



Versa-Lam® LVL 1.8E 2650
Large Columns: Allowable Axial Load Table

Column Length (ft)	Allowable Axial Load (lb)					
	3 1/2" x 9 1/4"			3 1/2" x 11 7/8"		
	100%	115%	125%	100%	115%	125%
4	38,890	42,580	44,800	49,920	54,660	57,520
5	32,470	34,790	36,150	41,680	44,660	46,410
6	26,670	28,180	29,060	34,250	36,180	37,310
7	22,000	23,040	23,640	28,250	29,590	30,340
8	18,330	19,070	19,510	23,540	24,490	25,050
9	15,460	16,010	16,320	19,850	20,550	20,950
10	13,180	13,590	13,830	16,920	17,450	17,760
11	11,350	11,670	11,860	14,580	14,990	15,230
12	9,870	10,130	10,270	12,670	13,000	13,190
13	8,660	8,860	8,980	11,120	11,380	11,520
14	7,650	7,820	7,910	9,820	10,040	10,160

Notes:

1. Table assumes that the column is braced at column ends only (in each direction). Effective column length is equal to actual column length.
2. Allowable loads are based upon one-piece (solid) column members used in dry service conditions. BC Calc® sizing software (www.BCCalc.com) may be used for multi-piece column design.
3. Allowable loads are based on an eccentricity value equal to 0.167 multiplied by either the column thickness or width (worst case).
4. Allowable loads are based on axial loaded columns using the design provisions of the 2024 National Design Specification (NDS) for Wood Construction. Table capacity values based upon a buckling length coefficient, K_e equal to 1.0 (rotation free, translation fixed at each column end per NDS Appendix G). A K_e coefficient of 1.0 conservatively models typical wood column applications. For other end fixity conditions, contact Boise Cascade EWP Engineering. For side or other combined bending and axial loads, see provisions in 2024 NDS.
5. Lateral loads (wind loading) are not considered in this table. BC Calc® sizing software (www.BCCalc.com) may be used for out of plane lateral load column application design.

Reference Design Values:

- Modulus of Elasticity (E_t) (True / Shear Free) = 1.8×10^6 lb/in²
- Modulus of Elasticity (E_a) (Apparent) = 1.7×10^6 lb/in²
- Modulus of Elasticity (E_{min}) (Lateral Stability) = 0.9×10^6 lb/in²
- Flexural Stress ($F_{b||}$) (Parallel to Gluelines) = 2650 lb/in²
- Flexural Stress ($F_{b\perp}$) (Perpendicular to Gluelines) = 2400 lb/in²
- Compression Parallel to Grain ($F_{c||}$) = 3000 lb/in²
- Compression Perpendicular to Grain ($F_{c\perp||}$) (Parallel to Gluelines) = 750 lb/in²
- Compression Perpendicular to Grain ($F_{c\perp\perp}$) (Perpendicular to Gluelines) = 610 lb/in²