

ALLOWABLE SPAN TABLES FOR ROOF RAFTERS

w psf

California Building Code 2007 Edition (CBC), NDS 2005

Lumber: Douglas Fir-Larch, Surfaced-Dry condition (19% maximum moisture content).

Roofing: Clay or Concrete Tile, Mineral Aggregate, Built Up Roofing, including ceiling with gypsum board.

Design Criteria: 20# LL + 20 DL =40# TL per sq. ft. and Deflection L/240 for LL (Roof Slopes less than 5:12).

19# LL + 20 DL =39# TL per sq. ft. and Deflection L/240 for LL (Roof Slopes 5:12 or Steeper).

15% Repetitive member factor included where applicable. 25% Duration load adjustment applied.

ROOF SLOPE LESS THAN 5:12 (40#/sf)						
SIZE	GRADE	RAFTER SPACING IN INCHES				
W x D		12	16	24	32	42
2 x 4	SS	10-3	9-3	8-3	7-6	6-9
	#1+	10-0	9-3	8-0	7-0	6-0
	#1	10-0	9-0	7-3	6-3	5-6
	#2	9-9	8-6	7-0	6-0	5-3
	#3	7-6	6-6	5-3	4-6	4-0
2 x 6	SS	16-3	14-9	12-9	11-6	10-0
	#1+	16-0	14-6	11-9	10-3	8-9
	#1	15-3	13-3	10-9	9-3	8-0
	#2	14-6	12-6	10-3	8-9	7-9
	#3	11-0	9-6	7-9	6-9	5-9
2 x 8	SS	21-6	19-6	16-9	14-6	12-6
	#1+	21-0	18-3	15-0	13-0	11-3
	#1	19-3	16-9	13-6	11-9	10-3
	#2	18-3	15-9	13-0	11-3	9-9
	#3	14-0	12-0	9-9	8-6	7-6
2 x 10	SS	27-6	25-0	20-6	17-9	15-6
	#1+	26-0	22-6	18-3	15-9	13-9
	#1	23-6	20-6	16-9	14-6	12-6
	#2	22-6	19-6	15-9	13-9	12-0
	#3	17-0	14-9	12-0	10-6	9-0

ROOF SLOPE 5:12 OR GREATER (39#/sf)						
SIZE	GRADE	RAFTER SPACING IN INCHES				
W x D		12	16	24	32	42
2 x 4	SS	10-6	9-6	8-3	7-6	6-9
	#1+	10-3	9-3	8-0	7-0	6-0
	#1	10-0	9-0	7-6	6-6	5-6
	#2	10-0	8-6	7-0	6-0	5-3
	#3	7-6	6-6	5-3	4-6	4-0
2 x 6	SS	16-6	15-0	13-0	11-6	10-0
	#1+	16-3	14-6	12-0	10-3	9-0
	#1	15-6	13-3	10-9	9-6	8-3
	#2	14-6	12-9	10-3	9-0	7-9
	#3	11-3	9-6	7-9	6-9	6-0
2 x 8	SS	21-9	19-9	17-0	14-9	12-9
	#1+	21-6	18-6	15-0	13-0	11-6
	#1	19-6	17-0	13-9	12-0	10-6
	#2	18-6	16-0	13-0	11-3	9-9
	#3	14-3	12-3	10-0	8-6	7-6
2 x 10	SS	28-0	25-3	20-9	18-0	15-6
	#1+	26-3	22-9	18-6	16-0	14-0
	#1	24-0	20-9	17-0	14-6	12-9
	#2	22-9	19-9	16-0	13-9	12-0
	#3	17-3	15-0	12-3	10-6	9-3

SIZE	GRADE	RAFTER SPACING IN INCHES				
W x D		32	42	48	60	72
4 x 4	SS	9-9	9-0	8-6	8-0	7-3
	#1+	9-9	8-9	8-0	7-3	6-6
	#1	9-0	7-9	7-3	6-6	6-0
	#2	8-6	7-6	7-0	6-3	5-9
4 x 6	SS	15-6	14-3	13-3	11-9	10-9
	#1+	14-6	12-9	11-9	10-6	9-9
	#1	13-3	11-6	10-9	9-9	8-9
	#2	12-6	11-0	10-3	9-3	8-3
4 x 8	SS	20-6	18-9	17-6	15-9	14-3
	#1+	19-3	16-9	15-9	14-0	12-9
	#1	17-6	15-3	14-3	12-9	11-9
	#2	16-6	14-6	13-6	12-0	11-0
4 x 10	SS	26-3	23-0	21-6	19-3	17-6
	#1+	23-6	20-6	19-3	17-3	15-9
	#1	21-6	18-9	17-6	15-9	14-3
	#2	20-6	17-9	16-9	14-9	13-6

SIZE	GRADE	RAFTER SPACING IN INCHES				
W x D		32	42	48	60	72
4 x 4	SS	10-0	9-3	8-9	8-0	7-6
	#1+	9-9	8-9	8-3	7-3	6-9
	#1	9-3	8-0	7-6	6-9	6-0
	#2	8-9	7-6	7-0	6-3	5-9
4 x 6	SS	15-9	14-3	13-6	12-0	11-0
	#1+	14-9	12-9	12-0	10-9	9-9
	#1	13-6	11-9	11-0	9-9	9-0
	#2	12-9	11-0	10-6	9-3	8-6
4 x 8	SS	21-0	19-0	17-9	15-9	14-6
	#1+	19-6	17-0	15-9	14-3	13-0
	#1	17-9	15-6	14-6	13-0	11-9
	#2	16-9	14-9	13-9	12-3	11-3
4 x 10	SS	26-9	23-3	21-9	19-6	17-9
	#1+	23-9	20-9	19-6	17-6	15-9
	#1	21-9	19-0	17-9	15-9	14-6
	#2	20-9	18-0	16-9	15-0	13-9

SIZE	GRADE	RAFTER SPACING IN INCHES			
W x D		48	60	72	96
6 x 6	SS	14-6	13-0	12-0	10-3
	#1	13-0	11-9	10-6	9-3
	#2	10-3	9-3	8-3	7-3
6 x 8	SS	20-0	17-9	16-3	14-0
	#1	17-9	16-0	14-6	12-6
	#2	14-0	12-6	11-6	10-0
6 x 10	SS	25-9	23-3	21-3	18-6
	#1	24-0	21-6	19-6	17-0
	#2	19-3	17-3	15-9	13-6
8 x 8	SS	22-6	20-9	19-0	16-6
	#1	20-9	18-9	17-0	14-9
	#2	16-6	14-9	13-6	11-6

SIZE	GRADE	RAFTER SPACING IN INCHES			
W x D		48	60	72	96
6 x 6	SS	14-9	13-3	12-0	10-6
	#1	13-3	11-9	10-9	9-3
	#2	10-6	9-3	8-6	7-3
6 x 8	SS	20-3	18-0	16-6	14-3
	#1	18-0	16-3	14-9	12-9
	#2	14-3	12-9	11-6	10-0
6 x 10	SS	26-3	23-9	21-6	18-9
	#1	24-3	21-9	19-9	17-3
	#2	19-6	17-6	16-0	13-9
8 x 8	SS	23-0	21-0	19-3	16-9
	#1	21-0	18-9	17-3	15-0
	#2	16-9	15-0	13-6	11-9

**DIVISION OF BUILDING AND SAFETY
COUNTY OF VENTURA**

**B & S
STD B-30**

BUILDING OFFICIAL _____

Jim MacDonald

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