

Shear Walls

In-Plane Shear Design

Shear walls utilizing block or surface splines shall be sized to resist all code required wind and seismic loads without exceeding the allowable loads provided in Table 6. The maximum panel height-to-width ratio shall be 2:1. Shearwall chords, holdowns, and connections to transfer shear forces between the wall and surrounding structure shall be designed in accordance with accepted engineering practice. Allowable strengths for shear walls with structural splines along each panel edge shall be designed in accordance with accepted engineering practice and subject to the limitations for wood sheathed shear walls.

**Table 6: Allowable In-Plane Shear Strength (Pounds per Foot)
for SIP Shear Walls (Wind and Seismic Loads in Seismic Design Categories A, B and C)^{1,2}**

Spline Type ³	Nominal SIP Thickness (in.)	Minimum Facing Connections ^{2,4}			Shear Strength (plf)
		Chord ²	Plate ²	Spline ³	
Block or Surface Spline	4.625	0.131"x 2-1/2" nails, 6" oc	0.131"x 2-1/2" nails, 6" oc	0.131"x 2-1/2" nails, 6" oc	380
	6.625	0.131"x 2-1/2" nails, 6" oc	0.131"x 2-1/2" nails, 6" oc	0.131"x 2-1/2" nails, 6" oc	380
	8.375	0.131"x 2-1/2" nails, 6" oc	0.131"x 2-1/2" nails, 6" oc	0.131"x 2-1/2" nails, 6" oc	400

¹ Maximum shear wall dimension ratio shall not exceed 2:1 (height : width) for resisting wind or seismic loads.

² Chords, holdowns, and connection to other structural elements must be designed by a registered design professional in accordance with accepted engineering practice.

³ Spline type at interior panel-to-panel joints only, solid chord members are required at each end of each shearwall segment.

⁴ Required connections must be made on each side of the panel. Dimensional or engineered lumber shall have an equivalent specific gravity of 0.42 or greater.



Force
Shear walls are vertical walls that are used to help frames resist sideways forces.