TABLE SP Boozer 26F

**SOUTHERN PINE**

# THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION

## Structural Glued Laminated Timber

## *ROOF BEAMS*
## *SNOW LOAD*

| $F_{bx}$ | $F_{vx}$ | $E_x$ | $C_D$ | Deflection limit |
|---|---|---|---|---|
| 2600 psi | 225 psi | 1.9 million psi | 1.15 | Span / 180 for TOTAL LOAD |

Simple Span Beams
For Preliminary Design Purposes
Lamination thickness: 1-3/8 in.

| BEAM SIZE | | BEAM | BEAM CAPACITY, UNIFORM LOAD w, plf | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Width | Depth | WEIGHT | SPAN, ft | | | | | | | | | | | | | | | | |
| b, in. | d, in. | plf | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 8 3/8 | 7.3 | 1274 B | 1007 B | 816 B | 674 B | 558 D | 439 D | 352 D | 286 D | 235 D | 196 D | 165 D | 141 D | 121 D | -- | -- | -- | -- |
| 3 1/2 | 9 1/4 | 8.1 | 1555 B | 1228 B | 995 B | 822 B | 691 B | 589 B | 474 D | 385 D | 317 D | 265 D | 223 D | 189 D | 162 D | 140 D | 122 D | 107 D | -- |
| 3 1/2 | 9 1/2 | 8.3 | 1640 B | 1296 B | 1049 B | 867 B | 729 B | 621 B | 513 D | 417 D | 344 D | 287 D | 241 D | 205 D | 176 D | 152 D | 132 D | 116 D | -- |
| 3 1/2 | 9 3/4 | 8.5 | 1727 B | 1365 B | 1105 B | 914 B | 768 B | 654 B | 555 D | 451 D | 372 D | 310 D | 261 D | 222 D | 190 D | 164 D | 143 D | 125 D | 110 D |
| 3 1/2 | 11 1/4 | 9.8 | 2218 S | 1817 B | 1472 B | 1216 B | 1022 B | 871 B | 751 B | 654 B | 571 D | 476 D | 401 D | 341 D | 292 D | 252 D | 220 D | 192 D | 169 D |
| 3 1/2 | 11 7/8 | 10.4 | 2382 S | 2024 B | 1640 B | 1355 B | 1139 B | 970 B | 837 B | 729 B | 641 B | 560 D | 471 D | 401 D | 344 D | 297 D | 258 D | 226 D | 199 D |
| 3 1/2 | 12 5/8 | 11.0 | 2586 S | 2211 S | 1853 B | 1532 B | 1287 B | 1097 B | 946 B | 824 B | 724 B | 641 B | 567 D | 482 D | 413 D | 357 D | 310 D | 272 D | 239 D |
| 3 1/2 | 14 | 12.3 | 2983 S | 2536 S | 2205 S | 1884 B | 1583 B | 1349 B | 1163 B | 1013 B | 890 B | 789 B | 703 B | 631 B | 563 D | 487 D | 423 D | 370 D | 326 D |
| 3 1/2 | 15 3/8 | 13.5 | 3000 * | 2884 S | 2496 S | 2200 S | 1909 B | 1626 B | 1402 B | 1222 B | 1074 B | 951 B | 848 B | 761 B | 687 B | 623 B | 560 D | 490 D | 432 D |
| 3 1/2 | 16 | 14.0 | 3000 * | 3000 * | 2635 S | 2318 S | 2067 B | 1761 B | 1519 B | 1323 B | 1163 B | 1030 B | 919 B | 825 B | 744 B | 675 B | 615 B | 553 D | 487 D |
| 3 1/2 | 16 3/4 | 14.7 | 3000 * | 3000 * | 2806 S | 2464 S | 2196 S | 1930 B | 1664 B | 1450 B | 1274 B | 1129 B | 1007 B | 904 B | 816 B | 740 B | 674 B | 615 B | 558 D |
| 3 1/2 | 18 | 15.8 | 3000 * | 3000 * | 3000 * | 2717 S | 2415 S | 2174 S | 1922 B | 1674 B | 1472 B | 1304 B | 1163 B | 1044 B | 942 B | 853 B | 776 B | 708 B | 649 B |
| 3 1/2 | 19 3/8 | 17.0 | 3000 * | 3000 * | 3000 * | 3000 * | 2667 S | 2394 S | 2172 S | 1940 B | 1705 B | 1510 B | 1347 B | 1209 B | 1089 B | 985 B | 895 B | 817 B | 749 B |
| 3 1/2 | 20 5/8 | 18.0 | 3000 * | 3000 * | 3000 * | 3000 * | 2909 S | 2604 S | 2358 S | 2154 S | 1932 B | 1712 B | 1526 B | 1366 B | 1230 B | 1113 B | 1011 B | 923 B | 846 B |
| 5 1/2 | 8 3/8 | 11.5 | 2003 B | 1582 B | 1282 B | 1059 B | 877 D | 690 D | 552 D | 449 D | 370 D | 309 D | 260 D | 221 D | 189 D | -- | -- | -- | -- |
| 5 1/2 | 9 1/4 | 12.7 | 2443 B | 1930 B | 1563 B | 1292 B | 1086 B | 925 B | 744 D | 605 D | 499 D | 416 D | 350 D | 298 D | 255 D | 221 D | 192 D | 168 D | -- |
| 5 1/2 | 9 1/2 | 13.1 | 2577 B | 2036 B | 1649 B | 1363 B | 1145 B | 976 B | 806 D | 655 D | 540 D | 450 D | 379 D | 323 D | 277 D | 239 D | 208 D | 182 D | -- |
| 5 1/2 | 9 3/4 | 13.4 | 2714 B | 2144 B | 1737 B | 1436 B | 1206 B | 1028 B | 872 D | 709 D | 584 D | 487 D | 410 D | 349 D | 299 D | 258 D | 225 D | 197 D | 173 D |
| 5 1/2 | 11 1/4 | 15.5 | 3485 S | 2855 B | 2313 B | 1911 B | 1606 B | 1368 B | 1180 B | 1028 B | 897 D | 748 D | 630 D | 536 D | 459 D | 397 D | 345 D | 302 D | 266 D |
| 5 1/2 | 11 7/8 | 16.3 | 3742 S | 3181 B | 2577 B | 2129 B | 1789 B | 1525 B | 1315 B | 1145 B | 1007 B | 879 D | 741 D | 630 D | 540 D | 467 D | 406 D | 355 D | 313 D |
| 5 1/2 | 12 5/8 | 17.4 | 4063 S | 3474 S | 2912 B | 2407 B | 2023 B | 1723 B | 1486 B | 1294 B | 1138 B | 1008 B | 890 D | 757 D | 649 D | 561 D | 488 D | 427 D | 376 D |
| 5 1/2 | 14 | 19.3 | 4688 S | 3985 S | 3465 S | 2960 B | 2487 B | 2119 B | 1827 B | 1592 B | 1399 B | 1238 B | 1101 B | 986 B | 885 D | 765 D | 665 D | 582 D | 512 D |
| 5 1/2 | 15 3/8 | 21.1 | 5365 S | 4532 S | 3923 S | 3458 S | 3000 B | 2556 B | 2204 B | 1920 B | 1683 B | 1487 B | 1322 B | 1184 B | 1065 B | 964 B | 876 B | 771 D | 678 D |
| 5 1/2 | 16 | 22.0 | 5693 S | 4794 S | 4140 S | 3643 S | 3248 B | 2768 B | 2387 B | 2077 B | 1819 B | 1607 B | 1429 B | 1279 B | 1151 B | 1042 B | 947 B | 865 B | 765 D |
| 5 1/2 | 16 3/4 | 23.0 | 6000 * | 5119 S | 4409 S | 3872 S | 3452 S | 3033 B | 2616 B | 2271 B | 1989 B | 1757 B | 1563 B | 1399 B | 1259 B | 1139 B | 1036 B | 945 B | 866 B |
| 5 1/2 | 18 | 24.8 | 6000 * | 5693 S | 4879 S | 4269 S | 3795 S | 3416 S | 3010 B | 2613 B | 2289 B | 2022 B | 1798 B | 1609 B | 1449 B | 1311 B | 1192 B | 1088 B | 997 B |
| 5 1/2 | 19 3/8 | 26.6 | 6000 * | 6000 * | 5430 S | 4731 S | 4192 S | 3763 S | 3413 S | 3016 B | 2642 B | 2334 B | 2076 B | 1858 B | 1672 B | 1513 B | 1376 B | 1256 B | 1151 B |
| 5 1/2 | 20 5/8 | 28.4 | 6000 * | 6000 * | 5964 S | 5175 S | 4571 S | 4093 S | 3705 S | 3385 S | 2985 B | 2636 B | 2345 B | 2099 B | 1889 B | 1709 B | 1554 B | 1419 B | 1300 B |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE SPECIFICATIONS**: This table applies to straight, simply supported glued laminated timber beams under dry conditions of use.

Beams must be laterally supported at the top along the length of the beam and at the top and bottom at the ends.

The load carrying capacities tabulated are for total load including the weight of the member.

BEAM WEIGHT: 36.0 pounds per cubic foot was used to determine beam weight per lineal foot shown in the table.

DESIGN VALUE MODIFICATIONS: The allowable stress in bending, $F_{bx}$, has been adjusted by the AITC volume factor, $C_V$.

For determination of load carrying capacities governed by shear, loads within a distance "d" (the depth of the beam) from the ends have been neglected.

DEFLECTION LIMITS: For roof beams, deflection is limited to span /180 for total load.

CONTROLLING VALUES: Values marked with a D are controlled by deflection, B are bending controlled, and S are shear controlled.

SPAN: Span is defined as the length from centerline to centerline of bearing. This span is the length used in standard engineering equations to calculate deflection, bending and shear.

* The values have been limited to reasonable capacities. Engineering calculations may allow for greater capacities.

**While these capacity tables have been prepared in accordance with recognized engineering principles and are based on the most accurate and reliable technical data available, these tables should not be used or relied upon for any general or specific application without competent professional examination and verification of their accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.**

**AITC MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS SUITABLE FOR ANY GENERAL OR SPECIFIC USE OR IS FREE FROM INFRINGEMENT OF ANY PATENT OR COPYRIGHT. ANY USER OF THIS INFORMATION ASSUMES ALL RISK AND LIABILITY ARISING FROM SUCH USE.**

**January, 2003**

TABLE Boozer 26F

**SOUTHERN PINE**

**THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION**

**Structural Glued Laminated Timber**

# *ROOF BEAMS*
# *SNOW LOAD*

| $F_{bx}$ | $F_{vx}$ | $E_x$ | $C_D$ | Deflection limit |
|---|---|---|---|---|
| 2600 psi | 225 psi | 1.9 million psi | 1.15 | Span / 180 for TOTAL LOAD |

Simple Span Beams
For Preliminary Design Purposes
Lamination thickness: 1-3/8 in.

| BEAM SIZE | | BEAM | BEAM CAPACITY, UNIFORM LOAD w, plf | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Width | Depth | WEIGHT | SPAN, ft | | | | | | | | | | | | | | | |
| b, in. | d, in. | plf | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 8 3/8 | 7.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 9 1/4 | 8.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 9 1/2 | 8.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 9 3/4 | 8.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 11 1/4 | 9.8 | 150 D | 133 D | 119 D | 106 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 11 7/8 | 10.4 | 176 D | 156 D | 140 D | 125 D | 113 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 12 5/8 | 11.0 | 211 D | 188 D | 168 D | 151 D | 135 D | 122 D | 111 D | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 14 | 12.3 | 288 D | 256 D | 229 D | 205 D | 185 D | 167 D | 151 D | 137 D | 125 D | 115 D | 105 D | -- | -- | -- | -- | -- |
| 3 1/2 | 15 3/8 | 13.5 | 382 D | 340 D | 303 D | 272 D | 245 D | 221 D | 200 D | 182 D | 166 D | 152 D | 139 D | 128 D | 118 D | 109 D | -- | -- |
| 3 1/2 | 16 | 14.0 | 430 D | 383 D | 342 D | 306 D | 276 D | 249 D | 226 D | 205 D | 187 D | 171 D | 157 D | 144 D | 133 D | 123 D | 113 D | 105 D |
| 3 1/2 | 16 3/4 | 14.7 | 494 D | 439 D | 392 D | 352 D | 316 D | 286 D | 259 D | 235 D | 215 D | 196 D | 180 D | 165 D | 152 D | 141 D | 130 D | 121 D |
| 3 1/2 | 18 | 15.8 | 597 B | 545 D | 487 D | 436 D | 393 D | 355 D | 321 D | 292 D | 266 D | 244 D | 223 D | 205 D | 189 D | 175 D | 161 D | 150 D |
| 3 1/2 | 19 3/8 | 17.0 | 689 B | 636 B | 588 B | 544 D | 490 D | 442 D | 401 D | 364 D | 332 D | 304 D | 279 D | 256 D | 236 D | 218 D | 201 D | 187 D |
| 3 1/2 | 20 5/8 | 18.0 | 778 B | 718 B | 665 B | 617 B | 574 B | 534 D | 484 D | 440 D | 401 D | 367 D | 336 D | 309 D | 284 D | 263 D | 243 D | 225 D |
| 5 1/2 | 8 3/8 | 11.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 9 1/4 | 12.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 9 1/2 | 13.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 9 3/4 | 13.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 11 1/4 | 15.5 | 235 D | 209 D | 187 D | 167 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 11 7/8 | 16.3 | 277 D | 246 D | 220 D | 197 D | 177 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 12 5/8 | 17.4 | 332 D | 295 D | 264 D | 237 D | 213 D | 192 D | 174 D | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 14 | 19.3 | 453 D | 403 D | 360 D | 323 D | 290 D | 262 D | 238 D | 216 D | 197 D | 180 D | 165 D | -- | -- | -- | -- | -- |
| 5 1/2 | 15 3/8 | 21.1 | 600 D | 534 D | 476 D | 427 D | 385 D | 347 D | 315 D | 286 D | 261 D | 239 D | 219 D | 201 D | 185 D | 171 D | -- | -- |
| 5 1/2 | 16 | 22.0 | 676 D | 601 D | 537 D | 481 D | 433 D | 391 D | 355 D | 323 D | 294 D | 269 D | 246 D | 227 D | 209 D | 193 D | 178 D | 165 D |
| 5 1/2 | 16 3/4 | 23.0 | 776 D | 690 D | 616 D | 552 D | 497 D | 449 D | 407 D | 370 D | 337 D | 309 D | 283 D | 260 D | 239 D | 221 D | 204 D | 189 D |
| 5 1/2 | 18 | 24.8 | 917 B | 846 B | 765 D | 685 D | 617 D | 557 D | 505 D | 459 D | 419 D | 383 D | 351 D | 323 D | 297 D | 274 D | 254 D | 235 D |
| 5 1/2 | 19 3/8 | 26.6 | 1058 B | 977 B | 904 B | 839 B | 769 D | 695 D | 630 D | 573 D | 522 D | 477 D | 438 D | 402 D | 370 D | 342 D | 316 D | 293 D |
| 5 1/2 | 20 5/8 | 28.4 | 1196 B | 1103 B | 1021 B | 948 B | 882 B | 823 B | 760 D | 691 D | 630 D | 576 D | 528 D | 485 D | 447 D | 413 D | 382 D | 354 D |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE SPECIFICATIONS**: This table applies to straight, simply supported glued laminated timber beams under dry conditions of use.

Beams must be laterally supported at the top along the length of the beam and at the top and bottom at the ends.

The load carrying capacities tabulated are for total load including the weight of the member.

BEAM WEIGHT: 36.0 pounds per cubic foot was used to determine beam weight per lineal foot shown in the table.

DESIGN VALUE MODIFICATIONS: The allowable stress in bending, $F_{bx}$, has been adjusted by the AITC volume factor, $C_V$.

For determination of load carrying capacities governed by shear, loads within a distance "d" (the depth of the beam) from the ends have been neglected.

DEFLECTION LIMITS: For floor beams, deflection is limited to span/360 for live load.

CONTROLLING VALUES: Values marked with a D are controlled by deflection, B are bending controlled, and S are shear controlled.

SPAN: Span is defined as the length from centerline to centerline of bearing. This span is the length used in standard engineering equations to calculate deflection, bending and shear.

* The values have been limited to reasonable capacities. Engineering calculations may allow for greater capacities.

**While these capacity tables have been prepared in accordance with recognized engineering principles and are based on the most accurate and reliable technical data available, these tables should not be used or relied upon for any general or specific application without competent professional examination and verification of their accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.**

**AITC MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS SUITABLE FOR ANY GENERAL OR SPECIFIC USE OR IS FREE FROM INFRINGEMENT OF ANY PATENT OR COPYRIGHT. ANY USER OF THIS INFORMATION ASSUMES ALL RISK AND LIABILITY ARISING FROM SUCH USE.**

**January, 2003**

TABLE SP Boozer 26F

**SOUTHERN PINE**

**THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION**

**Structural Glued Laminated Timber**

## *ROOF BEAMS*
## *SNOW LOAD*

| $F_{bx}$ | $F_{vx}$ | $E_x$ | $C_D$ | Deflection limit |
|---|---|---|---|---|
| 2600 psi | 225 psi | 1.9 million psi | 1.15 | Span / 180 for TOTAL LOAD |

Simple Span Beams
For Preliminary Design Purposes
Lamination thickness: 1-3/8 in.

| BEAM SIZE | | BEAM | BEAM CAPACITY, UNIFORM LOAD w, plf | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Width | Depth | WEIGHT | SPAN, ft | | | | | | | | | | | | | | | | |
| b, in. | d, in. | plf | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 8 3/8 | 7.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 9 1/4 | 8.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 9 1/2 | 8.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 9 3/4 | 8.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 11 1/4 | 9.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 11 7/8 | 10.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 12 5/8 | 11.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 14 | 12.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 15 3/8 | 13.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 16 | 14.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 16 3/4 | 14.7 | 112 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 18 | 15.8 | 139 D | 129 D | 120 D | 112 D | 105 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 19 3/8 | 17.0 | 173 D | 161 D | 150 D | 140 D | 131 D | 123 D | 115 D | 108 D | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 1/2 | 20 5/8 | 18.0 | 209 D | 194 D | 181 D | 169 D | 158 D | 148 D | 139 D | 130 D | 122 D | 115 D | 109 D | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 8 3/8 | 11.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 9 1/4 | 12.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 9 1/2 | 13.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 9 3/4 | 13.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 11 1/4 | 15.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 11 7/8 | 16.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 12 5/8 | 17.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 14 | 19.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 15 3/8 | 21.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 16 | 22.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 16 3/4 | 23.0 | 176 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 18 | 24.8 | 218 D | 203 D | 189 D | 177 D | 165 D | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 19 3/8 | 26.6 | 272 D | 253 D | 236 D | 220 D | 206 D | 193 D | 181 D | 170 D | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5 1/2 | 20 5/8 | 28.4 | 328 D | 306 D | 285 D | 266 D | 248 D | 233 D | 218 D | 205 D | 192 D | 181 D | 171 D | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0 | 0 | 0.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**TABLE SPECIFICATIONS**: This table applies to straight, simply supported glued laminated timber beams under dry conditions of use.

Beams must be laterally supported at the top along the length of the beam and at the top and bottom at the ends.

The load carrying capacities tabulated are for total load including the weight of the member.

BEAM WEIGHT: 36.0 pounds per cubic foot was used to determine beam weight per lineal foot shown in the table.

DESIGN VALUE MODIFICATIONS: The allowable stress in bending, $F_{bx}$, has been adjusted by the AITC volume factor, $C_V$.

For determination of load carrying capacities governed by shear, loads within a distance "d" (the depth of the beam) from the ends have been neglected.

DEFLECTION LIMITS: For roof beams, deflection is limited to span /180 for total load.

CONTROLLING VALUES: Values marked with a D are controlled by deflection, B are bending controlled, and S are shear controlled.

SPAN: Span is defined as the length from centerline to centerline of bearing. This span is the length used in standard engineering equations to calculate deflection, bending and shear.

* The values have been limited to reasonable capacities. Engineering calculations may allow for greater capacities.

**While these capacity tables have been prepared in accordance with recognized engineering principles and are based on the most accurate and reliable technical data available, these tables should not be used or relied upon for any general or specific application without competent professional examination and verification of their accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.**

**AITC MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS SUITABLE FOR ANY GENERAL OR SPECIFIC USE OR IS FREE FROM INFRINGEMENT OF ANY PATENT OR COPYRIGHT. ANY USER OF THIS INFORMATION ASSUMES ALL RISK AND LIABILITY ARISING FROM SUCH USE.**

**January, 2003**