

## Technical Tip

### Free-Standing Exterior Deck With ZIP System® R-Sheathing

A typical exterior wood-framed deck is commonly attached to the outside wall of a residential building using a pressure treated wood ledger that is either thru-bolted, or lag-screwed to a solid wood rim board positioned directly behind the wall sheathing. Deck joists are then typically connected to the ledger with metal hangers. This general approach to deck construction is appropriate when standard ZIP System sheathing is installed over a solid wood rim board. See the typical exterior wood deck connection detail on [zipsystem.com](http://zipsystem.com) for more information.

ZIP System R-Sheathing incorporates an insulating foam layer between sheathing and the rim board. While this foam layer contributes to the energy efficiency of the wall, it provides no structural benefit. The foam thickness spaces the ledger board further away from the rim board which lessens its ability to support the vertical load of the deck. Because of the foam layer, the force from the deck has to be supported differently than traditional wood sheathed walls.

When building a wood deck where ZIP System R-Sheathing is used, Huber Engineered Woods recommends building a free-standing or “self-supported” deck. Free-standing decks do not utilize the adjoining wall of a house to support vertical loads. Instead, that portion of the deck is supported with beams and posts. The deck can be attached to the building for the purpose of lateral stability but not to support any vertical loading from the deck. Free-standing decks are commonly constructed when attaching to cantilevered walls and overhangs as shown in the following illustration.

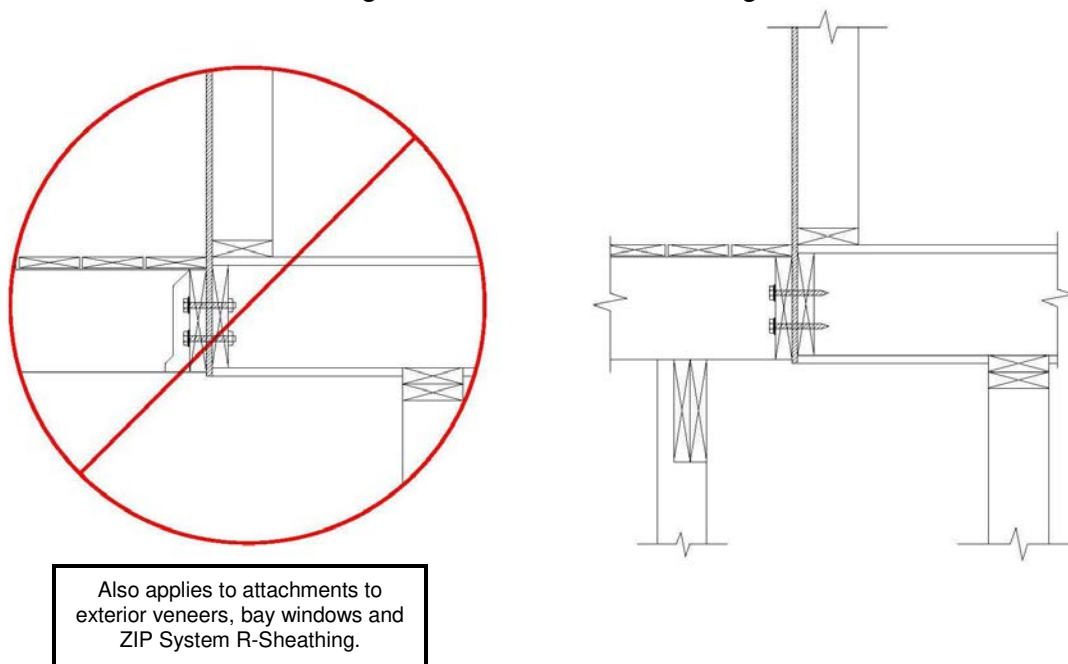


Figure 1: Free-standing Deck Construction for Cantilevered Walls and Overhangs

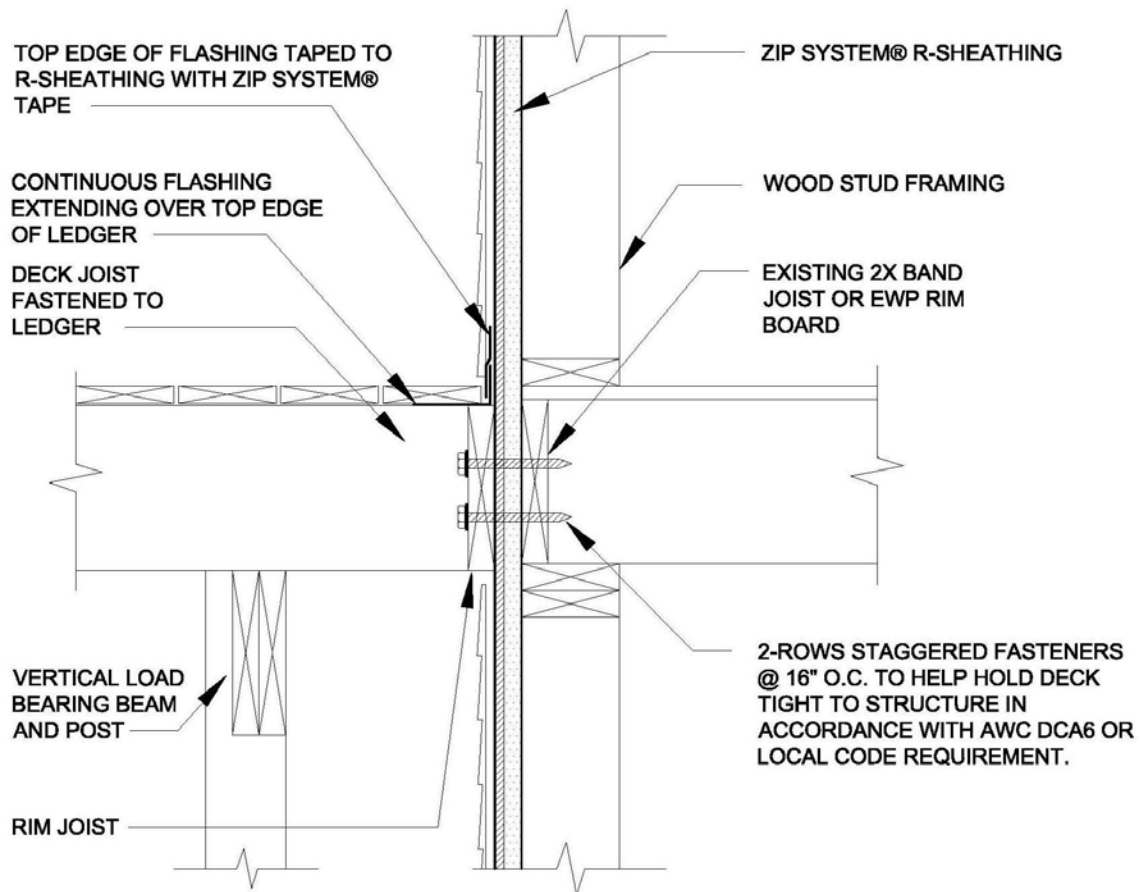


Figure 2: Self-supporting Deck Fastened to R-Sheathing Wall Assembly

Please refer to the American Wood Council Design for Code Acceptance 6, *Prescriptive Residential Wood Deck Construction Guide*, for more information on the construction of free-standing wood decks.

Please visit [zipsystem.com](http://zipsystem.com) or contact our technical services department at 800-933-9220 ext. 2716 with any questions or comments.