

## RAFTER SPANS

Species or Group	Grade *	Span (feet and inches)											
		<i>Italic Bold Print</i> indicates spans controlled by deflection											
		2 x 6			2 x 8			2 x 10			2 x 12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
Southern Pine	1	<i>15-9</i>	<i>14-4</i>	<i>12-6</i>	<i>20-10</i>	<i>18-11</i>	16-5	<i>26-6</i>	23-11	19-6	<i>32-3</i>	28-6	23-3
	2	<i>15-6</i>	13-11	11-5	<i>20-5</i>	18-0	14-8	24-10	21-6	17-6	29-1	25-2	20-7
	3	12-6	10-10	8-10	15-10	13-9	11-3	18-9	16-3	13-3	22-4	19-4	15-9
Spruce Pine-Fir	1	<i>14-1</i>	<i>12-9</i>	10-8	<i>18-6</i>	16-7	13-7	23-5	20-3	16-7	27-2	23-6	19-2
	2	<i>13-8</i>	12-4	10-1	<i>18-0</i>	15-7	12-9	22-0	19-0	15-7	25-6	22-1	18-0
	3	10-8	9-3	7-7	13-7	11-9	9-7	16-7	14-4	11-8	19-2	16-7	13-7

## FLOOR JOIST SPANS 40 LBS. Live Load (Living Areas)

Species or Group	Grade *	Span (feet and inches)											
		<i>Italic Bold Print</i> indicates spans controlled by deflection											
		2 x 6			2 x 8			2 x 10			2 x 12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
Southern Pine	1	<i>10-11</i>	<i>9-11</i>	<i>8-8</i>	<i>14-5</i>	<i>13-1</i>	<i>11-5</i>	<i>18-5</i>	<i>16-9</i>	14-7	<i>22-5</i>	<i>20-4</i>	17-5
	2	<i>10-9</i>	<i>9-9</i>	<i>8-6</i>	<i>14-2</i>	<i>12-10</i>	11-0	<i>18-0</i>	16-1	13-2	21-9	18-10	15-4
	3	9-4	8-1	6-7	11-11	10-3	8-5	14-0	12-2	9-11	16-8	14-5	11-10
Spruce Pine-Fir	1	<i>9-9</i>	<i>8-10</i>	<i>7-9</i>	<i>12-10</i>	<i>11-8</i>	10-2	<i>16-5</i>	<i>14-11</i>	12-5	<i>19-11</i>	17-7	14-4
	2	<i>9-6</i>	<i>8-7</i>	<i>7-6</i>	<i>12-6</i>	<i>11-4</i>	9-6	<i>15-11</i>	14-3	11-8	19-1	16-6	13-6
	3	8-0	6-11	5-8	10-2	8-9	7-2	12-5	10-9	8-9	14-4	12-5	10-2

## CEILING JOIST SPANS ( DRYWALL)

Species or Group	Grade *	Span (feet and inches)											
		<i>Italic Bold Print</i> indicates spans controlled by deflection											
		2 x 6			2 x 8			2 x 10			2 x 12		
		12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc	12" oc	16" oc	24" oc
Southern Pine	1	<i>15-9</i>	<i>14-4</i>	<i>12-6</i>	<i>20-10</i>	<i>18-11</i>	15-11	<i>26-6</i>	23-2	18-11	31-10	27-6	22-6
	2	<i>15-6</i>	13-6	11-0	20-1	17-5	14-2	24-0	20-9	17-0	28-1	24-4	19-10
	3	12-1	10-5	8-6	15-4	13-3	10-10	18-1	15-8	12-10	21-7	18-8	15-3
Spruce Pine-Fir	1	<i>14-1</i>	12-8	10-4	18-6	16-0	13-1	22-7	19-73	16-0	26-3	22-8	18-6
	2	<i>13-8</i>	11-11	9-8	17-5	15-1	12-4	21-3	18-5	15-0	24-8	21-4	17-5
	3	10-4	8-11	7-4	13-1	11-4	9-3	16-0	13-10	11-4	18-6	16-1	13-1

**HEADER TABLE  
SHINGLE ROOF**

<b>Header Size</b>						
<b>Header Span</b>	<b>Structure Width</b>					
	<b>12</b>	<b>16</b>	<b>20</b>	<b>24</b>	<b>28</b>	<b>32</b>
<b>4-feet</b>	2 – 2 x 4	2 – 2 x 4	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6
<b>6-feet</b>	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6	2 – 2 x 8	2 – 2 x 8
<b>8-feet</b>	2 – 2 x 8	2 – 2 x 8	2 – 2 x 8	2 – 2 x 8	2 – 2 x 10	2 – 2 x 10
<b>10-feet</b>	2 – 2 x 8	2 – 2 x 10	2 – 2 x 10	2 – 2 x 12	2 – 2 x 12	3 – 2 x 10
<b>12-feet</b>	2 – 2 x 10	2 – 2 x 12	2 – 2 x 12	3 – 2 x 10	3 – 2 x 12	3 – 2 x 12
<b>14-feet</b>	2 – 2 x 12	3 – 2 x 10	3 – 2 x 12	3 – 2 x 12	-	-
<b>16-feet</b>	3 – 2 x 10	3 – 2 x 12	3 – 2 x 12	-	-	-
<b>18-feet</b>	3 – 2 x 12	-	-	-	-	-
<b>20-feet</b>	3 – 2 x 12	-	-	-	-	-

**HEADER TABLE  
METAL ROOF**

<b>Header Size</b>						
<b>Header Span</b>	<b>Structure Width</b>					
	<b>12</b>	<b>16</b>	<b>20</b>	<b>24</b>	<b>28</b>	<b>32</b>
<b>4-feet</b>	2 – 2 x 4	2 – 2 x 4	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6
<b>6-feet</b>	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6	2 – 2 x 6	2 – 2 x 8
<b>8-feet</b>	2 – 2 x 6	2 – 2 x 8	2 – 2 x 8	2 – 2 x 8	2 – 2 x 10	2 – 2 x 10
<b>10-feet</b>	2 – 2 x 8	2 – 2 x 8	2 – 2 x 10	2 – 2 x 10	2 – 2 x 12	2 – 2 x 12
<b>12-feet</b>	2 – 2 x 10	2 – 2 x 10	2 – 2 x 12	3 – 2 x 10	3 – 2 x 10	3 – 2 x 12
<b>14-feet</b>	2 – 2 x 12	2 – 2 x 12	3 – 2 x 10	3 – 2 x 12	3 – 2 x 12	-
<b>16-feet</b>	3 – 2 x 10	3 – 2 x 12	3 – 2 x 12	-	-	-
<b>18-feet</b>	3 – 2 x 12	3 – 2 x 12	-	-	-	-
<b>20-feet</b>	3 – 2 x 12	3 – 2 x 12	-	-	-	-

## GIRDER SPANS

### SHINGLE ROOF

HOUSE WIDTH	GIRDER SPAN	SIZE	
24	5-Foot	2-2 x 8	3-2 x 6
	6-Foot	2-2 x 10	3-2 x 8
	7-Foot	2-2 x 12	3-2 x 10
	8-Foot		3-2 x 12
26	5-Foot	2-2 x 8	3-2 x 6
	6-Foot	2-2 x 12	3-2 x 8
	7-Foot	2-2 x 12	3-2 x 10
	8-Foot		3-2 x 12
28	5-Foot	2-2 x 10	3-2 x 6
	6-Foot	2-2 x 12	3-2 x 8
	7-Foot		3-2 x 10
	8-Foot		3-2 x 12
32	5-Foot	2-2 x 8	3-2 x 6
	6-Foot	2-2 x 12	3-2 x 8
	7-Foot	2-2 x 12	3-2 x 10
	8-Foot		3-2 x 12

### METAL ROOF

HOUSE WIDTH	GIRDER SPAN	SIZE	
24	5-Foot	2-2 x 8	3-2 x 6
	6-Foot	2-2 x 10	3-2 x 8
	7-Foot	2-2 x 12	3-2 x 8
	8-Foot		3-2 x 10
26	5-Foot	2-2 x 8	3-2 x 6
	6-Foot	2-2 x 12	3-2 x 8
	7-Foot	2-2 x 12	3-2 x 10
	8-Foot		3-2 x 12
28	5-Foot	2-2 x 8	3-2 x 6
	6-Foot	2-2 x 12	3-2 x 8
	7-Foot		3-2 x 10
	8-Foot		3-2 x 12
32	5-Foot	2-2 x 8	3-2 x 6
	6-Foot	2-2 x 10	3-2 x 8
	7-Foot	2-2 x 12	3-2 x 10
	8-Foot		3-2 x 12