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Shear wall Sole Plate Fastening Recommendations into Trus Joist TimberStrand® LSL Structural Composite Lumber

The shear transfer between upper-level wood framed shear walls via their sole plate fasteners into the rimboard/blocking below is a critical connection that needs careful specification.

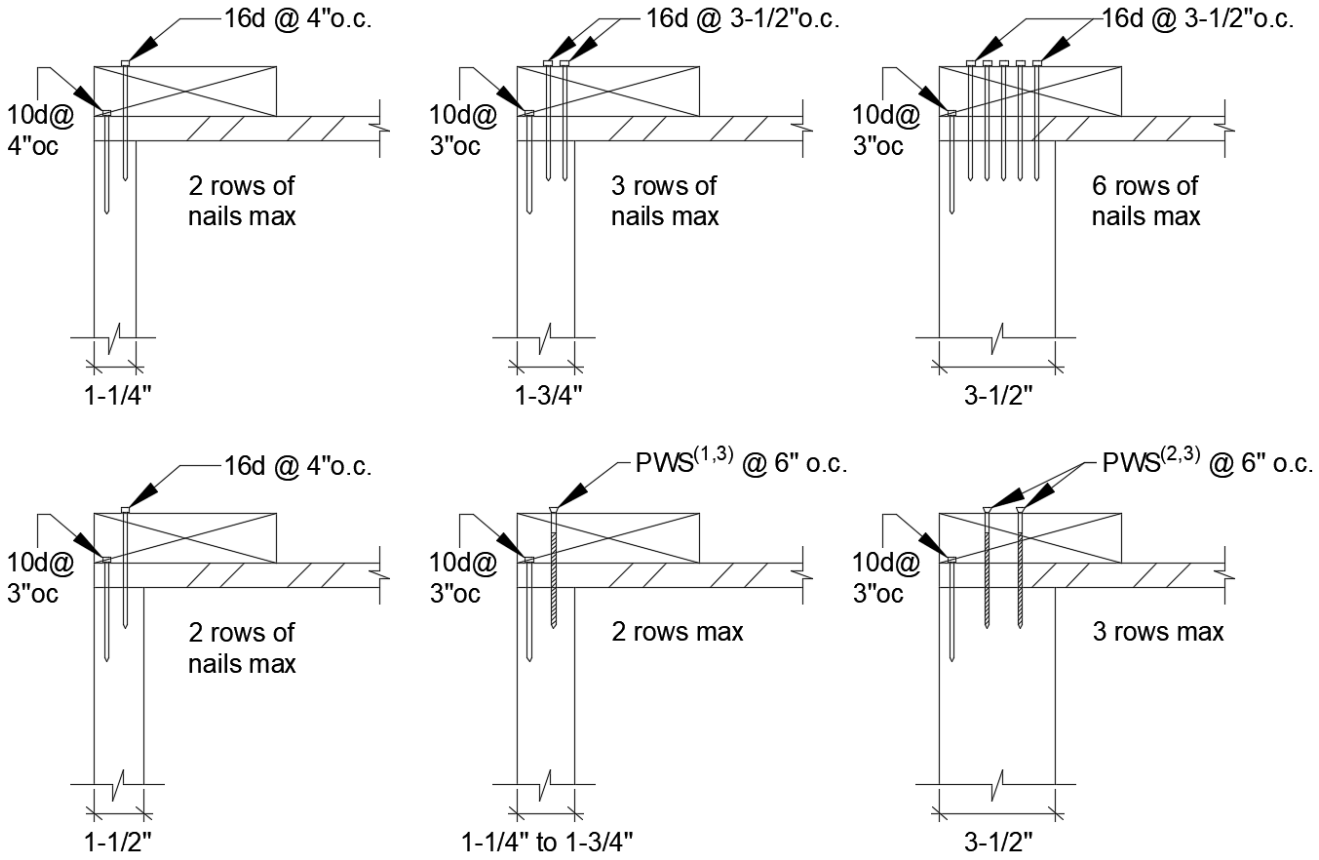
Weyerhaeuser evaluates and promotes TimberStrand® LSL as the preferred rimboard/blocking material due to economics, TJI® joist depth compatibility, width availability, fastening capabilities, and meeting the criteria in the 2018 IBC section 2303.1.13.

The sole plate's fastener type, number of rows, spacing and the ***width*** of the TimberStrand® LSL rim board/blocking should be properly specified, scheduled, and detailed in the construction documents. A clear specification also helps suppliers create an accurate material list and avoids framing issues during construction.

Weyerhaeuser publishes two documents to help an engineer of record to correctly specify TimberStrand® LSL to avoid potential splitting and achieve lateral shear transfer.

- ICC-ES ESR-1387
- Technical Bulletin TB-206

Section details below summarize the fastener minimum spacings, maximum number of rows and width requirements: (**Note**: PWS = Proprietary Wood Screws; 1.25" & 1.5" widths are 1.3E grade, while 1.75" & 3.5" are 1.55E grade. Minimum edge distances and spacing between rows per TB-206).



(1) For 1-3/4" TimberStrand® LSL, a single row of Strong-Tie® SDWS Timber screws or SDWH Hex screws may be installed at 4" o.c. to attach the wall plate to rim board.
(2) For 3-1/2" TimberStrand® LSL, two rows of Strong-Tie® SDWS Timber screws or SDWH Hex screws may be installed at 4" o.c. to attach the wall plate to rim board.
(3) For additional information, reference Simpson Strong-Tie® engineering letter, *Sole or Top Plate to Rim/Blocking using SDWS and SDWH Screw (L-F-PLTRMBLK21)*.