-3 1.38	27-0 1.49	27-8 1.61	28-4 1.73	29-1 1.86	29-9 1.99	30-4 2.12
	16.0	20-1 0.82	20-9 0.91	21-5 1.00	22-1 1.09	22-9 1.19	23-4 1.29	24-0 1.40	24-7 1.50	25-2 1.61	25-9 1.72	26-3 1.83
2x 12	24.0	16-4 0.67	17-0 0.74	17-6 0.82	18-1 0.89	18-7 0.97	19-1 1.06	19-7 1.14	20-1 1.23	20-6 1.31	21-0 1.41	21-5 1.50

For Sl: 1 inch = 25.4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.
NOTE: The modulus of elasticity, "*E*," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4w
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
40 Lbs. per Sq. Ft. Live Load (Supporting Gypsum Ceiling)
For Use in Snow Load Zone 4

DESIGN CRITERIA: Strength—15 Ibs. per sq. ft. dead load plus 40 Ibs. per sq. ft. Iive load determines fiber stress. Deflection—For 40 Ibs. per sq. ft. Iive load. Limited to span in inches divided by 240.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SIZE AND SPACING		ALLOWABLE EXTREME FIBER STRESS IN BENDING, *'Fb,"* (psi)										
(inches)	(inches)	300	400	500	600	700	800	900	1000	1100	1200	1300
2 x 6	12.0	5-3 0.12	6-1 0.19	6-9 0.27	7-5 0.35	8-0 0.44	8-7 0.54	9-1 0.65	9-7 0.76	10-0 0.88	10-6 1.00	10-11 1.13
	16.0	4-6 0.11	5-3 0.17	5-10 0.23	6-5 0.31	6-11 0.39	7-5 0.47	7-10 0.56	8-3 0.66	8-8 0.76	9-1 0.86	9-5 0.98
	24.0	3-8 0.09	4-3 0.14	4-9 0.19	5-3 0.25	5-8 0.31	6-1 0.38	6-5 0.46	6-9 0.54	7-1 0.62	7-5 0.71	7-9 0.80
2 x 8	12.0	6-11 0.12	8-0 0.19	8-11 0.27	9-9 0.35	10-7 0.44	11-3 0.54	12-0 0.65	12-7 0.76	13-3 0.88	13-10 1.00	14-5 1.13
	16.0	6-0 0.11	6- 11 0.17	7-9 0.23	8-6 0.31	9-2 0.39	9-9 0.47	10-4 0.56	10- 11 0.66	11 -6 0.76	12-0 0.86	12-6 0.98
	24.0	4-11 0.09	5-8 0.14	6-4 0.19	6-11 0.25	7-6 0.31	8-0 0.38	8-6 0.46	8-11 0.54	9-4 0.62	9-9 0.71	10-2 0.80
2x 10	12.0	8-10 0.12	10-2 0.19	11-5 0.27	12-6 0.35	13-6 0.44	14-5 0.54	15-3 0.65	16-1 0.76	16-11 0.88	17-8 1.00	18-4 1.13
	16.0	7-8 0.11	8-10 0.17	9-10 0.23	10-10 0.31	11-8 0.39	12-6 0.47	13-3 0.56	13-11 0.66	14-8 0.76	15-3 0.86	15-11 0.98
	24.0	6-3 0.09	7-2 0.14	8-1 0.19	8-10 0.25	9-6 0.31	10-2 0.38	10-10 0.46	11-5 0.54	11-11 0.62	12-6 0.71	13-0 0.80
2 x 12	12.0	10-9 0.12	12-5 0.19	13- 10 0.27	15-2 0.35	16-5 0.44	17-6 0.54	18-7 0.65	19-7 0.76	20-6 0.88	21 -5 1.00	22-4 1.13
	16.0	9-3 0.11	10-9 0.17	12-0 0.23	13-2 0.31	14-2 0.39	15-2 0.47	16-1 0.56	17-0 0.66	17-9 0.76	18-7 0.86	19-4 0.98
	24.0	7-7 0.09	8-9 0.14	9-10 0.19	10-9 0.25	11-7 0.31	12-5 0.38	13-2 0.46	13-10 0.54	14-6 0.62	15-2 0.71	15-9 0.80
(inches)	(inches)	1400	1500	1600	1700	1 800	1900	2000	2100	2200	2300	2400
2 x 6	120	11-4 1.26	11-9 1.40	12-1 1.54	12-6 1.68	12-10 1.83	13-2 1.99	13-6 2.15	13-10 2.31	14-2 2.48	14-6 2.65	14-10 2.82
	16.0	9-10 1.09	10-2 1.21	10-6 1.33	10-10 1.46	11-1 1.59	11-5 1.72	11-9 1.86	12-0 2.00	12-4 2.15	12-7 2.29	12-10 2.45
	24.0	8-0 0.89	8-3 0.99	8-7 1.09	8- 10 1.19	9- 1 1.30	9-4 1.41	9-7 1.52	9- 10 1.63	10-0 1.75	10-3 1.87	10-6 2.00
2 x 8	12.0	14-11 1.26	15-5 1.40	16-0 1.54	16-5 1.68	16-11 1.83	17-5 1.99	17-10 2.15	18-3 2.31	18-9 2.48	19-2 2.65	19-7 2.82
	16. 0	12-11 1.09	13-5 1.21	13-10 1.33	14-3 1.46	14-8 1.59	15-1 1.72	15-5 1.86	15-10 2.00	16-3 2.15	16-7 2.29	16-11 2.45
	24.0	10-7 0.89	10-11 0.99	11-3 1.09	11-8 1.19	12-0 1.30	12-4 1.41	12-7 1.52	12-11 1.63	13-3 1.75	13-6 1.87	13-10 2.00
2x 10	12.0	19- 1 1.26	19-9 1.40	20-4 1.54	21 -0 1.68	21 -7 1.83	22-2 1.99	22-9 2.15	23-4 2.31	23-11 2.48	24-5 2.65	25-0 2.82
	16.0	16-6 1.09	17-1 1.21	17-8 1.33	18-2 1.46	18-9 1.59	19-3 1.72	19-9 1.86	20-2 2.00	20-8 2.15	21-2 2.29	21-7 2.45
	24.0	13-6 0.89	13-11 0.99	14-5 1.09	14-10 1.19	15-3 1.30	15-8 1.41	16-1 1.52	16-6 1.63	16-11 1.75	17-3 1.87	17-8 2.00
2x 12	12.0	23-2 1.26	24-0 1.40	24-9 1.54	25-6 1.68	26-3 1.83	27-0 1.99	27-8 2.15	28-5 2.31	29- 1 2.48	29-9 2.65	30-4 2.00
	16.0	20- 1 1.09	20-9 1.21	21 -5 1.33	22- 1 1.46	22-9 1.59	23-5 1.72	24-0 1.86	24-7 2.00	25-2 2.15	25-9 2.29	26-3 2.45
	24.0	16-5 0.89	17-0 0.99	17-6 1.09	18- 1 1.19	18-7 1.30	19- 1 1.41	19-7 1.52	20- 1 1.63	20-6 1.75	21-0 1.87	21 -5 2.00

For Sl: 1 inch = 25.4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0 0479 kN/m2.
NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

TABLE 3608.2.4x
ALLOWABLE SPANS FOR LOW OR HIGH SLOPE RAFTERS
40 Lbs. per Sq. Ft. Live Load (Supporting Veneer Plaster Ceiling)
For Use in Snow Load Zone 4

DESIGN CRITERIA: Strength—15 Ibs. per sq. ft. dead load plus 40 Ibs. per sq. fl. live load determines fiber stress. Deflection—For 40 Ibs. per sq. fl. live load. Limited to span in inches divided by 360.
RAFTERS: Spans are measured along the horizontal projection and loads are considered as applied on the horizontal projection.
HOW TO USE TABLES: Enter table with span of rafters (upper figure in each square). Determine size and spacing (first column) based on stress grade (top row) and modulus of elasticity (lower figure in each square) of lumber to be used.

RAFTER SPACING AND SIZE		ALLOWABLE EXTREME FIBER STRESS IN BENDING, "*Fb*," (psi)									
(inches)	**(inches)**	**300**	**400**	**500**	**600**	**700**	**300**	**900**	**1000**	**1100**	**1200**
		5-3	6-1	6-9	7-5	8-0	8-7	9-1	9-7	10-0	10-6
	12.0	0.19	0.29	0.40	0.53	0.67	0.82	0.97	1 14	1 31	1 50
		4-6	5-3	5-10	6-5	6-1 1	7-5	7-10	8-3	8-8	9-1
	16 0	0.16	025	035	046	058	071	084	099	1 14	1 30
		3-8	4-3	4-9	5-3	5-8	6-1	6-5	6-9	7-1	7-5
2x6	24.0	0.13	0.20	0.28	0.37	0.47	0.58	0.69	0.81	0.93	1.06
		6-11	8-0	8-11	9-9	10-7	11-3	12-0	12-7	13-3	13-10
	12.0	0.19	0.29	0.40	0.53	0.67	0.82	0.97	1.14	1.31	1.50
		6-0	6-11	7-9	8-6	9-2	9-9	10-4	10-11	11-6	12-0
	16.0	0.16	0.25	0.35	0.46	0.58	0.71	0.84	0.99	1.14	1.30
		4-11	5-8	6-4	6-11	7-6	8-0	8-6	8-11	9-4	9-9
2x8	24.0	0.13	0.20	0.28	0.37	0.47	0.58	0.69	0.81	.093	1.06
		8-10	10-2	11-5	12-6	13-6	14-5	15-3	16-1	16-11	17-8
	12.0	0.19	0.29	040	053	067	082	097	1 14	1 31	1 50
		7-8	8-10	9-10	10-10	11-8	12-6	13-3	13-1 1	14-8	15-3
	16.0	0.16	0.25	0.35	0.46	0.58	0.71	0.84	0.99	1 14	1.30
		6-3	7-2	8-1	8-10	9-6	10-2	10-10	11-5	11-11	12-6
2x 10	24.0	0.1 3	0.20	0.28	0.37	0.47	0.58	0.69	0.8 1	0.93	1.06
		10-9	12-5	13-10	15-2	16-5	17-6	18-7	19-7	20-6	21-5
	12.0	0.19	0.29	0.40	0.53	0.67	0.82	0.97	1.14	1.31	1.50
		9-3	10-9	12-0	13-2	14-2	15-2	16-1	17-0	17-9	18-7
	16.0	0.16	0.25	0.35	0.46	0.58	0.71	0.84	0.99	1.14	1 30
		7-7	8-9	9-10	10-9	1 1-7	12-5	13-2	13-10	14-6	15-2
2x 12	24 0	0.13	0.20	0.28	0..37	0.47	0.58	0.69	0.81	0.93	1.06
(inches)	**(inches)**	**1300**	**1400**	**1500**	**1600**	**1700**	**1800**	**1900**	**2000**	**2100**	**2200**
		10-11	11-4	11-9	12-1	12-6	12-10	13-2	13-6	13-10	14-2
	12.0	1.69	1.89	2.09	2.31	2.53	2.75	2.98	3.22	3.47	3.72
		9-5	9-10	10-2	10-6	10-10	11-1	11-5	11-9	12-0	12-3
	16.0	1.46	1.63	1.81	2.00	2.19	2.38	2.58	2.79	3.00	3.22
		7-9	8-0	8-3	8-7	8-10	9-1	9-4	9-7	9-10	10-0
2 x 6	24.0	1.19	1.33	1.48	1.63	1.79	1.95	2.11	2.28	2.45	2.63
		14-5	14-11	15-5	16-0	16-5	16-11	17-5	17-10	18-4	18-9
	12.0	1.69	1.89	2.09	2.31	2.53	2.75	2.98	3.22	3.47	3.72
		12-6	12-11	13-5	13-10	14-3	14-8	15-1	15-6	15-10	16-2
	16.0	1.46	1.63	1.81	2.00	2.19	2.38	2.58	2.79	3.00	3.22
		10-2	10-7	10-11	11-3	11-8	12-0	12-4	12-7	12-11	13-3
2 x 8	24.0	1.19	1.33	1.48	1.63	1.79	1.95	2.11	2.28	2.45	2.63
		18-4	19-1	19-9	20-4	21-0	21-7	22-2	22-9	23-4	23-10
	12.0	1.69	1.89	2.09	2.31	2.53	2.75	2.98	3.22	3.47	3.72
		15-11	16-6	17-1	17-8	18-2	18-9	19-3	19-9	20-2	20-8
	16.0	1.46	1.63	1.81	2.00	2.19	2.38	2.58	2.79	3.00	3.22
		13-0	13-6	13-11	14-5	14-10	15-3	15-8	16-1	16-6	16-10
2x 10	24.0	1.19	1.33	1.48	1.63	1.79	1.95	2.11	2.28	2.45	2.63
		22-4	23-2	24-0	24-9	25-6	26-3	27-0	27-9	28-4	29-1
	12 0	1.69	1.89	2.09	2.31	2.53	2.75	2.98	3.22	3.47	3.72
		19-4	20- 1	20-9	21-5	22- 1	22-9	23-5	24-0	24-7	25-2
	16.0	1.46	1.63	1.81	2.00	2.19	2.38	2.58	2.79	3.00	3.22
		15-9	16-5	17-0	17-6	18-1	18-7	19-1	19-7	20-1	20-6
2 x 12	24.0	1.19	1.33	1.48	1.63	1.79	1.95	2.11	2.28	2.45	2.63

For Sl: 1 inch = 25.4 mm, 1 pound per square inch = 6.895 kPa, 1 pound per square foot = 0.0479 kN/m2.

NOTE: The modulus of elasticity, "E," in 1,000,000 pounds per square inch is shown below each span.

NON-TEXT PAGE