



PACIFIC LUMBER INSPECTION BUREAU

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# AP - 2

## Allowable Properties for Dimension Lumber – Domestic & Imported Species

As Listed in Standard Grading Rules No. 17

Revised July 12, 2021



**ALLOWABLE PROPERTIES FOR  
DIMENSION LUMBER**  
As Listed in Standard Grading Rules No. 17

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**Note:**

While Pacific Lumber Inspection Bureau works to ensure the accuracy of this document, errors may have occurred in its preparation. Updates and Errata, when necessary are posted on the PLIB website [www.plib.org](http://www.plib.org). Technical inquiries may be directed to PLIB at [info@plib.org](mailto:info@plib.org) or by phone to (253) 835-3344.

# Domestic Species





**Douglas fir**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft	Fc	Fc <sup>⊥</sup>	Fv	E
	2" nom.	4" nom.	(psi)	(psi)	(psi)	(psi)	(psi)
<b>BASE VALUES</b>							
Select Structural	1,500		1,000	1,700	625	180	1,900,000
No. 1 & Btr.	1,200		800	1,550	625	180	1,800,000
No. 1	1,000		675	1,500	625	180	1,700,000
No. 2	900		575	1,350	625	180	1,600,000
No. 3	525		325	775	625	180	1,400,000
Construction	1,000		650	1,650	625	180	1,500,000
Standard	575		375	1,400	625	180	1,400,000
Utility	275		175	900	625	180	1,300,000
Stud	700		450	850	625	180	1,400,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	2,250	2,250	1,500	1,955	625	180	1,900,000
No. 1 & Btr.	1,800	1,800	1,200	1,785	625	180	1,800,000
No. 1	1,500	1,500	1,015	1,725	625	180	1,700,000
No. 2	1,350	1,350	865	1,555	625	180	1,600,000
No. 3	790	790	490	890	625	180	1,400,000
Construction	1,000	1,000	650	1,650	625	180	1,500,000
Standard	575	575	375	1,400	625	180	1,400,000
Utility	275	275	175	900	625	180	1,300,000
Stud	770	770	495	895	625	180	1,400,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,950	1,950	1,300	1,870	625	180	1,900,000
No. 1 & Btr.	1,560	1,560	1,040	1,705	625	180	1,800,000
No. 1	1,300	1,300	880	1,650	625	180	1,700,000
No. 2	1,170	1,170	750	1,485	625	180	1,600,000
No. 3	685	685	425	855	625	180	1,400,000
Stud	700	700	450	850	625	180	1,400,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,800	1,950	1,200	1,785	625	180	1,900,000
No. 1 & Btr.	1,440	1,560	960	1,630	625	180	1,800,000
No. 1	1,200	1,300	810	1,575	625	180	1,700,000
No. 2	1,080	1,170	690	1,420	625	180	1,600,000
No. 3	630	685	390	815	625	180	1,400,000
Stud	630	685	390	815	625	180	1,400,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,650	1,800	1,100	1,700	625	180	1,900,000
No. 1 & Btr.	1,320	1,440	880	1,550	625	180	1,800,000
No. 1	1,100	1,200	745	1,500	625	180	1,700,000
No. 2	990	1,080	635	1,350	625	180	1,600,000
No. 3	580	630	360	775	625	180	1,400,000
Stud	580	630	360	775	625	180	1,400,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,500	1,650	1,000	1,700	625	180	1,900,000
No. 1 & Btr.	1,200	1,320	800	1,550	625	180	1,800,000
No. 1	1,000	1,100	675	1,500	625	180	1,700,000
No. 2	900	990	575	1,350	625	180	1,600,000
No. 3	525	580	325	775	625	180	1,400,000
Stud	525	580	325	775	625	180	1,400,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,350	1,500	900	1,530	625	180	1,900,000
No. 1 & Btr.	1,080	1,200	720	1,395	625	180	1,800,000
No. 1	900	1,000	610	1,350	625	180	1,700,000
No. 2	810	900	520	1,215	625	180	1,600,000
No. 3	475	525	295	700	625	180	1,400,000
Stud	475	525	295	700	625	180	1,400,000

**Allowable Property Values**

Specific Gravity (all grades) = 0.50

**Notes:** All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.50

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**Allowable Property Values - Hem-Fir**

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<b>Hem-Fir</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,400		925	1,500	405	150	1,600,000
No. 1 & Btr.	1,100		725	1,350	405	150	1,500,000
No. 1	975		625	1,350	405	150	1,500,000
No. 2	850		525	1,300	405	150	1,300,000
No. 3	500		300	725	405	150	1,200,000
Construction	975		600	1,500	405	150	1,300,000
Standard	550		325	1,300	405	150	1,200,000
Utility	250		150	850	405	150	1,100,000
Stud	675		400	800	405	150	1,200,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	2,100	2,100	1,390	1,725	405	150	1,600,000
No. 1 & Btr.	1,650	1,650	1,090	1,555	405	150	1,500,000
No. 1	1,465	1,465	940	1,555	405	150	1,500,000
No. 2	1,275	1,275	790	1,495	405	150	1,300,000
No. 3	750	750	450	835	405	150	1,200,000
Construction	975	975	600	1,500	405	150	1,300,000
Standard	550	550	325	1,300	405	150	1,200,000
Utility	250	250	150	850	405	150	1,100,000
Stud	745	745	440	840	405	150	1,200,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,820	1,820	1,205	1,650	405	150	1,600,000
No. 1 & Btr.	1,430	1,430	945	1,485	405	150	1,500,000
No. 1	1,270	1,270	815	1,485	405	150	1,500,000
No. 2	1,105	1,105	685	1,430	405	150	1,300,000
No. 3	650	650	390	800	405	150	1,200,000
Stud	675	675	400	800	405	150	1,200,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,680	1,820	1,110	1,575	405	150	1,600,000
No. 1 & Btr.	1,320	1,430	870	1,420	405	150	1,500,000
No. 1	1,170	1,270	750	1,420	405	150	1,500,000
No. 2	1,020	1,105	630	1,365	405	150	1,300,000
No. 3	600	650	360	760	405	150	1,200,000
Stud	600	650	360	760	405	150	1,200,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,540	1,680	1,020	1,500	405	150	1,600,000
No. 1 & Btr.	1,210	1,320	800	1,350	405	150	1,500,000
No. 1	1,075	1,170	690	1,350	405	150	1,500,000
No. 2	935	1,020	580	1,300	405	150	1,300,000
No. 3	550	600	330	725	405	150	1,200,000
Stud	550	600	330	725	405	150	1,200,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,400	1,540	925	1,500	405	150	1,600,000
No. 1 & Btr.	1,100	1,210	725	1,350	405	150	1,500,000
No. 1	975	1,075	625	1,350	405	150	1,500,000
No. 2	850	935	525	1,300	405	150	1,300,000
No. 3	500	550	300	725	405	150	1,200,000
Stud	500	550	300	725	405	150	1,200,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,260	1,400	835	1,350	405	150	1,600,000
No. 1 & Btr.	990	1,100	655	1,215	405	150	1,500,000
No. 1	880	975	565	1,215	405	150	1,500,000
No. 2	765	850	475	1,170	405	150	1,300,000
No. 3	450	500	270	655	405	150	1,200,000
Stud	450	500	270	655	405	150	1,200,000
Specific Gravity (all grades) = 0.43							
<small>Notes: All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.43</small>							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 4/25/1996	



**Allowable Property Values - Spruce-Pine-Fir South**

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<b>Spruce-Pine-Fir South</b>									
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity		
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)		
	2" nom.	4" nom.							
<b>BASE VALUES</b>									
Select Structural	1,300		575	1,200	335	135	1,300,000		
No. 1	875		400	1,050	335	135	1,200,000		
No. 2	775		350	1,000	335	135	1,100,000		
No. 3	450		200	575	335	135	1,000,000		
Construction	875		400	1,200	335	135	1,000,000		
Standard	500		225	1,000	335	135	900,000		
Utility	225		100	675	335	135	900,000		
Stud	600		275	625	335	135	1,000,000		
<b>2x4 Size Adjusted Values</b>									
Select Structural	1,950	1,950	865	1,380	335	135	1,300,000		
No. 1	1,315	1,315	600	1,210	335	135	1,200,000		
No. 2	1,165	1,165	525	1,150	335	135	1,100,000		
No. 3	675	675	300	660	335	135	1,000,000		
Construction	875	875	400	1,200	335	135	1,000,000		
Standard	500	500	225	1,000	335	135	900,000		
Utility	225	225	100	675	335	135	900,000		
Stud	660	660	305	655	335	135	1,000,000		
<b>2x6 Size Adjusted Values</b>									
Select Structural	1,690	1,690	750	1,320	335	135	1,300,000		
No. 1	1,140	1,140	520	1,155	335	135	1,200,000		
No. 2	1,010	1,010	455	1,100	335	135	1,100,000		
No. 3	585	585	260	635	335	135	1,000,000		
Stud	600	600	275	625	335	135	1,000,000		
<b>2x8 Size Adjusted Values</b>									
Select Structural	1,560	1,690	690	1,260	335	135	1,300,000		
No. 1	1,050	1,140	480	1,105	335	135	1,200,000		
No. 2	930	1,010	420	1,050	335	135	1,100,000		
No. 3	540	585	240	605	335	135	1,000,000		
Stud	540	585	240	605	335	135	1,000,000		
<b>2x10 Size Adjusted Values</b>									
Select Structural	1,430	1,560	635	1,200	335	135	1,300,000		
No. 1	965	1,050	440	1,050	335	135	1,200,000		
No. 2	855	930	385	1,000	335	135	1,100,000		
No. 3	495	540	220	575	335	135	1,000,000		
Stud	495	540	220	575	335	135	1,000,000		
<b>2x12 Size Adjusted Values</b>									
Select Structural	1,300	1,430	575	1,200	335	135	1,300,000		
No. 1	875	965	400	1,050	335	135	1,200,000		
No. 2	775	855	350	1,000	335	135	1,100,000		
No. 3	450	495	200	575	335	135	1,000,000		
Stud	450	495	200	575	335	135	1,000,000		
<b>2x14 &amp; Wdr. Size Adjusted Values</b>									
Select Structural	1,170	1,300	520	1,080	335	135	1,300,000		
No. 1	790	875	360	945	335	135	1,200,000		
No. 2	700	775	315	900	335	135	1,100,000		
No. 3	405	450	180	520	335	135	1,000,000		
Stud	405	450	180	520	335	135	1,000,000		
Specific Gravity (all grades) = 0.36									
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.36</p>									
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		4/25/1996	



**Allowable Property Values - Western Woods**

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<b>Western Woods</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	900		400	1,050	335	135	1,200,000
No. 1	675		300	950	335	135	1,100,000
No. 2	675		300	900	335	135	1,000,000
No. 3	375		175	525	335	135	900,000
Construction Standard	775		350	1,100	335	135	1,000,000
Utility	425		200	925	335	135	900,000
Stud	200		100	600	335	135	800,000
	525		225	575	335	135	900,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,350	1,350	600	1,210	335	135	1,200,000
No. 1	1,015	1,015	450	1,095	335	135	1,100,000
No. 2	1,015	1,015	450	1,035	335	135	1,000,000
No. 3	565	565	265	605	335	135	900,000
Construction Standard	775	775	350	1,100	335	135	1,000,000
Utility	425	425	200	925	335	135	900,000
Stud	200	200	100	600	335	135	800,000
	580	580	250	605	335	135	900,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,170	1,170	520	1,155	335	135	1,200,000
No. 1	880	880	390	1,045	335	135	1,100,000
No. 2	880	880	390	990	335	135	1,000,000
No. 3	490	490	230	580	335	135	900,000
Stud	525	525	225	575	335	135	900,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,080	1,170	480	1,105	335	135	1,200,000
No. 1	810	880	360	1,000	335	135	1,100,000
No. 2	810	880	360	945	335	135	1,000,000
No. 3	450	490	210	550	335	135	900,000
Stud	450	490	210	550	335	135	900,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	990	1,080	440	1,050	335	135	1,200,000
No. 1	745	810	330	950	335	135	1,100,000
No. 2	745	810	330	900	335	135	1,000,000
No. 3	415	450	195	525	335	135	900,000
Stud	415	450	195	525	335	135	900,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	900	990	400	1,050	335	135	1,200,000
No. 1	675	745	300	950	335	135	1,100,000
No. 2	675	745	300	900	335	135	1,000,000
No. 3	375	415	175	525	335	135	900,000
Stud	375	415	175	525	335	135	900,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	810	900	360	945	335	135	1,200,000
No. 1	610	675	270	855	335	135	1,100,000
No. 2	610	675	270	810	335	135	1,000,000
No. 3	340	375	160	475	335	135	900,000
Stud	340	375	160	475	335	135	900,000
Specific Gravity (all grades) = 0.36							
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.36</p>							
Prepared by Pacific Lumber Inspection Bureau      6/16/2021      Approved      4/25/1996							



**Allowable Property Values for Western Cedars**

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<b>Western Cedars</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,000		600	1,000	425	155	1,100,000
No. 1	725		425	825	425	155	1,000,000
No. 2	700		425	650	425	155	1,000,000
No. 3	400		250	375	425	155	900,000
Construction	800		475	850	425	155	900,000
Standard	450		275	650	425	155	800,000
Utility	225		125	425	425	155	800,000
Stud	550		325	400	425	155	900,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,500	1,500	900	1,150	425	155	1,100,000
No. 1	1,090	1,090	640	950	425	155	1,000,000
No. 2	1,050	1,050	640	750	425	155	1,000,000
No. 3	600	600	375	430	425	155	900,000
Construction	800	800	475	850	425	155	900,000
Standard	450	450	275	650	425	155	800,000
Utility	225	225	125	425	425	155	800,000
Stud	605	605	360	420	425	155	900,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,300	1,300	780	1,100	425	155	1,100,000
No. 1	945	945	555	910	425	155	1,000,000
No. 2	910	910	555	715	425	155	1,000,000
No. 3	520	520	325	415	425	155	900,000
Stud	550	550	325	400	425	155	900,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,200	1,300	720	1,050	425	155	1,100,000
No. 1	870	945	510	865	425	155	1,000,000
No. 2	840	910	510	685	425	155	1,000,000
No. 3	480	520	300	395	425	155	900,000
Stud	480	520	300	395	425	155	900,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,100	1,200	660	1,000	425	155	1,100,000
No. 1	800	870	470	825	425	155	1,000,000
No. 2	770	840	470	650	425	155	1,000,000
No. 3	440	480	275	375	425	155	900,000
Stud	440	480	275	375	425	155	900,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,000	1,100	600	1,000	425	155	1,100,000
No. 1	725	800	425	825	425	155	1,000,000
No. 2	700	770	425	650	425	155	1,000,000
No. 3	400	440	250	375	425	155	900,000
Stud	400	440	250	375	425	155	900,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	900	1,000	540	900	425	155	1,100,000
No. 1	655	725	385	745	425	155	1,000,000
No. 2	630	700	385	585	425	155	1,000,000
No. 3	360	400	225	340	425	155	900,000
Stud	360	400	225	340	425	155	900,000
Specific Gravity (all grades) = 0.36							
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.36</p>							
Prepared by Pacific Lumber Inspection Bureau      6/16/2021      Approved      4/25/1996							





**Allowable Property Values - Alaska Cedar**

Pacific Lumber Inspection Bureau  
1010 S. 336th ST  
STE 210  
Federal Way, WA 98003  
ph: (253) 835-3344  
fax: (253) 835-3371  
email: info@plib.org

**Alaska Cedar**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,150		625	1,000	525	165	1,400,000	
No. 1	975		525	900	525	165	1,300,000	
No. 2	800		425	750	525	165	1,200,000	
No. 3	450		250	425	525	165	1,100,000	
Construction	900		500	950	525	165	1,200,000	
Standard	500		275	775	525	165	1,100,000	
Utility	250		125	500	525	165	1,000,000	
Stud	625		350	475	525	165	1,100,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,725	1,725	940	1,150	525	165	1,400,000	
No. 1	1,465	1,465	790	1,035	525	165	1,300,000	
No. 2	1,200	1,200	640	865	525	165	1,200,000	
No. 3	675	675	375	490	525	165	1,100,000	
Construction	900	900	500	950	525	165	1,200,000	
Standard	500	500	275	775	525	165	1,100,000	
Utility	250	250	125	500	525	165	1,000,000	
Stud	690	690	385	500	525	165	1,100,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,495	1,495	815	1,100	525	165	1,400,000	
No. 1	1,270	1,270	685	990	525	165	1,300,000	
No. 2	1,040	1,040	555	825	525	165	1,200,000	
No. 3	585	585	325	470	525	165	1,100,000	
Stud	625	625	350	475	525	165	1,100,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,380	1,495	750	1,050	525	165	1,400,000	
No. 1	1,170	1,270	630	945	525	165	1,300,000	
No. 2	960	1,040	510	790	525	165	1,200,000	
No. 3	540	585	300	445	525	165	1,100,000	
Stud	540	585	300	445	525	165	1,100,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,265	1,380	690	1,000	525	165	1,400,000	
No. 1	1,075	1,170	580	900	525	165	1,300,000	
No. 2	880	960	470	750	525	165	1,200,000	
No. 3	495	540	275	425	525	165	1,100,000	
Stud	495	540	275	425	525	165	1,100,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,150	1,265	625	1,000	525	165	1,400,000	
No. 1	975	1,075	525	900	525	165	1,300,000	
No. 2	800	880	425	750	525	165	1,200,000	
No. 3	450	495	250	425	525	165	1,100,000	
Stud	450	495	250	425	525	165	1,100,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,035	1,150	565	900	525	165	1,400,000	
No. 1	880	975	475	810	525	165	1,300,000	
No. 2	720	800	385	675	525	165	1,200,000	
No. 3	405	450	225	385	525	165	1,100,000	
Stud	405	450	225	385	525	165	1,100,000	
Specific Gravity (all grades) = 0.47								
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.47								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		10/31/2002



**Allowable Property Values - Port Orford Cedar**

Pacific Lumber Inspection Bureau  
1010 S. 336th ST  
STE 210  
Federal Way, WA 98003  
ph: (253) 835-3344  
fax: (253) 835-3371  
email: info@plib.org

**Port Orford Cedar**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					

**BASE VALUES**

Select Structural	1,250		700	1,150	470	165	1,600,000
No. 1	1,050		575	1,050	470	165	1,500,000
No. 2	875		475	875	470	165	1,400,000
No. 3	500		275	500	470	165	1,300,000
Construction	975		550	1,100	470	165	1,300,000
Standard	550		300	900	470	165	1,200,000
Utility	250		150	600	470	165	1,100,000
Stud	675		375	550	470	165	1,300,000

**2x4 Size Adjusted Values**

Select Structural	1,875	1,875	1,050	1,325	470	165	1,600,000
No. 1	1,575	1,575	865	1,210	470	165	1,500,000
No. 2	1,315	1,315	715	1,005	470	165	1,400,000
No. 3	750	750	415	575	470	165	1,300,000
Construction	975	975	550	1,100	470	165	1,300,000
Standard	550	550	300	900	470	165	1,200,000
Utility	250	250	150	600	470	165	1,100,000
Stud	745	745	415	580	470	165	1,300,000

**2x6 Size Adjusted Values**

Select Structural	1,625	1,625	910	1,265	470	165	1,600,000
No. 1	1,365	1,365	750	1,155	470	165	1,500,000
No. 2	1,140	1,140	620	965	470	165	1,400,000
No. 3	650	650	360	550	470	165	1,300,000
Stud	675	675	375	550	470	165	1,300,000

**2x8 Size Adjusted Values**

Select Structural	1,500	1,625	840	1,210	470	165	1,600,000
No. 1	1,260	1,365	690	1,105	470	165	1,500,000
No. 2	1,050	1,140	570	920	470	165	1,400,000
No. 3	600	650	330	525	470	165	1,300,000
Stud	600	650	330	525	470	165	1,300,000

**2x10 Size Adjusted Values**

Select Structural	1,375	1,500	770	1,150	470	165	1,600,000
No. 1	1,155	1,260	635	1,050	470	165	1,500,000
No. 2	965	1,050	525	875	470	165	1,400,000
No. 3	550	600	305	500	470	165	1,300,000
Stud	550	600	305	500	470	165	1,300,000

**2x12 Size Adjusted Values**

Select Structural	1,250	1,375	700	1,150	470	165	1,600,000
No. 1	1,050	1,155	575	1,050	470	165	1,500,000
No. 2	875	965	475	875	470	165	1,400,000
No. 3	500	550	275	500	470	165	1,300,000
Stud	500	550	275	500	470	165	1,300,000

**2x14 & Wdr. Size Adjusted Values**

Select Structural	1,125	1,250	630	1,035	470	165	1,600,000
No. 1	945	1,050	520	945	470	165	1,500,000
No. 2	790	875	430	790	470	165	1,400,000
No. 3	450	500	250	450	470	165	1,300,000
Stud	450	500	250	450	470	165	1,300,000

Specific Gravity (all grades) = 0.44

**Notes:** All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.44



**Allowable Property Values - Western Juniper**

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STE 210  
Federal Way, WA 98003  
ph: (253) 835-3344  
fax: (253) 835-3371  
email: info@plib.org

**Western Juniper**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	925		525	225	770	125	600,000
No. 1	800		425	200	770	125	600,000
No. 2	650		350	175	770	125	500,000
No. 3	375		200	100	770	125	500,000
Construction Standard	750		400	200	770	125	500,000
Utility	425		225	175	770	125	500,000
Stud	200		100	100	770	125	400,000
	500		275	100	770	125	500,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,390	1,390	790	260	770	125	600,000
No. 1	1,200	1,200	640	230	770	125	600,000
No. 2	975	975	525	200	770	125	500,000
No. 3	565	565	300	115	770	125	500,000
Construction Standard	750	750	400	200	770	125	500,000
Utility	425	425	225	175	770	125	500,000
Stud	200	200	100	100	770	125	400,000
	550	550	305	105	770	125	500,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,205	1,205	685	250	770	125	600,000
No. 1	1,040	1,040	555	220	770	125	600,000
No. 2	845	845	455	195	770	125	500,000
No. 3	490	490	260	110	770	125	500,000
Stud	500	500	275	100	770	125	500,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,110	1,205	630	235	770	125	600,000
No. 1	960	1,040	510	210	770	125	600,000
No. 2	780	845	420	185	770	125	500,000
No. 3	450	490	240	105	770	125	500,000
Stud	450	490	240	105	770	125	500,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,020	1,110	580	225	770	125	600,000
No. 1	880	960	470	200	770	125	600,000
No. 2	715	780	385	175	770	125	500,000
No. 3	415	450	220	100	770	125	500,000
Stud	415	450	220	100	770	125	500,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	925	1,020	525	225	770	125	600,000
No. 1	800	880	425	200	770	125	600,000
No. 2	650	715	350	175	770	125	500,000
No. 3	375	415	200	100	770	125	500,000
Stud	375	415	200	100	770	125	500,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	835	925	475	205	770	125	600,000
No. 1	720	800	385	180	770	125	600,000
No. 2	585	650	315	160	770	125	500,000
No. 3	340	375	180	90	770	125	500,000
Stud	340	375	180	90	770	125	500,000
Specific Gravity (all grades) = 0.42							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.42							
Prepared by Pacific Lumber Inspection Bureau 6/16/2021 Approved 2/1/2018							

# Imported Species



**Allowable Property Values -  
Austrian Spruce from Austria & Czech Republic**

Pacific Lumber Inspection Bureau  
 1010 S. 336th ST  
 STE 210  
 Federal Way, WA 98003  
 ph: (253) 835-3344  
 fax: (253) 835-3371  
 email: info@plib.org

<b>Austrian Spruce from Austria &amp; Czech Republic</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,500		675	1,250	260	175	1,700,000
No. 1	1,000		450	1,100	260	175	1,600,000
No. 2	925		400	1,050	260	175	1,500,000
No. 3	525		225	625	260	175	1,300,000
Construction Standard	1,050		475	1,300	260	175	1,400,000
Utility	575		250	1,100	260	175	1,300,000
Stud	275		125	725	260	175	1,200,000
	725		325	675	260	175	1,300,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	2,250	2,250	1,015	1,440	260	175	1,700,000
No. 1	1,500	1,500	675	1,265	260	175	1,600,000
No. 2	1,390	1,390	600	1,210	260	175	1,500,000
No. 3	790	790	340	720	260	175	1,300,000
Construction Standard	1,050	1,050	475	1,300	260	175	1,400,000
Utility	575	575	250	1,100	260	175	1,300,000
Stud	275	275	125	725	260	175	1,200,000
	800	800	360	710	260	175	1,300,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,950	1,950	880	1,375	260	175	1,700,000
No. 1	1,300	1,300	585	1,210	260	175	1,600,000
No. 2	1,205	1,205	520	1,155	260	175	1,500,000
No. 3	685	685	295	690	260	175	1,300,000
Stud	725	725	325	675	260	175	1,300,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,800	1,950	810	1,315	260	175	1,700,000
No. 1	1,200	1,300	540	1,155	260	175	1,600,000
No. 2	1,110	1,205	480	1,105	260	175	1,500,000
No. 3	630	685	270	655	260	175	1,300,000
Stud	630	685	270	655	260	175	1,300,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,650	1,800	745	1,250	260	175	1,700,000
No. 1	1,100	1,200	495	1,100	260	175	1,600,000
No. 2	1,020	1,110	440	1,050	260	175	1,500,000
No. 3	580	630	250	625	260	175	1,300,000
Stud	580	630	250	625	260	175	1,300,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,500	1,650	675	1,250	260	175	1,700,000
No. 1	1,000	1,100	450	1,100	260	175	1,600,000
No. 2	925	1,020	400	1,050	260	175	1,500,000
No. 3	525	580	225	625	260	175	1,300,000
Stud	525	580	225	625	260	175	1,300,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,350	1,500	610	1,125	260	175	1,700,000
No. 1	900	1,000	405	990	260	175	1,600,000
No. 2	835	925	360	945	260	175	1,500,000
No. 3	475	525	205	565	260	175	1,300,000
Stud	475	525	205	565	260	175	1,300,000
Specific Gravity (all grades) = 0.43							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.43							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 7/25/1996	



**Allowable Property Values -  
Douglas Fir from France & Germany**

**Douglas Fir  
from France & Germany**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)	Ft (psi)	Fc (psi)	Fc-L (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,500		675	1,250	540	205	1,900,000
No. 1	975		450	1,100	540	205	1,700,000
No. 2	825		375	1,000	540	205	1,500,000
No. 3	475		225	600	540	205	1,300,000
Construction	925		425	1,250	540	205	1,400,000
Standard	525		225	1,050	540	205	1,300,000
Utility	250		100	675	540	205	1,200,000
Stud	650		300	650	540	205	1,300,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	2,250	2,250	1,015	1,440	540	205	1,900,000
No. 1	1,465	1,465	675	1,265	540	205	1,700,000
No. 2	1,240	1,240	565	1,150	540	205	1,500,000
No. 3	715	715	340	690	540	205	1,300,000
Construction	925	925	425	1,250	540	205	1,400,000
Standard	525	525	225	1,050	540	205	1,300,000
Utility	250	250	100	675	540	205	1,200,000
Stud	715	715	330	685	540	205	1,300,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,950	1,950	880	1,375	540	205	1,900,000
No. 1	1,270	1,270	585	1,210	540	205	1,700,000
No. 2	1,075	1,075	490	1,100	540	205	1,500,000
No. 3	620	620	295	660	540	205	1,300,000
Stud	650	650	300	650	540	205	1,300,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,800	1,950	810	1,315	540	205	1,900,000
No. 1	1,170	1,270	540	1,155	540	205	1,700,000
No. 2	990	1,075	450	1,050	540	205	1,500,000
No. 3	570	620	270	630	540	205	1,300,000
Stud	570	620	270	630	540	205	1,300,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,650	1,800	745	1,250	540	205	1,900,000
No. 1	1,075	1,170	495	1,100	540	205	1,700,000
No. 2	910	990	415	1,000	540	205	1,500,000
No. 3	525	570	250	600	540	205	1,300,000
Stud	525	570	250	600	540	205	1,300,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,500	1,650	675	1,250	540	205	1,900,000
No. 1	975	1,075	450	1,100	540	205	1,700,000
No. 2	825	910	375	1,000	540	205	1,500,000
No. 3	475	525	225	600	540	205	1,300,000
Stud	475	525	225	600	540	205	1,300,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,350	1,500	610	1,125	540	205	1,900,000
No. 1	880	975	405	990	540	205	1,700,000
No. 2	745	825	340	900	540	205	1,500,000
No. 3	430	475	205	540	540	205	1,300,000
Stud	430	475	205	540	540	205	1,300,000
Specific Gravity (all grades) = 0.48							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.48							

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Lumber  
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**Allowable Property Values -**

**Norway Spruce from Baltic Countries - Estonia, Latvia, & Lithuania**

**Norway Spruce from Baltic Countries  
Estonia, Latvia, & Lithuania**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi) 2" nom.	4" nom.	Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
<b>BASE VALUES</b>								
Select Structural	1,200		550	1,200	430	150	1,600,000	
No. 1	825		375	1,050	430	150	1,400,000	
No. 2	725		325	950	430	150	1,200,000	
No. 3	425		200	550	430	150	1,100,000	
Construction	825		375	1,150	430	150	1,100,000	
Standard	450		200	975	430	150	1,000,000	
Utility	225		100	650	430	150	1,000,000	
Stud	575		250	600	430	150	1,100,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,800	1,800	825	1,380	430	150	1,600,000	
No. 1	1,240	1,240	565	1,210	430	150	1,400,000	
No. 2	1,090	1,090	490	1,095	430	150	1,200,000	
No. 3	640	640	300	635	430	150	1,100,000	
Construction	825	825	375	1,150	430	150	1,100,000	
Standard	450	450	200	975	430	150	1,000,000	
Utility	225	225	100	650	430	150	1,000,000	
Stud	635	635	275	630	430	150	1,100,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,560	1,560	715	1,320	430	150	1,600,000	
No. 1	1,075	1,075	490	1,155	430	150	1,400,000	
No. 2	945	945	425	1,045	430	150	1,200,000	
No. 3	555	555	260	605	430	150	1,100,000	
Stud	575	575	250	600	430	150	1,100,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,440	1,560	660	1,260	430	150	1,600,000	
No. 1	990	1,075	450	1,105	430	150	1,400,000	
No. 2	870	945	390	1,000	430	150	1,200,000	
No. 3	510	555	240	580	430	150	1,100,000	
Stud	510	555	240	580	430	150	1,100,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,320	1,440	605	1,200	430	150	1,600,000	
No. 1	910	990	415	1,050	430	150	1,400,000	
No. 2	800	870	360	950	430	150	1,200,000	
No. 3	470	510	220	550	430	150	1,100,000	
Stud	470	510	220	550	430	150	1,100,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,200	1,320	550	1,200	430	150	1,600,000	
No. 1	825	910	375	1,050	430	150	1,400,000	
No. 2	725	800	325	950	430	150	1,200,000	
No. 3	425	470	200	550	430	150	1,100,000	
Stud	425	470	200	550	430	150	1,100,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,080	1,200	495	1,080	430	150	1,600,000	
No. 1	745	825	340	945	430	150	1,400,000	
No. 2	655	725	295	855	430	150	1,200,000	
No. 3	385	425	180	495	430	150	1,100,000	
Stud	385	425	180	495	430	150	1,100,000	
Specific Gravity (all grades) = 0.43								
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.43								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		7/25/2002



**Allowable Property Values - Norway Spruce from Finland**

Pacific Lumber Inspection Bureau  
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 Federal Way, WA 98003  
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 fax: (253) 835-3371  
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<b>Norway Spruce from Finland</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,350		600	1,200	220	125	1,500,000
No. 1	825		375	1,000	220	125	1,400,000
No. 2	625		275	875	220	125	1,200,000
No. 3	375		175	500	220	125	1,100,000
Construction Standard	725		325	1,100	220	125	1,100,000
Utility	400		175	900	220	125	1,000,000
Stud	200		75	600	220	125	1,000,000
	500		225	550	220	125	1,100,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	2,025	2,025	900	1,380	220	125	1,500,000
No. 1	1,240	1,240	565	1,150	220	125	1,400,000
No. 2	940	940	415	1,005	220	125	1,200,000
No. 3	565	565	265	575	220	125	1,100,000
Construction Standard	725	725	325	1,100	220	125	1,100,000
Utility	400	400	175	900	220	125	1,000,000
Stud	200	200	75	600	220	125	1,000,000
	550	550	250	580	220	125	1,100,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,755	1,755	780	1,320	220	125	1,500,000
No. 1	1,075	1,075	490	1,100	220	125	1,400,000
No. 2	815	815	360	965	220	125	1,200,000
No. 3	490	490	230	550	220	125	1,100,000
Stud	500	500	225	550	220	125	1,100,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,620	1,755	720	1,260	220	125	1,500,000
No. 1	990	1,075	450	1,050	220	125	1,400,000
No. 2	750	815	330	920	220	125	1,200,000
No. 3	450	490	210	525	220	125	1,100,000
Stud	450	490	210	525	220	125	1,100,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,485	1,620	660	1,200	220	125	1,500,000
No. 1	910	990	415	1,000	220	125	1,400,000
No. 2	690	750	305	875	220	125	1,200,000
No. 3	415	450	195	500	220	125	1,100,000
Stud	415	450	195	500	220	125	1,100,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,350	1,485	600	1,200	220	125	1,500,000
No. 1	825	910	375	1,000	220	125	1,400,000
No. 2	625	690	275	875	220	125	1,200,000
No. 3	375	415	175	500	220	125	1,100,000
Stud	375	415	175	500	220	125	1,100,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,215	1,350	540	1,080	220	125	1,500,000
No. 1	745	825	340	900	220	125	1,400,000
No. 2	565	625	250	790	220	125	1,200,000
No. 3	340	375	160	450	220	125	1,100,000
Stud	340	375	160	450	220	125	1,100,000
Specific Gravity (all grades) = 0.42							
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.42</p>							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 7/27/2000	





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**Allowable Property Values -**

**Norway Spruce from Germany, NE France, & Switzerland**

<b>Norway Spruce</b>								
<b>from Germany, NE France, and Switzerland</b>								
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,200		550	1,200	355	170	1,600,000	
No. 1	825		375	1,050	355	170	1,400,000	
No. 2	725		325	950	355	170	1,200,000	
No. 3	425		200	550	355	170	1,100,000	
Construction	825		375	1,200	355	170	1,100,000	
Standard	475		200	975	355	170	1,000,000	
Utility	225		100	650	355	170	900,000	
Stud	575		250	600	355	170	1,100,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,800	1,800	825	1,380	355	170	1,600,000	
No. 1	1,240	1,240	565	1,210	355	170	1,400,000	
No. 2	1,090	1,090	490	1,095	355	170	1,200,000	
No. 3	640	640	300	635	355	170	1,100,000	
Construction	825	825	375	1,200	355	170	1,100,000	
Standard	475	475	200	975	355	170	1,000,000	
Utility	225	225	100	650	355	170	900,000	
Stud	635	635	275	630	355	170	1,100,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,560	1,560	715	1,320	355	170	1,600,000	
No. 1	1,075	1,075	490	1,155	355	170	1,400,000	
No. 2	945	945	425	1,045	355	170	1,200,000	
No. 3	555	555	260	605	355	170	1,100,000	
Stud	575	575	250	600	355	170	1,100,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,440	1,560	660	1,260	355	170	1,600,000	
No. 1	990	1,075	450	1,105	355	170	1,400,000	
No. 2	870	945	390	1,000	355	170	1,200,000	
No. 3	510	555	240	580	355	170	1,100,000	
Stud	510	555	240	580	355	170	1,100,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,320	1,440	605	1,200	355	170	1,600,000	
No. 1	910	990	415	1,050	355	170	1,400,000	
No. 2	800	870	360	950	355	170	1,200,000	
No. 3	470	510	220	550	355	170	1,100,000	
Stud	470	510	220	550	355	170	1,100,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,200	1,320	550	1,200	355	170	1,600,000	
No. 1	825	910	375	1,050	355	170	1,400,000	
No. 2	725	800	325	950	355	170	1,200,000	
No. 3	425	470	200	550	355	170	1,100,000	
Stud	425	470	200	550	355	170	1,100,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,080	1,200	495	1,080	355	170	1,600,000	
No. 1	745	825	340	945	355	170	1,400,000	
No. 2	655	725	295	855	355	170	1,200,000	
No. 3	385	425	180	495	355	170	1,100,000	
Stud	385	425	180	495	355	170	1,100,000	
Specific Gravity (all grades) = 0.42								
<small>Notes: All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.42</small>								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		2/3/2005



**Allowable Property Values - Norway Spruce from Norway**

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 Federal Way, WA 98003  
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<b>Norway Spruce from Norway</b>								
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,550		700	1,250	360	115	1,800,000	
No. 1	1,000		450	1,100	360	115	1,500,000	
No. 2	800		375	1,000	360	115	1,300,000	
No. 3	475		200	575	360	115	1,200,000	
Construction Standard	925		425	1,250	360	115	1,200,000	
Utility	525		225	1,050	360	115	1,100,000	
Stud	250		100	675	360	115	1,000,000	
	625		275	650	360	115	1,200,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	2,325	2,325	1,050	1,440	360	115	1,800,000	
No. 1	1,500	1,500	675	1,265	360	115	1,500,000	
No. 2	1,200	1,200	565	1,150	360	115	1,300,000	
No. 3	715	715	300	660	360	115	1,200,000	
Construction Standard	925	925	425	1,250	360	115	1,200,000	
Utility	525	525	225	1,050	360	115	1,100,000	
Stud	250	250	100	675	360	115	1,000,000	
	690	690	305	685	360	115	1,200,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	2,015	2,015	910	1,375	360	115	1,800,000	
No. 1	1,300	1,300	585	1,210	360	115	1,500,000	
No. 2	1,040	1,040	490	1,100	360	115	1,300,000	
No. 3	620	620	260	635	360	115	1,200,000	
Stud	625	625	275	650	360	115	1,200,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,860	2,015	840	1,315	360	115	1,800,000	
No. 1	1,200	1,300	540	1,155	360	115	1,500,000	
No. 2	960	1,040	450	1,050	360	115	1,300,000	
No. 3	570	620	240	605	360	115	1,200,000	
Stud	570	620	240	605	360	115	1,200,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,705	1,860	770	1,250	360	115	1,800,000	
No. 1	1,100	1,200	495	1,100	360	115	1,500,000	
No. 2	880	960	415	1,000	360	115	1,300,000	
No. 3	525	570	220	575	360	115	1,200,000	
Stud	525	570	220	575	360	115	1,200,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,550	1,705	700	1,250	360	115	1,800,000	
No. 1	1,000	1,100	450	1,100	360	115	1,500,000	
No. 2	800	880	375	1,000	360	115	1,300,000	
No. 3	475	525	200	575	360	115	1,200,000	
Stud	475	525	200	575	360	115	1,200,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,395	1,550	630	1,125	360	115	1,800,000	
No. 1	900	1,000	405	990	360	115	1,500,000	
No. 2	720	800	340	900	360	115	1,300,000	
No. 3	430	475	180	520	360	115	1,200,000	
Stud	430	475	180	520	360	115	1,200,000	
Specific Gravity (all grades) = 0.43								
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.42</p>								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		1/5/2017



**Allowable Property Values -  
Norway Spruce from Romania and Ukraine**

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<b>Norway Spruce from Romania and Ukraine</b>								
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,250		575	1,200	275	100	1,500,000	
No. 1	850		375	1,050	275	100	1,400,000	
No. 2	750		325	950	275	100	1,200,000	
No. 3	425		200	550	275	100	1,100,000	
Construction Standard	850		375	1,200	275	100	1,100,000	
Standard	475		200	1,000	275	100	1,000,000	
Utility	225		100	650	275	100	1,000,000	
Stud	575		250	600	275	100	1,100,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,875	1,875	865	1,380	275	100	1,500,000	
No. 1	1,275	1,275	565	1,210	275	100	1,400,000	
No. 2	1,125	1,125	490	1,095	275	100	1,200,000	
No. 3	640	640	300	635	275	100	1,100,000	
Construction Standard	850	850	375	1,200	275	100	1,100,000	
Standard	475	475	200	1,000	275	100	1,000,000	
Utility	225	225	100	650	275	100	1,000,000	
Stud	635	635	275	630	275	100	1,100,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,625	1,625	750	1,320	275	100	1,500,000	
No. 1	1,105	1,105	490	1,155	275	100	1,400,000	
No. 2	975	975	425	1,045	275	100	1,200,000	
No. 3	555	555	260	605	275	100	1,100,000	
Stud	575	575	250	600	275	100	1,100,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,500	1,625	690	1,260	275	100	1,500,000	
No. 1	1,020	1,105	450	1,105	275	100	1,400,000	
No. 2	900	975	390	1,000	275	100	1,200,000	
No. 3	510	555	240	580	275	100	1,100,000	
Stud	510	555	240	580	275	100	1,100,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,375	1,500	635	1,200	275	100	1,500,000	
No. 1	935	1,020	415	1,050	275	100	1,400,000	
No. 2	825	900	360	950	275	100	1,200,000	
No. 3	470	510	220	550	275	100	1,100,000	
Stud	470	510	220	550	275	100	1,100,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,250	1,375	575	1,200	275	100	1,500,000	
No. 1	850	935	375	1,050	275	100	1,400,000	
No. 2	750	825	325	950	275	100	1,200,000	
No. 3	425	470	200	550	275	100	1,100,000	
Stud	425	470	200	550	275	100	1,100,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,125	1,250	520	1,080	275	100	1,500,000	
No. 1	765	850	340	945	275	100	1,400,000	
No. 2	675	750	295	855	275	100	1,200,000	
No. 3	385	425	180	495	275	100	1,100,000	
Stud	385	425	180	495	275	100	1,100,000	
Specific Gravity (all grades) = 0.38								
<small>Notes: All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.38</small>								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		7/22/2004



**Allowable Property Values - Norway Spruce from Sweden**

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<b>Norway Spruce from Sweden</b>								
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,250		550	1,200	285	170	1,600,000	
No. 1	825		375	1,050	285	170	1,400,000	
No. 2	675		300	925	285	170	1,200,000	
No. 3	400		175	525	285	170	1,100,000	
Construction Standard	775		350	1,150	285	170	1,200,000	
Utility	425		200	950	285	170	1,100,000	
Stud	200		100	625	285	170	1,000,000	
	550		250	575	285	170	1,100,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,875	1,875	825	1,380	285	170	1,600,000	
No. 1	1,240	1,240	565	1,210	285	170	1,400,000	
No. 2	1,015	1,015	450	1,065	285	170	1,200,000	
No. 3	600	600	265	605	285	170	1,100,000	
Construction Standard	775	775	350	1,150	285	170	1,200,000	
Utility	425	425	200	950	285	170	1,100,000	
Stud	200	200	100	625	285	170	1,000,000	
	605	605	275	605	285	170	1,100,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,625	1,625	715	1,320	285	170	1,600,000	
No. 1	1,075	1,075	490	1,155	285	170	1,400,000	
No. 2	880	880	390	1,020	285	170	1,200,000	
No. 3	520	520	230	580	285	170	1,100,000	
Stud	550	550	250	575	285	170	1,100,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,500	1,625	660	1,260	285	170	1,600,000	
No. 1	990	1,075	450	1,105	285	170	1,400,000	
No. 2	810	880	360	970	285	170	1,200,000	
No. 3	480	520	210	550	285	170	1,100,000	
Stud	480	520	210	550	285	170	1,100,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,375	1,500	605	1,200	285	170	1,600,000	
No. 1	910	990	415	1,050	285	170	1,400,000	
No. 2	745	810	330	925	285	170	1,200,000	
No. 3	440	480	195	525	285	170	1,100,000	
Stud	440	480	195	525	285	170	1,100,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,250	1,375	550	1,200	285	170	1,600,000	
No. 1	825	910	375	1,050	285	170	1,400,000	
No. 2	675	745	300	925	285	170	1,200,000	
No. 3	400	440	175	525	285	170	1,100,000	
Stud	400	440	175	525	285	170	1,100,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,125	1,250	495	1,080	285	170	1,600,000	
No. 1	745	825	340	945	285	170	1,400,000	
No. 2	610	675	270	835	285	170	1,200,000	
No. 3	360	400	160	475	285	170	1,100,000	
Stud	360	400	160	475	285	170	1,100,000	
Specific Gravity (all grades) = 0.42								
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.42</p>								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		7/29/1999



**Allowable Property Values -  
Norway Spruce from Archangel Region of Russia**

Pacific Lumber Inspection Bureau  
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 Federal Way, WA 98003  
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<b>Norway Spruce from Archangel Region of Russia</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,250		575	1,200	275	100	1,500,000
No. 1	850		375	1,050	275	100	1,400,000
No. 2	750		325	950	275	100	1,200,000
No. 3	425		200	550	275	100	1,100,000
Construction	850		375	1,200	275	100	1,100,000
Standard	475		200	1,000	275	100	1,000,000
Utility	225		100	650	275	100	1,000,000
Stud	575		250	600	275	100	1,100,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	2,300	2,300	1,050	1,400	315	175	1,500,000
No. 1	1,750	1,750	775	1,350	315	175	1,400,000
No. 2	1,750	1,750	775	1,350	315	175	1,400,000
No. 3	1,000	1,000	450	775	315	175	1,200,000
Construction	1,300	1,300	600	1,400	315	175	1,300,000
Standard	725	725	325	1,200	315	175	1,200,000
Utility	350	350	150	775	315	175	1,100,000
Stud	975	975	450	775	315	175	1,200,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	2,000	2,000	900	1,350	315	175	1,500,000
No. 1	1,500	1,500	675	1,300	315	175	1,400,000
No. 2	1,500	1,500	675	1,300	315	175	1,400,000
No. 3	850	850	375	750	315	175	1,200,000
Stud	900	900	400	750	315	175	1,200,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	No 2 x 8 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							
<b>2x10 Size Adjusted Values</b>							
Select Structural	No 2 x 10 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							
<b>2x12 Size Adjusted Values</b>							
Select Structural	No 2 x 12 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	No 2 x 14 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							
Specific Gravity (all grades) = Not Assigned							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Specific Gravity not assigned.							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 7/29/1999	



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**Allowable Property Values - Scots Pine from Austria & Czech Republic**

<b>Scots Pine</b>							
<b>from Austria, Czech Republic, Romania, and Ukraine</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,300		600	1,200	270	135	1,700,000
No. 1	900		400	1,050	270	135	1,600,000
No. 2	775		350	1,000	270	135	1,400,000
No. 3	450		200	575	270	135	1,300,000
Construction Standard	875		400	1,200	270	135	1,300,000
Utility	500		225	1,000	270	135	1,200,000
Stud	225		100	675	270	135	1,100,000
	600		275	625	270	135	1,300,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,950	1,950	900	1,380	270	135	1,700,000
No. 1	1,350	1,350	600	1,210	270	135	1,600,000
No. 2	1,165	1,165	525	1,150	270	135	1,400,000
No. 3	675	675	300	660	270	135	1,300,000
Construction Standard	875	875	400	1,200	270	135	1,300,000
Utility	500	500	225	1,000	270	135	1,200,000
Stud	225	225	100	675	270	135	1,100,000
	660	660	305	655	270	135	1,300,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,690	1,690	780	1,320	270	135	1,700,000
No. 1	1,170	1,170	520	1,155	270	135	1,600,000
No. 2	1,010	1,010	455	1,100	270	135	1,400,000
No. 3	585	585	260	635	270	135	1,300,000
Stud	600	600	275	625	270	135	1,300,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,560	1,690	720	1,260	270	135	1,700,000
No. 1	1,080	1,170	480	1,105	270	135	1,600,000
No. 2	930	1,010	420	1,050	270	135	1,400,000
No. 3	540	585	240	605	270	135	1,300,000
Stud	540	585	240	605	270	135	1,300,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,430	1,560	660	1,200	270	135	1,700,000
No. 1	990	1,080	440	1,050	270	135	1,600,000
No. 2	855	930	385	1,000	270	135	1,400,000
No. 3	495	540	220	575	270	135	1,300,000
Stud	495	540	220	575	270	135	1,300,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,300	1,430	600	1,200	270	135	1,700,000
No. 1	900	990	400	1,050	270	135	1,600,000
No. 2	775	855	350	1,000	270	135	1,400,000
No. 3	450	495	200	575	270	135	1,300,000
Stud	450	495	200	575	270	135	1,300,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,170	1,300	540	1,080	270	135	1,700,000
No. 1	810	900	360	945	270	135	1,600,000
No. 2	700	775	315	900	270	135	1,400,000
No. 3	405	450	180	520	270	135	1,300,000
Stud	405	450	180	520	270	135	1,300,000
Specific Gravity (all grades) = 0.50							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.50							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 4/29/2004	



Pacific Lumber Inspection Bureau

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**Allowable Property Values - Scots Pine from Estonia & Lithuania**

<b>Scots Pine from Estonia &amp; Lithuania</b>								
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,100		500	1,150	430	130	1,500,000	
No. 1	750		350	1,000	430	130	1,300,000	
No. 2	650		300	900	430	130	1,100,000	
No. 3	375		175	525	430	130	1,000,000	
Construction	750		325	1,100	430	130	1,100,000	
Standard	425		200	925	430	130	1,000,000	
Utility	200		100	600	430	130	900,000	
Stud	525		225	575	430	130	1,000,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,650	1,650	750	1,325	430	130	1,500,000	
No. 1	1,125	1,125	525	1,150	430	130	1,300,000	
No. 2	975	975	450	1,035	430	130	1,100,000	
No. 3	565	565	265	605	430	130	1,000,000	
Construction	750	750	325	1,100	430	130	1,100,000	
Standard	425	425	200	925	430	130	1,000,000	
Utility	200	200	100	600	430	130	900,000	
Stud	580	580	250	605	430	130	1,000,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,430	1,430	650	1,265	430	130	1,500,000	
No. 1	975	975	455	1,100	430	130	1,300,000	
No. 2	845	845	390	990	430	130	1,100,000	
No. 3	490	490	230	580	430	130	1,000,000	
Stud	525	525	225	575	430	130	1,000,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,320	1,430	600	1,210	430	130	1,500,000	
No. 1	900	975	420	1,050	430	130	1,300,000	
No. 2	780	845	360	945	430	130	1,100,000	
No. 3	450	490	210	550	430	130	1,000,000	
Stud	450	490	210	550	430	130	1,000,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,210	1,320	550	1,150	430	130	1,500,000	
No. 1	825	900	385	1,000	430	130	1,300,000	
No. 2	715	780	330	900	430	130	1,100,000	
No. 3	415	450	195	525	430	130	1,000,000	
Stud	415	450	195	525	430	130	1,000,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,100	1,210	500	1,150	430	130	1,500,000	
No. 1	750	825	350	1,000	430	130	1,300,000	
No. 2	650	715	300	900	430	130	1,100,000	
No. 3	375	415	175	525	430	130	1,000,000	
Stud	375	415	175	525	430	130	1,000,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	990	1,100	450	1,035	430	130	1,500,000	
No. 1	675	750	315	900	430	130	1,300,000	
No. 2	585	650	270	810	430	130	1,100,000	
No. 3	340	375	160	475	430	130	1,000,000	
Stud	340	375	160	475	430	130	1,000,000	
Specific Gravity (all grades) = 0.45								
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.45								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		2/8/2001





**Allowable Property Values for Scots Pine from Finland**

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 Federal Way, WA 98003  
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 fax: (253) 835-3371  
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<b>Scots Pine from Finland</b>									
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity		
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)		
	2" nom.	4" nom.							
<b>BASE VALUES</b>									
Select Structural	1,300		600	1,200	210	150	1,500,000		
No. 1	950		425	1,100	210	150	1,400,000		
No. 2	925		425	1,100	210	150	1,300,000		
No. 3	525		250	625	210	150	1,200,000		
Construction Standard	1,050		475	1,300	210	150	1,200,000		
Utility	600		275	1,100	210	150	1,100,000		
Stud	275		125	725	210	150	1,000,000		
	725		325	675	210	150	1,200,000		
<b>2x4 Size Adjusted Values</b>									
Select Structural	1,950	1,950	900	1,380	210	150	1,500,000		
No. 1	1,425	1,425	640	1,265	210	150	1,400,000		
No. 2	1,390	1,390	640	1,265	210	150	1,300,000		
No. 3	790	790	375	720	210	150	1,200,000		
Construction Standard	1,050	1,050	475	1,300	210	150	1,200,000		
Utility	600	600	275	1,100	210	150	1,100,000		
Stud	275	275	125	725	210	150	1,000,000		
	800	800	360	710	210	150	1,200,000		
<b>2x6 Size Adjusted Values</b>									
Select Structural	1,690	1,690	780	1,320	210	150	1,500,000		
No. 1	1,235	1,235	555	1,210	210	150	1,400,000		
No. 2	1,205	1,205	555	1,210	210	150	1,300,000		
No. 3	685	685	325	690	210	150	1,200,000		
Stud	725	725	325	675	210	150	1,200,000		
<b>2x8 Size Adjusted Values</b>									
Select Structural	1,560	1,690	720	1,260	210	150	1,500,000		
No. 1	1,140	1,235	510	1,155	210	150	1,400,000		
No. 2	1,110	1,205	510	1,155	210	150	1,300,000		
No. 3	630	685	300	655	210	150	1,200,000		
Stud	630	685	300	655	210	150	1,200,000		
<b>2x10 Size Adjusted Values</b>									
Select Structural	1,430	1,560	660	1,200	210	150	1,500,000		
No. 1	1,045	1,140	470	1,100	210	150	1,400,000		
No. 2	1,020	1,110	470	1,100	210	150	1,300,000		
No. 3	580	630	275	625	210	150	1,200,000		
Stud	580	630	275	625	210	150	1,200,000		
<b>2x12 Size Adjusted Values</b>									
Select Structural	1,300	1,430	600	1,200	210	150	1,500,000		
No. 1	950	1,045	425	1,100	210	150	1,400,000		
No. 2	925	1,020	425	1,100	210	150	1,300,000		
No. 3	525	580	250	625	210	150	1,200,000		
Stud	525	580	250	625	210	150	1,200,000		
<b>2x14 &amp; Wdr. Size Adjusted Values</b>									
Select Structural	1,170	1,300	540	1,080	210	150	1,500,000		
No. 1	855	950	385	990	210	150	1,400,000		
No. 2	835	925	385	990	210	150	1,300,000		
No. 3	475	525	225	565	210	150	1,200,000		
Stud	475	525	225	565	210	150	1,200,000		
Specific Gravity (all grades) = 0.48									
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.48</p>									
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		7/27/2000	





**Allowable Property Values for Scots Pine from Germany**

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<b>Scots Pine from Germany</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,200		550	1,200	395	160	1,600,000
No. 1	800		375	1,050	395	160	1,400,000
No. 2	700		325	950	395	160	1,100,000
No. 3	400		175	550	395	160	1,000,000
Construction	800		375	1,150	395	160	1,100,000
Standard	450		200	975	395	160	1,000,000
Utility	225		100	625	395	160	900,000
Stud	550		250	600	395	160	1,000,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,800	1,800	825	1,380	395	160	1,600,000
No. 1	1,200	1,200	565	1,210	395	160	1,400,000
No. 2	1,050	1,050	490	1,095	395	160	1,100,000
No. 3	600	600	265	635	395	160	1,000,000
Construction	800	800	375	1,150	395	160	1,100,000
Standard	450	450	200	975	395	160	1,000,000
Utility	225	225	100	625	395	160	900,000
Stud	605	605	275	630	395	160	1,000,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,560	1,560	715	1,320	395	160	1,600,000
No. 1	1,040	1,040	490	1,155	395	160	1,400,000
No. 2	910	910	425	1,045	395	160	1,100,000
No. 3	520	520	230	605	395	160	1,000,000
Stud	550	550	250	600	395	160	1,000,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,440	1,560	660	1,260	395	160	1,600,000
No. 1	960	1,040	450	1,105	395	160	1,400,000
No. 2	840	910	390	1,000	395	160	1,100,000
No. 3	480	520	210	580	395	160	1,000,000
Stud	480	520	210	580	395	160	1,000,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,320	1,440	605	1,200	395	160	1,600,000
No. 1	880	960	415	1,050	395	160	1,400,000
No. 2	770	840	360	950	395	160	1,100,000
No. 3	440	480	195	550	395	160	1,000,000
Stud	440	480	195	550	395	160	1,000,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,200	1,320	550	1,200	395	160	1,600,000
No. 1	800	880	375	1,050	395	160	1,400,000
No. 2	700	770	325	950	395	160	1,100,000
No. 3	400	440	175	550	395	160	1,000,000
Stud	400	440	175	550	395	160	1,000,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,080	1,200	495	1,080	395	160	1,600,000
No. 1	720	800	340	945	395	160	1,400,000
No. 2	630	700	295	855	395	160	1,100,000
No. 3	360	400	160	495	395	160	1,000,000
Stud	360	400	160	495	395	160	1,000,000
Specific Gravity (all grades) = 0.53							
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.53</p>							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 7/27/2000	



**Allowable Property Values for Scots Pine from Sweden**

Pacific Lumber Inspection Bureau  
 1010 S. 336th ST  
 STE 210  
 Federal Way, WA 98003  
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<b>Scots Pine from Sweden</b>								
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,350		600	1,200	410	120	1,700,000	
No. 1	825		375	1,000	410	120	1,500,000	
No. 2	575		250	825	410	120	1,200,000	
No. 3	325		150	475	410	120	1,100,000	
Construction	650		300	1,050	410	120	1,200,000	
Standard	375		175	850	410	120	1,100,000	
Utility	175		75	550	410	120	1,000,000	
Stud	450		200	525	410	120	1,100,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	2,025	2,025	900	1,380	410	120	1,700,000	
No. 1	1,240	1,240	565	1,150	410	120	1,500,000	
No. 2	865	865	375	950	410	120	1,200,000	
No. 3	490	490	225	545	410	120	1,100,000	
Construction	650	650	300	1,050	410	120	1,200,000	
Standard	375	375	175	850	410	120	1,100,000	
Utility	175	175	75	550	410	120	1,000,000	
Stud	495	495	220	550	410	120	1,100,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,755	1,755	780	1,320	410	120	1,700,000	
No. 1	1,075	1,075	490	1,100	410	120	1,500,000	
No. 2	750	750	325	910	410	120	1,200,000	
No. 3	425	425	195	525	410	120	1,100,000	
Stud	450	450	200	525	410	120	1,100,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,620	1,755	720	1,260	410	120	1,700,000	
No. 1	990	1,075	450	1,050	410	120	1,500,000	
No. 2	690	750	300	865	410	120	1,200,000	
No. 3	390	425	180	500	410	120	1,100,000	
Stud	390	425	180	500	410	120	1,100,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,485	1,620	660	1,200	410	120	1,700,000	
No. 1	910	990	415	1,000	410	120	1,500,000	
No. 2	635	690	275	825	410	120	1,200,000	
No. 3	360	390	165	475	410	120	1,100,000	
Stud	360	390	165	475	410	120	1,100,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,350	1,485	600	1,200	410	120	1,700,000	
No. 1	825	910	375	1,000	410	120	1,500,000	
No. 2	575	635	250	825	410	120	1,200,000	
No. 3	325	360	150	475	410	120	1,100,000	
Stud	325	360	150	475	410	120	1,100,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,215	1,350	540	1,080	410	120	1,700,000	
No. 1	745	825	340	900	410	120	1,500,000	
No. 2	520	575	225	745	410	120	1,200,000	
No. 3	295	325	135	430	410	120	1,100,000	
Stud	295	325	135	430	410	120	1,100,000	
Specific Gravity (all grades) = 0.47								
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.47</p>								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		1/23/2001



Pacific Lumber Inspection Bureau

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**Allowable Property Values -  
Silver Fir from Germany, NE France, & Switzerland**

<b>Silver Fir (<i>Abies alba</i>) from Germany, NE France, and Switzerland</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	950		425	1,100	400	130	1,500,000
No. 1	725		325	975	400	130	1,400,000
No. 2	725		325	950	400	130	1,300,000
No. 3	425		200	550	400	130	1,100,000
Construction	825		375	1,150	400	130	1,200,000
Standard	475		200	975	400	130	1,100,000
Utility	225		100	650	400	130	1,000,000
Stud	575		250	600	400	130	1,100,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,425	1,425	640	1,265	400	130	1,500,000
No. 1	1,090	1,090	490	1,120	400	130	1,400,000
No. 2	1,090	1,090	490	1,095	400	130	1,300,000
No. 3	640	640	300	635	400	130	1,100,000
Construction	825	825	375	1,150	400	130	1,200,000
Standard	475	475	200	975	400	130	1,100,000
Utility	225	225	100	650	400	130	1,000,000
Stud	635	635	275	630	400	130	1,100,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,235	1,235	555	1,210	400	130	1,500,000
No. 1	945	945	425	1,075	400	130	1,400,000
No. 2	945	945	425	1,045	400	130	1,300,000
No. 3	555	555	260	605	400	130	1,100,000
Stud	575	575	250	600	400	130	1,100,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,140	1,235	510	1,155	400	130	1,500,000
No. 1	870	945	390	1,025	400	130	1,400,000
No. 2	870	945	390	1,000	400	130	1,300,000
No. 3	510	555	240	580	400	130	1,100,000
Stud	510	555	240	580	400	130	1,100,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,045	1,140	470	1,100	400	130	1,500,000
No. 1	800	870	360	975	400	130	1,400,000
No. 2	800	870	360	950	400	130	1,300,000
No. 3	470	510	220	550	400	130	1,100,000
Stud	470	510	220	550	400	130	1,100,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	950	1,045	425	1,100	400	130	1,500,000
No. 1	725	800	325	975	400	130	1,400,000
No. 2	725	800	325	950	400	130	1,300,000
No. 3	425	470	200	550	400	130	1,100,000
Stud	425	470	200	550	400	130	1,100,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	855	950	385	990	400	130	1,500,000
No. 1	655	725	295	880	400	130	1,400,000
No. 2	655	725	295	855	400	130	1,300,000
No. 3	385	425	180	495	400	130	1,100,000
Stud	385	425	180	495	400	130	1,100,000
Specific Gravity (all grades) = 0.43							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.43							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 10/21/2004	



Pacific Lumber Inspection Bureau

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**Allowable Property Values -  
Montane Pine from The Republic of South Africa**

<b>Montane Pine from The Republic of South Africa</b>								
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	975		425	1,100	325	135	1,300,000	
No. 1	650		300	950	325	135	1,100,000	
No. 2	600		275	850	325	135	1,000,000	
No. 3	350		150	475	325	135	900,000	
Construction	675		300	1,050	325	135	900,000	
Standard	375		175	875	325	135	800,000	
Utility	175		75	575	325	135	800,000	
Stud	475		200	525	325	135	900,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,465	1,465	640	1,265	325	135	1,300,000	
No. 1	975	975	450	1,095	325	135	1,100,000	
No. 2	900	900	415	980	325	135	1,000,000	
No. 3	525	525	225	545	325	135	900,000	
Construction	675	675	300	1,050	325	135	900,000	
Standard	375	375	175	875	325	135	800,000	
Utility	175	175	75	575	325	135	800,000	
Stud	525	525	220	550	325	135	900,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,270	1,270	555	1,210	325	135	1,300,000	
No. 1	845	845	390	1,045	325	135	1,100,000	
No. 2	780	780	360	935	325	135	1,000,000	
No. 3	455	455	195	525	325	135	900,000	
Stud	475	475	200	525	325	135	900,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,170	1,270	510	1,155	325	135	1,300,000	
No. 1	780	845	360	1,000	325	135	1,100,000	
No. 2	720	780	330	895	325	135	1,000,000	
No. 3	420	455	180	500	325	135	900,000	
Stud	420	455	180	500	325	135	900,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,075	1,170	470	1,100	325	135	1,300,000	
No. 1	715	780	330	950	325	135	1,100,000	
No. 2	660	720	305	850	325	135	1,000,000	
No. 3	385	420	165	475	325	135	900,000	
Stud	385	420	165	475	325	135	900,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	975	1,075	425	1,100	325	135	1,300,000	
No. 1	650	715	300	950	325	135	1,100,000	
No. 2	600	660	275	850	325	135	1,000,000	
No. 3	350	385	150	475	325	135	900,000	
Stud	350	385	150	475	325	135	900,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	880	975	385	990	325	135	1,300,000	
No. 1	585	650	270	855	325	135	1,100,000	
No. 2	540	600	250	765	325	135	1,000,000	
No. 3	315	350	135	430	325	135	900,000	
Stud	315	350	135	430	325	135	900,000	
Specific Gravity (all grades) = 0.45								
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.45								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		1/29/2004

# Combination Species





**Allowable Property Values for Douglas Fir/Douglas fir North**

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<b>Douglas Fir/Douglas Fir North</b>									
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity		
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)		
	2" nom.	4" nom.							
<b>BASE VALUES</b>									
Select Structural	1,350		825	1,700	625	180	1,900,000		
No. 1	850		500	1,400	625	180	1,600,000		
No. 2	850		500	1,350	625	180	1,600,000		
No. 3	475		300	775	625	180	1,400,000		
Construction Standard	950		575	1,650	625	180	1,500,000		
Utility	250		150	900	625	180	1,300,000		
Stud	650		400	850	625	180	1,400,000		
<b>2x4 Size Adjusted Values</b>									
Select Structural	2,025	2,025	1,240	1,955	625	180	1,900,000		
No. 1	1,275	1,275	750	1,610	625	180	1,600,000		
No. 2	1,275	1,275	750	1,555	625	180	1,600,000		
No. 3	715	715	450	890	625	180	1,400,000		
Construction Standard	950	950	575	1,650	625	180	1,500,000		
Utility	525	525	325	1,400	625	180	1,400,000		
Stud	250	250	150	900	625	180	1,300,000		
	715	715	440	895	625	180	1,400,000		
<b>2x6 Size Adjusted Values</b>									
Select Structural	1,755	1,755	1,075	1,870	625	180	1,900,000		
No. 1	1,105	1,105	650	1,540	625	180	1,600,000		
No. 2	1,105	1,105	650	1,485	625	180	1,600,000		
No. 3	620	620	390	855	625	180	1,400,000		
Stud	650	650	400	850	625	180	1,400,000		
<b>2x8 Size Adjusted Values</b>									
Select Structural	1,620	1,755	990	1,785	625	180	1,900,000		
No. 1	1,020	1,105	600	1,470	625	180	1,600,000		
No. 2	1,020	1,105	600	1,420	625	180	1,600,000		
No. 3	570	620	360	815	625	180	1,400,000		
Stud	570	620	360	815	625	180	1,400,000		
<b>2x10 Size Adjusted Values</b>									
Select Structural	1,485	1,620	910	1,700	625	180	1,900,000		
No. 1	935	1,020	550	1,400	625	180	1,600,000		
No. 2	935	1,020	550	1,350	625	180	1,600,000		
No. 3	525	570	330	775	625	180	1,400,000		
Stud	525	570	330	775	625	180	1,400,000		
<b>2x12 Size Adjusted Values</b>									
Select Structural	1,350	1,485	825	1,700	625	180	1,900,000		
No. 1	850	935	500	1,400	625	180	1,600,000		
No. 2	850	935	500	1,350	625	180	1,600,000		
No. 3	475	525	300	775	625	180	1,400,000		
Stud	475	525	300	775	625	180	1,400,000		
<b>2x14 &amp; Wdr. Size Adjusted Values</b>									
Select Structural	1,215	1,350	745	1,530	625	180	1,900,000		
No. 1	765	850	450	1,260	625	180	1,600,000		
No. 2	765	850	450	1,215	625	180	1,600,000		
No. 3	430	475	270	700	625	180	1,400,000		
Stud	430	475	270	700	625	180	1,400,000		
Specific Gravity (all grades) = 0.49									
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules for Canadian Lumber). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see NLGA Standard Grading Rules for Canadian Lumber. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.49</p>									
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		4/25/1996	



**Allowable Property Values for Hem/Hem-Fir North**

Pacific Lumber Inspection Bureau  
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<b>Hem-Fir/Hem-Fir North</b>									
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity		
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)		
	2" nom.	4" nom.							
<b>BASE VALUES</b>									
Select Structural	1,300		775	1,500	370	145	1,600,000		
No. 1	975		575	1,350	370	145	1,500,000		
No. 2	850		525	1,300	370	145	1,300,000		
No. 3	500		300	725	370	145	1,200,000		
Construction	975		600	1,550	370	145	1,300,000		
Standard	550		325	1,300	370	145	1,200,000		
Utility	250		150	850	370	145	1,100,000		
Stud	675		400	800	370	145	1,200,000		
<b>2x4 Size Adjusted Values</b>									
Select Structural	1,950	1,950	1,165	1,725	370	145	1,600,000		
No. 1	1,465	1,465	865	1,555	370	145	1,500,000		
No. 2	1,275	1,275	790	1,495	370	145	1,300,000		
No. 3	750	750	450	835	370	145	1,200,000		
Construction	975	975	600	1,550	370	145	1,300,000		
Standard	550	550	325	1,300	370	145	1,200,000		
Utility	250	250	150	850	370	145	1,100,000		
Stud	745	745	440	840	370	145	1,200,000		
<b>2x6 Size Adjusted Values</b>									
Select Structural	1,690	1,690	1,010	1,650	370	145	1,600,000		
No. 1	1,270	1,270	750	1,485	370	145	1,500,000		
No. 2	1,105	1,105	685	1,430	370	145	1,300,000		
No. 3	650	650	390	800	370	145	1,200,000		
Stud	675	675	400	800	370	145	1,200,000		
<b>2x8 Size Adjusted Values</b>									
Select Structural	1,560	1,690	930	1,575	370	145	1,600,000		
No. 1	1,170	1,270	690	1,420	370	145	1,500,000		
No. 2	1,020	1,105	630	1,365	370	145	1,300,000		
No. 3	600	650	360	760	370	145	1,200,000		
Stud	600	650	360	760	370	145	1,200,000		
<b>2x10 Size Adjusted Values</b>									
Select Structural	1,430	1,560	855	1,500	370	145	1,600,000		
No. 1	1,075	1,170	635	1,350	370	145	1,500,000		
No. 2	935	1,020	580	1,300	370	145	1,300,000		
No. 3	550	600	330	725	370	145	1,200,000		
Stud	550	600	330	725	370	145	1,200,000		
<b>2x12 Size Adjusted Values</b>									
Select Structural	1,300	1,430	775	1,500	370	145	1,600,000		
No. 1	975	1,075	575	1,350	370	145	1,500,000		
No. 2	850	935	525	1,300	370	145	1,300,000		
No. 3	500	550	300	725	370	145	1,200,000		
Stud	500	550	300	725	370	145	1,200,000		
<b>2x14 &amp; Wdr. Size Adjusted Values</b>									
Select Structural	1,170	1,300	700	1,350	370	145	1,600,000		
No. 1	880	975	520	1,215	370	145	1,500,000		
No. 2	765	850	475	1,170	370	145	1,300,000		
No. 3	450	500	270	655	370	145	1,200,000		
Stud	450	500	270	655	370	145	1,200,000		
Specific Gravity (all grades) = 0.43									
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules for Canadian Lumber). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see NLGA Standard Grading Rules for Canadian Lumber. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.46</p>									
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		4/25/1996	



**Allowable Property Values for S-P-F/S-P-F South**

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**Spruce-Pine-Fir/Spruce-Pine-Fir South**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity	
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)	
	2" nom.	4" nom.						
<b>BASE VALUES</b>								
Select Structural	1,250		575	1,200	335	135	1,300,000	
No. 1	875		400	1,050	335	135	1,200,000	
No. 2	775		350	1,000	335	135	1,100,000	
No. 3	450		200	575	335	135	1,000,000	
Construction	875		400	1,200	335	135	1,000,000	
Standard	500		225	1,000	335	135	900,000	
Utility	225		100	675	335	135	900,000	
Stud	600		275	625	335	135	1,000,000	
<b>2x4 Size Adjusted Values</b>								
Select Structural	1,875	1,875	865	1,380	335	135	1,300,000	
No. 1	1,315	1,315	600	1,210	335	135	1,200,000	
No. 2	1,165	1,165	525	1,150	335	135	1,100,000	
No. 3	675	675	300	660	335	135	1,000,000	
Construction	875	875	400	1,200	335	135	1,000,000	
Standard	500	500	225	1,000	335	135	900,000	
Utility	225	225	100	675	335	135	900,000	
Stud	660	660	305	655	335	135	1,000,000	
<b>2x6 Size Adjusted Values</b>								
Select Structural	1,625	1,625	750	1,320	335	135	1,300,000	
No. 1	1,140	1,140	520	1,155	335	135	1,200,000	
No. 2	1,010	1,010	455	1,100	335	135	1,100,000	
No. 3	585	585	260	635	335	135	1,000,000	
Stud	600	600	275	625	335	135	1,000,000	
<b>2x8 Size Adjusted Values</b>								
Select Structural	1,500	1,625	690	1,260	335	135	1,300,000	
No. 1	1,050	1,140	480	1,105	335	135	1,200,000	
No. 2	930	1,010	420	1,050	335	135	1,100,000	
No. 3	540	585	240	605	335	135	1,000,000	
Stud	540	585	240	605	335	135	1,000,000	
<b>2x10 Size Adjusted Values</b>								
Select Structural	1,375	1,500	635	1,200	335	135	1,300,000	
No. 1	965	1,050	440	1,050	335	135	1,200,000	
No. 2	855	930	385	1,000	335	135	1,100,000	
No. 3	495	540	220	575	335	135	1,000,000	
Stud	495	540	220	575	335	135	1,000,000	
<b>2x12 Size Adjusted Values</b>								
Select Structural	1,250	1,375	575	1,200	335	135	1,300,000	
No. 1	875	965	400	1,050	335	135	1,200,000	
No. 2	775	855	350	1,000	335	135	1,100,000	
No. 3	450	495	200	575	335	135	1,000,000	
Stud	450	495	200	575	335	135	1,000,000	
<b>2x14 &amp; Wdr. Size Adjusted Values</b>								
Select Structural	1,125	1,250	520	1,080	335	135	1,300,000	
No. 1	790	875	360	945	335	135	1,200,000	
No. 2	700	775	315	900	335	135	1,100,000	
No. 3	405	450	180	520	335	135	1,000,000	
Stud	405	450	180	520	335	135	1,000,000	
Specific Gravity (all grades) = 0.42								
<p><b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules for Canadian Lumber). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see NLGA Standard Grading Rules for Canadian Lumber. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.42</p>								
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved		4/25/1996





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**Allowable Property Values -  
Austrian Spruce / Scots Pine from Austria & Czech Republic**

<b>Austrian Spruce/Scots Pine from Austria &amp; Czech Republic</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,300		600	1,200	260	135	1,700,000
No. 1	900		400	1,050	260	135	1,600,000
No. 2	775		350	1,000	260	135	1,400,000
No. 3	450		200	575	260	135	1,300,000
Construction	875		400	1,200	260	135	1,300,000
Standard	500		225	1,000	260	135	1,200,000
Utility	225		100	675	260	135	1,100,000
Stud	600		275	625	260	135	1,300,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,950	1,950	900	1,380	260	135	1,700,000
No. 1	1,350	1,350	600	1,210	260	135	1,600,000
No. 2	1,165	1,165	525	1,150	260	135	1,400,000
No. 3	675	675	300	660	260	135	1,300,000
Construction	875	875	400	1,200	260	135	1,300,000
Standard	500	500	225	1,000	260	135	1,200,000
Utility	225	225	100	675	260	135	1,100,000
Stud	660	660	305	655	260	135	1,300,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,690	1,690	780	1,320	260	135	1,700,000
No. 1	1,170	1,170	520	1,155	260	135	1,600,000
No. 2	1,010	1,010	455	1,100	260	135	1,400,000
No. 3	585	585	260	635	260	135	1,300,000
Stud	600	600	275	625	260	135	1,300,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,560	1,690	720	1,260	260	135	1,700,000
No. 1	1,080	1,170	480	1,105	260	135	1,600,000
No. 2	930	1,010	420	1,050	260	135	1,400,000
No. 3	540	585	240	605	260	135	1,300,000
Stud	540	585	240	605	260	135	1,300,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,430	1,560	660	1,200	260	135	1,700,000
No. 1	990	1,080	440	1,050	260	135	1,600,000
No. 2	855	930	385	1,000	260	135	1,400,000
No. 3	495	540	220	575	260	135	1,300,000
Stud	495	540	220	575	260	135	1,300,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,300	1,430	600	1,200	260	135	1,700,000
No. 1	900	990	400	1,050	260	135	1,600,000
No. 2	775	855	350	1,000	260	135	1,400,000
No. 3	450	495	200	575	260	135	1,300,000
Stud	450	495	200	575	260	135	1,300,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	1,170	1,300	540	1,080	260	135	1,700,000
No. 1	810	900	360	945	260	135	1,600,000
No. 2	700	775	315	900	260	135	1,400,000
No. 3	405	450	180	520	260	135	1,300,000
Stud	405	450	180	520	260	135	1,300,000
Specific Gravity (all grades) = 0.43							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules for Canadian Lumber). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see NLGA Standard Grading Rules for Canadian Lumber. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.43							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 4/29/2004	



**Allowable Property Values - Douglas fir/European Larch from Austria, Czech Republic and Bavaria**

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**Douglas fir/European Larch  
from Austria, Czech Republic,  
and Bavaria**

Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi) 2" nom.	4" nom.	Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)

**BASE VALUES**

Select Structural	No Base Values Approved						
No. 1							
No. 2							
No. 3							
Construction Standard Utility Stud							

**2x4 Size Adjusted Values**

Select Structural	1,900	1,900	850	1,400	440	195	1,800,000
No. 1	1,400	1,400	625	1,250	440	195	1,700,000
No. 2	1,350	1,350	600	1,250	440	195	1,600,000
No. 3	775	775	350	700	440	195	1,400,000
Construction Standard Utility Stud	1,000	1,000	450	1,250	440	195	1,500,000
	575	575	250	1,100	440	195	1,300,000
	275	275	125	700	440	195	1,300,000
	800	800	350	700	440	195	1,400,000

**2x6 Size Adjusted Values**

Select Structural	No 2x6 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							

**2x8 Size Adjusted Values**

Select Structural	No 2x8 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							

**2x10 Size Adjusted Values**

Select Structural	No 2x10 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							

**2x12 Size Adjusted Values**

Select Structural	No 2x12 Values Approved						
No. 1							
No. 2							
No. 3							
Stud							

**2x14 & Wdr. Size Adjusted Values**

Select Structural	No 2x14 & Wdr. Values Approved						
No. 1							
No. 2							
No. 3							
Stud							

Specific Gravity (all grades) = 0.48

**Notes:** All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules No. 17, Para. 200 Table 4). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see WCLIB Standard Grading Rules No. 17. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.48



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**Allowable Property Values - Norway Spruce/Scots Pine from Estonia & Lithuania**

<b>Norway Spruce / Scots Pine Estonia Lithuania</b>							
Grade	Extreme fiber in bending		Tension parallel to grain	Comp. parallel to grain	Comp. Perpen. to grain	Horiz. shear	Modulus of elasticity
	Fb (psi)		Ft (psi)	Fc (psi)	Fc <sup>⊥</sup> (psi)	Fv (psi)	E (psi)
	2" nom.	4" nom.					
<b>BASE VALUES</b>							
Select Structural	1,100		500	1,150	430	130	1,500,000
No. 1	750		350	1,000	430	130	1,300,000
No. 2	650		300	900	430	130	1,100,000
No. 3	375		175	525	430	130	1,000,000
Construction	750		325	1,100	430	130	1,100,000
Standard	425		200	925	430	130	1,000,000
Utility	200		100	600	430	130	900,000
Stud	525		225	575	430	130	1,000,000
<b>2x4 Size Adjusted Values</b>							
Select Structural	1,650	1,650	750	1,325	430	130	1,500,000
No. 1	1,125	1,125	525	1,150	430	130	1,300,000
No. 2	975	975	450	1,035	430	130	1,100,000
No. 3	565	565	265	605	430	130	1,000,000
Construction	750	750	325	1,100	430	130	1,100,000
Standard	425	425	200	925	430	130	1,000,000
Utility	200	200	100	600	430	130	900,000
Stud	580	580	250	605	430	130	1,000,000
<b>2x6 Size Adjusted Values</b>							
Select Structural	1,430	1,430	650	1,265	430	130	1,500,000
No. 1	975	975	455	1,100	430	130	1,300,000
No. 2	845	845	390	990	430	130	1,100,000
No. 3	490	490	230	580	430	130	1,000,000
Stud	525	525	225	575	430	130	1,000,000
<b>2x8 Size Adjusted Values</b>							
Select Structural	1,320	1,430	600	1,210	430	130	1,500,000
No. 1	900	975	420	1,050	430	130	1,300,000
No. 2	780	845	360	945	430	130	1,100,000
No. 3	450	490	210	550	430	130	1,000,000
Stud	450	490	210	550	430	130	1,000,000
<b>2x10 Size Adjusted Values</b>							
Select Structural	1,210	1,320	550	1,150	430	130	1,500,000
No. 1	825	900	385	1,000	430	130	1,300,000
No. 2	715	780	330	900	430	130	1,100,000
No. 3	415	450	195	525	430	130	1,000,000
Stud	415	450	195	525	430	130	1,000,000
<b>2x12 Size Adjusted Values</b>							
Select Structural	1,100	1,210	500	1,150	430	130	1,500,000
No. 1	750	825	350	1,000	430	130	1,300,000
No. 2	650	715	300	900	430	130	1,100,000
No. 3	375	415	175	525	430	130	1,000,000
Stud	375	415	175	525	430	130	1,000,000
<b>2x14 &amp; Wdr. Size Adjusted Values</b>							
Select Structural	990	1,100	450	1,035	430	130	1,500,000
No. 1	675	750	315	900	430	130	1,300,000
No. 2	585	650	270	810	430	130	1,100,000
No. 3	340	375	160	475	430	130	1,000,000
Stud	340	375	160	475	430	130	1,000,000
Specific Gravity (all grades) = 0.43							
<b>Notes:</b> All values are in pounds per square inch (psi). Values for specific widths are the product of the Base Value for the grade and the width adjustment factor (see Standard Grading Rules for Canadian Lumber). Values for specific sizes are rounded to the nearest 5 psi. Property values are for dimension lumber surfaced either green or dry used at 19% maximum moisture content as in most covered structures. For other use conditions see NLGA Standard Grading Rules for Canadian Lumber. Allowable property values are for Normal Loading. Published property values are developed in accordance with ASTM standards D1990, D2555, D245. Published Base Values are approved by the American Lumber Standard Committee Board of Review. Assigned Specific Gravity for all grades = 0.42							
Prepared by Pacific Lumber Inspection Bureau				6/16/2021		Approved 7/26/2001	

## ABOUT PLIB

Founded in 1903, Pacific Lumber Inspection Bureau (PLIB) is a non-profit, accredited lumber and wood products inspection and certification agency. PLIB provides lumber-grading and grade-stamping services to the lumber industry along with a wide range of other inspection and certification services for related wood-products manufacturers including Heat Treatment, Wood Packaging, CE Marking, WUI, Glulam, Cross-Laminated Timber, and Wood Trusses.

In January 2019, PLIB merged operations with the West Coast Lumber Inspection Bureau (WCLIB) and with it, the American Institute of Timber Construction (AITC), retaining both the WCLIB and AITC trademarks. With the merger, PLIB added Glulam and Cross-Laminated Timber quality-control certification to its list of signature services and expanded coverage into the southern United States and Europe.

PLIB is accredited by the American Lumber Standards Committee (ALSC), the Canadian Lumber Standards Accreditation Board (CLSAB), North America's only lumber grading accreditation bodies, and by the International Accreditation Service (IAS), a nonprofit, public-benefit corporation and a subsidiary of the International Code Council (ICC), the governing body that develops the International Building Code (IBC).

For more information about PLIB, visit our website at [www.plib.org](http://www.plib.org).