

Connecting a Deck to a SIPs House

Q I'm building a house using structural insulated panels (SIPs), and plans call for a porch in front and a deck in back. What's the best way to attach them to the house?

A Paul Malko, technical director at Foard Panel and a speaker at JLC Live, responds: Part of the answer depends on the rim detail. If the SIPs land on top of a conventionally framed deck, you can use 1 1/8-inch-thick structural rim boards and attach the deck ledger as prescribed by the code. If a SIP rim is used, the panel by itself would not be strong enough for attaching a deck or porch ledger to. The foam doesn't have enough compressive strength to be through-bolted.

That said, we have two ways of beefing up the outer skin of a SIP or SIP rim. The first is by adding double 7/16-inch-OSB nailers behind the outer sheathing, for a total thickness of 1 5/16 inches of OSB. This strategy creates a heavier outer skin, but I would not recommend going that route for attaching anything but the smallest deck or porch.

For the second method, we embed a 9 1/2-inch-wide by 1 7/8-inch-thick LVL behind the outer skin of the insulated rim, and attach a pressure-treated ledger, which will hold the deck framing, to the outside with SDS or TimberLok screws that don't need to be predrilled. Even with the embedded LVL, I would not proceed without careful engineering that takes into consideration all the particulars of the project.

The third and best option is building a deck or porch that is independent of the house with no direct connection to the house for support. With planning, the footings for the deck or porch can be made integral with the house foundation in a monolithic pour. Alternatively, porch footings can be attached to the foundation with steel dowels. The freestanding structure is then built with a small gap

between the house and deck to encourage drying.

If a deck (or porch) is built as an independent structure, lateral bracing will be needed to prevent racking; you can either install diagonal bracing between the posts, or anchor the structure back to the house.

For anchoring to a concrete foundation or to the house structure, I recommend the Maine Deck Bracket, as shown in the drawing below. ♦

This article originally appeared in JLC The Journal of Light Construction.

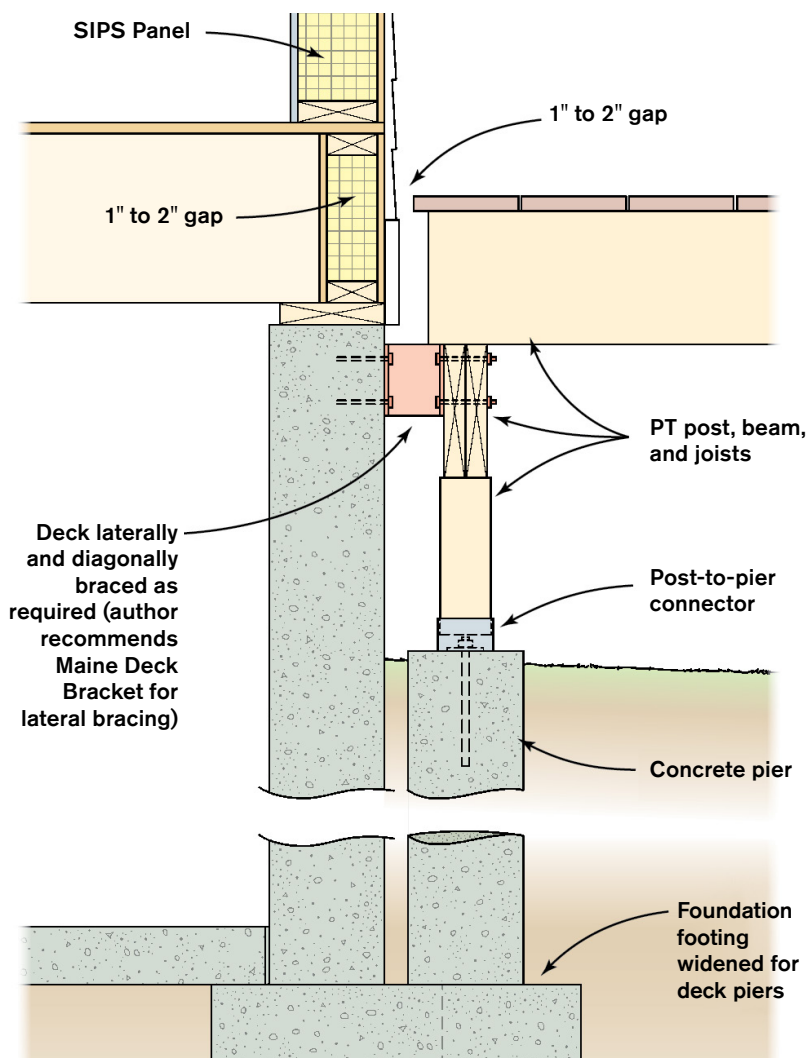


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