

BUILT UP WOOD FLOOR BEAMS

Supporting **One Floor** in a House **Maximum Spans for Uniformly Distributed Loads**

Species and Grade	Supported Joist Length	Built Up Beam Size					
		3-2X8	4-2X8	3-2X10	4-2X10	3-2X12	4-2X12
Douglas Fir #1 & #2	8	9-8	11-2	11-10	13-8	13-8	15-10
	10	8-8	10-0	10-7	12-2	12-3	14-2
	12	7-11	9-1	9-8	11-2	11-2	12-11
	14	7-4	8-5	8-11	10-4	10-4	11-11
	16	6-10	7-11	8-4	9-8	9-8	11-2
Hem-Fir #1 & #2	8	10-1	11-7	12-5	14-4	14-4	16-7
	10	9-1	10-5	11-1	12-9	12-10	14-10
	12	8-3	9-7	10-1	11-8	11-9	13-7
	14	7-8	8-10	9-4	10-10	10-10	12-6
	16	7-2	8-3	8-9	10-1	10-2	11-9
Spruce-Pine-Fir #1 & #2	8	10-0	11-0	12-10	14-1	14-11	17-2
	10	9-4	10-3	11-6	13-1	13-4	15-4
	12	8-7	9-8	10-6	12-1	12-2	14-0
	14	7-11	9-2	9-8	11-2	11-3	13-0
	16	7-5	8-7	9-1	10-6	10-6	12-2

Supporting **Two Floors** in a House **Maximum Spans for Uniformly Distributed Loads**

Species and Grade	Supported Joist Length	Built Up Beam Size					
		3-2X8	4-2X8	3-2X10	4-2X10	3-2X12	4-2X12
Douglas Fir #1 & #2	8	7-3	8-4	8-10	10-2	10-3	11-10
	10	6-6	7-6	7-11	9-2	9-2	10-7
	12	5-11	6-10	7-3	8-4	8-4	9-8
	14	5-6	6-4	6-8	7-9	7-9	8-11
	16	5-1	5-11	6-3	7-3	7-3	8-4
Hem-Fir #1 & #2	8	7-7	8-9	9-3	10-8	10-9	12-5
	10	6-9	7-10	8-3	9-7	9-7	11-1
	12	6-2	7-2	7-7	8-9	8-9	10-2
	14	5-9	6-7	7-0	8-1	8-2	9-5
	16	5-4	6-2	6-7	7-7	7-6	8-9
Spruce-Pine-Fir #1 & #2	8	7-10	9-1	9-7	11-1	11-2	12-10
	10	7-0	8-1	8-7	9-11	10-0	11-6
	12	6-5	7-5	7-10	9-1	9-1	10-6
	14	5-11	6-10	7-3	8-5	8-5	9-9
	16	5-7	6-5	6-9	7-10	7-11	9-1

SPAN TABLES

Floor Joists – Living Quarters

Hem-Fir No. 1 & 2

Subfloor Thickness	Installation	2X8		2X10		2X12	
		Joist Spacing		Joist Spacing		Joist Spacing	
		12"	16"	12"	16"	12"	16"
5/8	A	12-2	11-7	14-4	13-8	16-5	15-7
	B	13-6	12-10	15-10	15-1	18-1	17-3
	C	13-9	12-10	15-10	14-10	17-10	16-7
	D	14-2	12-11	17-7	16-4	19-8	18-4
	E	13-1	12-4	15-3	14-4	17-3	16-2

3/4	A	12-11	12-2	15-3	14-4	17-5	16-5
	B	14-2	12-11	16-10	15-10	19-3	18-1
	C	14-2	12-11	17-2	15-10	19-4	17-10
	D	14-2	12-11	18-2	16-6	21-4	19-8
	E	14-2	12-11	16-6	15-3	18-7	17-2

Spruce-Pine-Fir No. 1 & 2

Subfloor Thickness	Installation	2X8		2X10		2X12	
		Joist Spacing		Joist Spacing		Joist Spacing	
		12"	16"	12"	16"	12"	16"
5/8	A	11-7	11-0	13-8	13-0	15-7	14-10
	B	12-10	12-2	15-1	14-4	17-3	16-5
	C	13-1	12-2	15-1	14-1	17-0	15-10
	D	13-6	12-4	16-8	15-7	18-9	17-6
	E	12-5	11-9	14-6	13-8	16-4	15-5

3/4	A	12-4	11-7	14-6	13-8	16-7	15-7
	B	13-6	12-4	16-1	15-1	18-4	17-3
	C	13-6	12-4	16-4	15-1	18-5	17-0
	D	13-6	12-4	17-3	15-8	20-4	18-9
	E	13-6	12-4	15-8	14-6	17-9	16-4

A: Strapping **or** Ceiling Finish to Underside of Joists.
B: Strapping and Glued Subfloor **or** Ceiling Finish to Underside of Joists and Glued Subfloor.
C: Bridging and Strapping **or** Bridging and Ceiling Finish to Underside of Joists.
D: Bridging and Strapping and Joists Glued to Subfloor **or** Bridging and Ceiling Finish to Underside of Joists and Joists Glued to Subfloor.
E: Bridging Only.

Information compiled for your convenience from "The Span Book" Canadian Wood Council 2004 Edition.
 For expanded options refer to "The Span Book" 2004 Edition.