



**DEPARTMENT OF PUBLIC WORKS  
Building and Safety Division**

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## SPAN TABLES

<b>FLOOR JOISTS</b> Residential Occupancies					<b>40# Live Load, 10# Dead Load, 1/360</b>								
Span (feet and inches)													
Species	Grade	2x6			2x8			2x10			2x12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	11-4	10-4	9-0	15-0	13-7	11-11	19-1	17-4	15-2	23-3	21-1	18-5
<b>Larch</b>	No. 1 & Btr	11-2	10-2	8-10	14-8	13-4	11-8	18-9	17-0	14-9	22-10	20-9	17-1
	No. 1	10-11	9-11	8-8	14-5	13-1	11-0	18-5	16-5	13-5	22-0	19-1	15-7
	No. 2	10-9	9-9	8-3	14-2	12-9	10-5	18-0	15-7	12-9	20-11	18-1	14-9
<b>FLOOR JOISTS</b> Light Storage					<b>125# Live Load, 10# Dead Load, 1/360</b>								
Span (feet and inches)													
Species	Grade	2x8			2x10			2x12			2x14		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	10-3	9-4	8-1	13-1	11-10	10-0	15-11	14-3	11-7	18-4	15-11	13-0
<b>Larch</b>	No. 1 & Btr	10-1	9-0	7-4	12-8	11-0	8-11	14-8	12-9	10-5	16-5	14-3	11-7
	No. 1	9-6	8-2	6-8	11-7	10-0	8-2	13-5	11-7	9-6	15-0	13-0	10-7
	No. 2	9-0	7-9	6-4	11-0	9-6	7-9	12-9	11-0	9-0	14-3	12-4	10-1
<b>CEILING JOISTS</b> Ceilings where the roof slope is steeper than 3 in 12.					<b>20# Live Load, 10# Dead Load, 1/240</b>								
Span (feet and inches)													
Species	Grade	2x4			2x6			2x8			2x10		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	10-5	9-6	8-3	16-4	14-11	13-0	21-7	19-7	17-2	27-6	25-0	21-3
<b>Larch</b>	No. 1 & Btr	10-3	9-4	8-1	16-1	14-7	12-3	21-2	19-1	15-7	26-10	23-3	19-0
	No. 1	10-0	9-1	7-8	15-9	13-9	11-2	20-1	17-5	14-2	24-6	21-3	17-4
	No. 2	9-10	8-11	7-3	15-0	13-0	10-8	19-1	16-6	13-6	23-3	20-2	16-5

## Rafters

All tables assume no snow loads and a 1.25 Duration of Load adjustment has been applied.

<b>ROOF RAFTERS</b> Roof slope 3 in 12 or less. Light roof covering, no ceiling.					<b>20# Live Load, 10# Dead Load, 1/240</b>								
Span (feet and inches)													
Species	Grade	2x6			2x8			2x10			2x12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	16-4	14-11	13-0	21-7	19-7	17-2	27-6	25-0	21-10	33-6	30-5	26-7
<b>Larch</b>	No. 1 & Btr	16-1	14-7	12-9	21-2	19-3	16-10	27-1	24-7	21-3	32-11	29-11	24-8
	No. 1	15-9	14-4	12-6	20-10	18-11	15-10	26-6	23-9	19-5	31-10	27-6	22-6
	No. 2	15-6	14-1	11-11	20-5	18-5	15-1	26-0	22-6	18-5	30-2	26-1	21-4

<b>ROOF RAFTERS</b> Roof slope greater than 3 in 12; light roof covering; no ceiling.	<b>20# Live Load, 7# Dead Load, 1/180</b>
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Span (feet and inches)													
Species	Grade	2x6			2x8			2x10			2x12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	18-0	16-4	14-4	23-9	21-7	18-10	30-4	27-6	24-1	36-10	33-6	29-0
<b>Larch</b>	No. 1 & Btr	17-8	16-1	14-1	23-4	21-2	18-4	29-9	27-1	22-5	36-2	31-10	25-11
	No. 1	17-4	15-9	13-3	22-11	20-6	16-9	28-11	25-0	20-5	33-6	29-0	23-8
	No. 2	17-0	15-4	12-6	22-5	19-5	15-10	27-5	23-9	19-5	31-10	27-6	22-6

<b>ROOF RAFTERS</b> Roof slope 3 in 12 or less. Heavy roof covering, no ceiling.	<b>20# Live Load, 15# Dead Load, 1/180</b>
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Span (feet and inches)													
Species	Grade	2x6			2x8			2x10			2x12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	18-0	16-4	14-3	23-9	21-7	18-0	30-4	26-11	22-0	36-1	31-3	25-6
<b>Larch</b>	No. 1 & Btr	17-8	15-7	12-9	22-9	19-9	16-1	27-10	24-1	19-8	32-3	27-11	22-10
	No. 1	16-5	14-3	11-7	20-9	18-0	14-8	25-5	22-0	17-11	29-5	25-6	20-10
	No. 2	15-7	13-6	11-0	19-9	17-1	13-11	24-1	20-10	17-0	27-11	24-2	19-9

<b>ROOF RAFTERS</b> Roof slope 3 in 12 or less. Light roof covering. Heavy roof covering, no ceiling. OR Flat roof or cathedral ceiling with drywall finish.	<b>20# Live Load, 15# Dead Load, 1/240</b>
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Span (feet and inches)													
Species	Grade	2x6			2x8			2x10			2x12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	16-4	14-11	13-0	21-7	19-7	17-2	27-6	25-0	21-10	33-6	30-5	25-6
<b>Larch</b>	No. 1 & Btr	16-1	14-7	12-9	21-2	19-3	16-1	27-1	24-1	19-8	32-3	27-11	22-10
	No. 1	15-9	14-3	11-7	20-9	18-0	14-8	25-5	22-0	17-11	29-5	25-6	20-10
	No. 2	15-6	13-6	11-0	19-9	17-1	13-11	24-1	20-10	17-0	27-6	23-10	19-6

<b>ROOF RAFTERS</b> Heavy roof covering; flat roof or cathedral ceiling with drywall finish.	<b>20# Live Load, 25# Dead Load, 1/240</b>
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Span (feet and inches)													
Species	Grade	2x6			2x8			2x10			2x12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
<b>Douglas Fir</b>	Sel. Struc.	16-4	14-11	12-6	21-7	19-5	15-10	27-5	23-9	19-5	31-10	27-6	22-6
<b>Larch</b>	No. 1 & Btr	15-10	13-9	11-2	20-1	17-5	14-2	24-6	21-3	17-4	28-5	24-8	20-1
	No. 1	14-6	12-6	10-3	18-4	15-10	12-11	22-5	19-5	15-10	25-11	22-6	18-4
	No. 2	13-9	11-11	9-8	17-5	15-1	12-4	21-3	18-5	15-0	24-8	21-4	17-5