



Sample Calculation for Uniform Vertical load Capacity

Properties based on Panel Design Specification recognized by the code

Rim Board Properties	
$d_1 =$	1 1/8 in.
$d_2 =$	12 in.
$F_c A_{\text{-perp}} =$	6,750 lbf/ft
$EI_{\text{-perp}} =$	495,000 lbf-in. ² /ft
$A =$	13.5 in. ² /ft
$I =$	1.424 in. ⁴ /ft
$F_c =$	500 psi
$E =$	0.348×10^6 psi
$COV_E =$	0.250
$E_{\text{min}} =$	0.127
$K_e =$	0.900
$c =$	0.800
$C_D =$	1.000
$C_M(F_c) =$	1.000
$C_M(E) =$	1.000
$C_t =$	1.000
$C_F =$	1.000
$A =$	13.500 in. ²
Ultimate Vertical Load Capacity	
$E' =$	0.348×10^6 psi
$F_c^* =$	500 psi
$P =$	6,750 lbf
$P' =$	6,750 lbf/ft

Sill Plate Properties	
$F_{c\perp} =$	360 psi
$d_1 =$	1 1/8 in.
$d_2 =$	12 in.
$C_D =$	1.000
$C_M(F_c) =$	1.000
$C_t =$	1.000
$C_F =$	1.000
$F_{c\perp}^* =$	360 psi
$A =$	13.500 in. ²
Ultimate Vertical Load Capacity	
$P =$	4,860 lbf
$P' =$	4,860 lbf/ft

Sheathing F_c -perp

Calculated Vertical Load Capacity									
L_{U1} , in	L_{U2} , in	L_{e1} / d_1	L_{e2} / d_2	L_e / d	$F_c E$	C_p	P_{cr} , lbf	P_n , lbf/ft	P_n' , lbf/ft
16	16	12.80	1.20	12.80	637	0.7675	5,181	5,150	4,850
24	24	19.20	1.80	19.20	283	0.4785	3,230	3,200	3,200