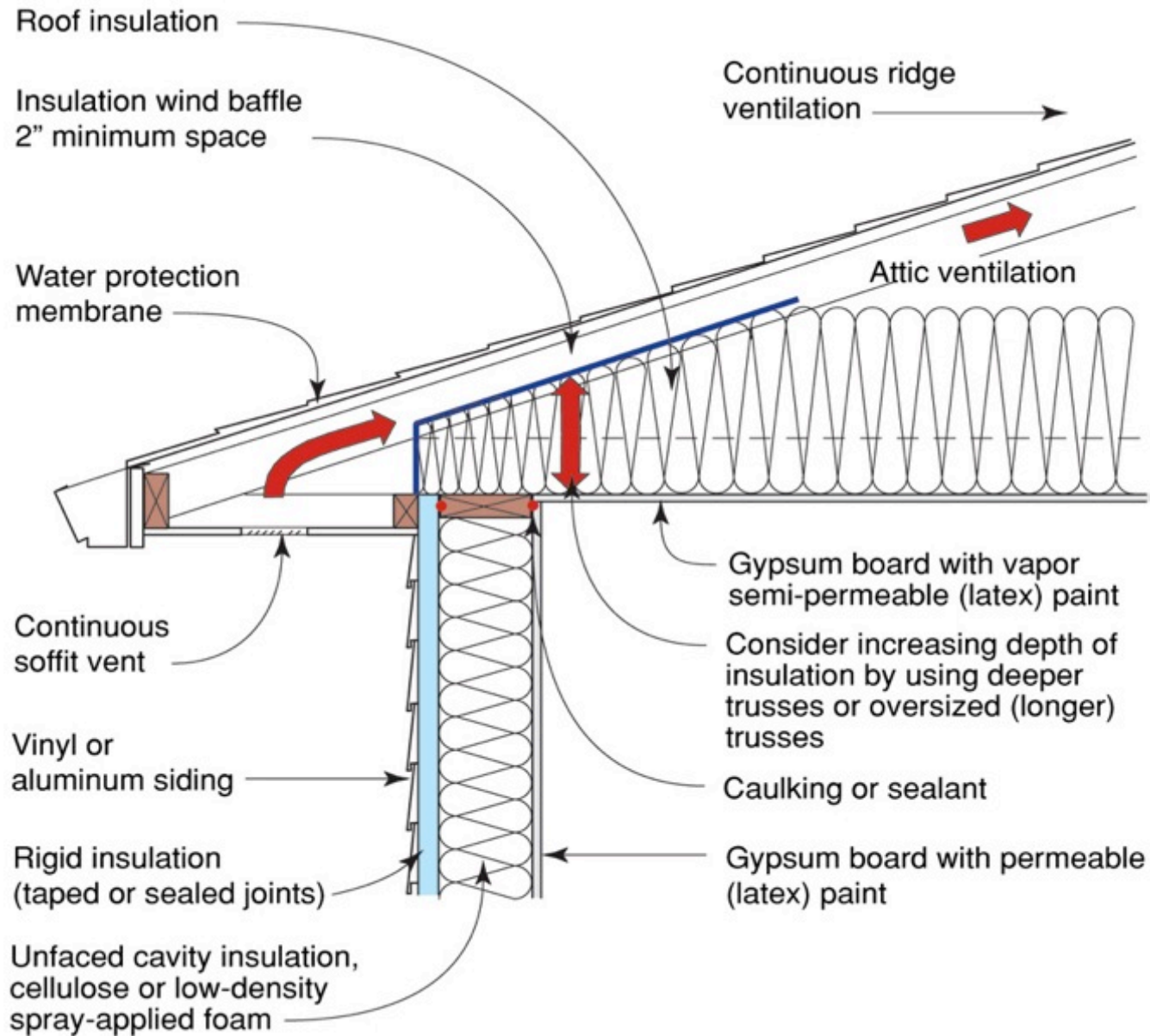


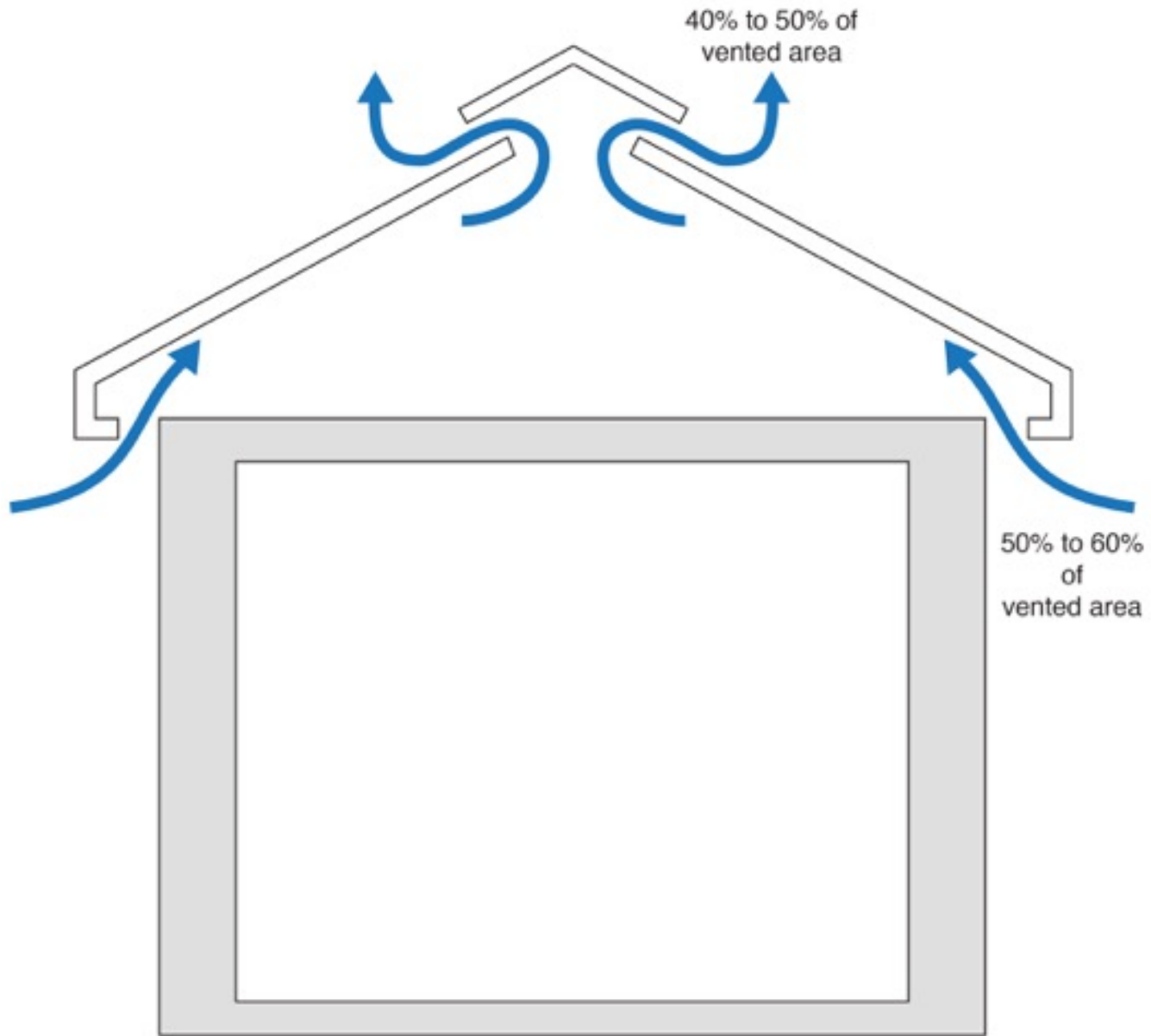
Joseph Lstiburek, Ph.D., P.Eng, ASHRAE Fellow

Building Science

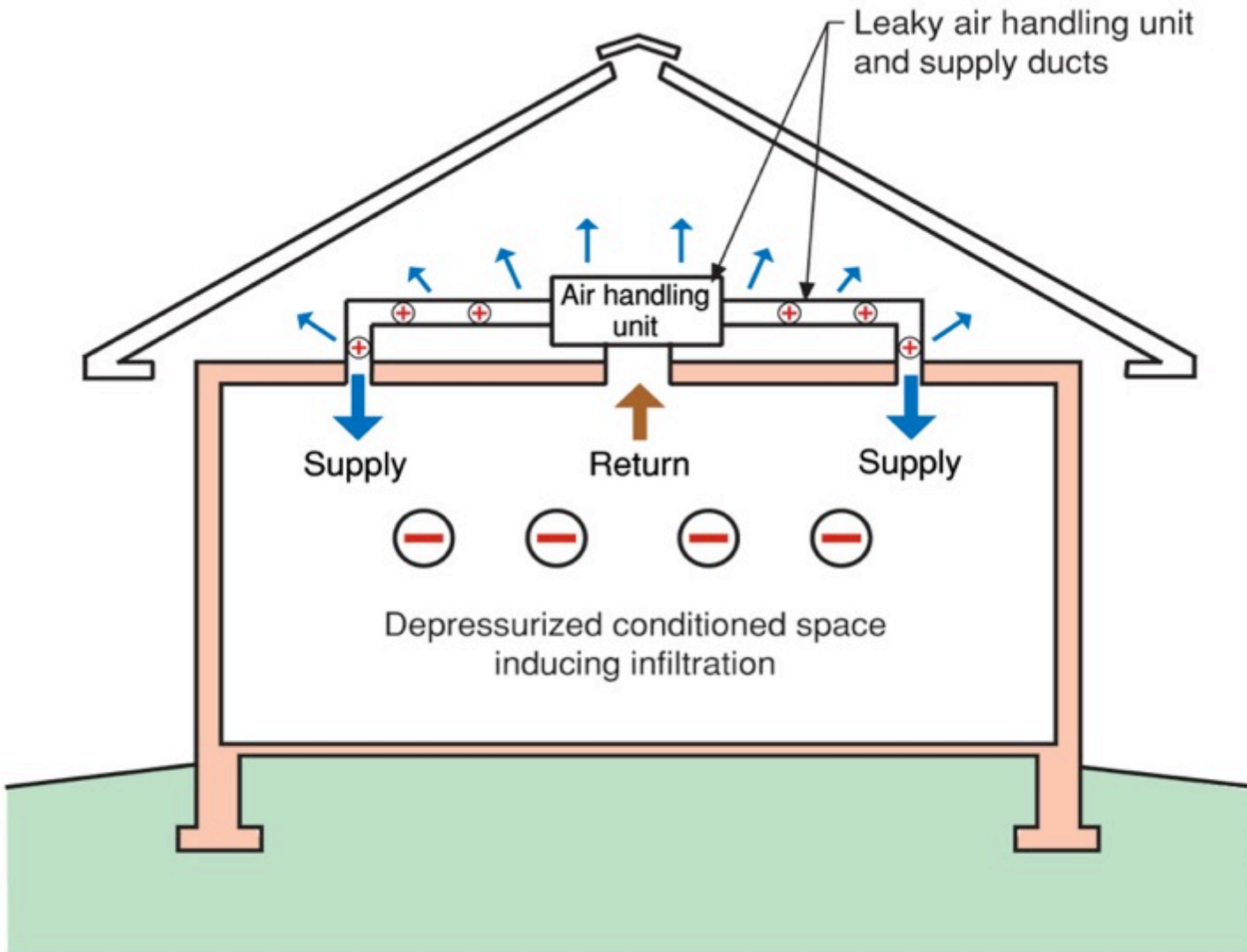
Venting Air or Venting Vapor or Not
Venting at All?

presented by www.buildingscience.com



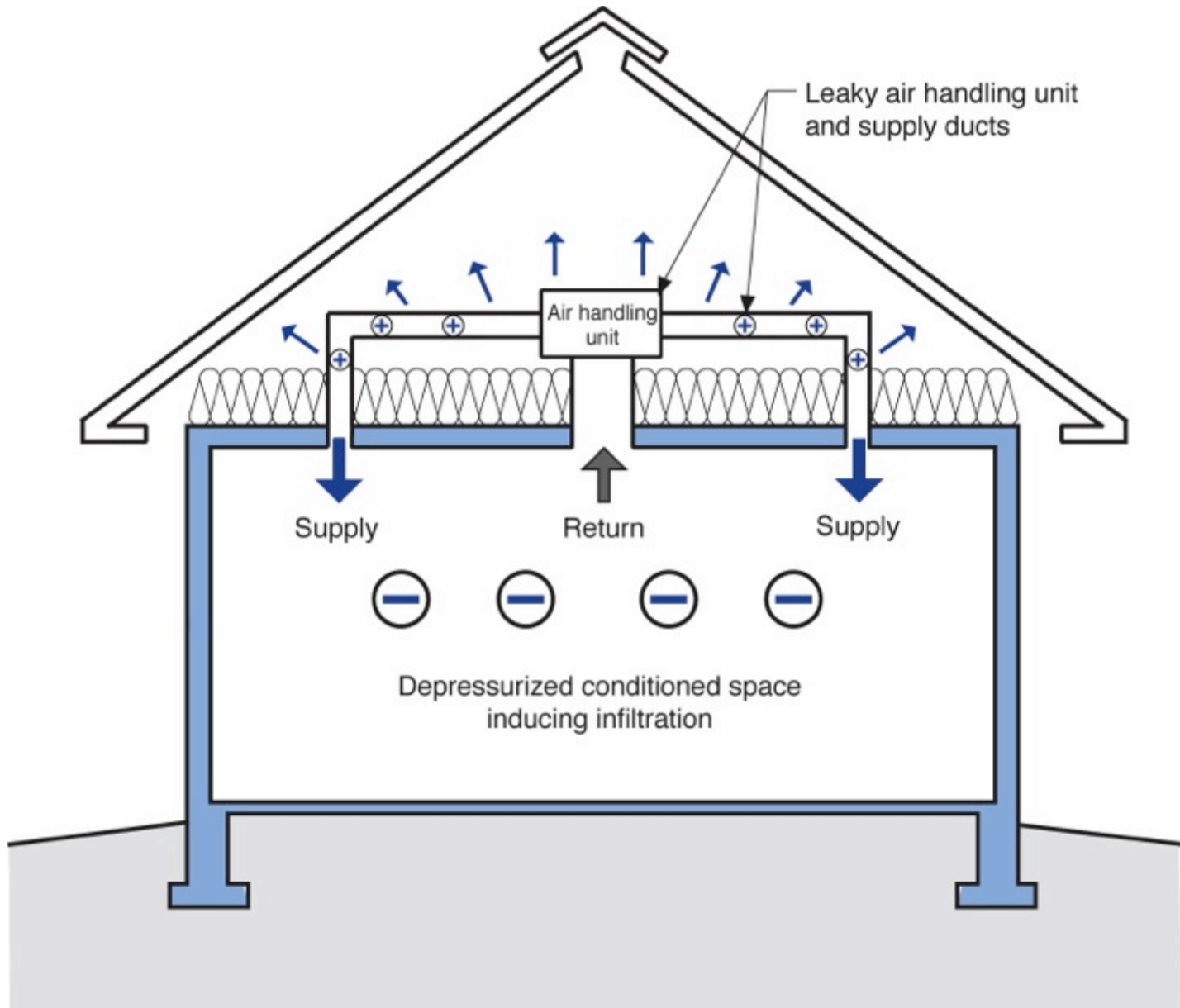


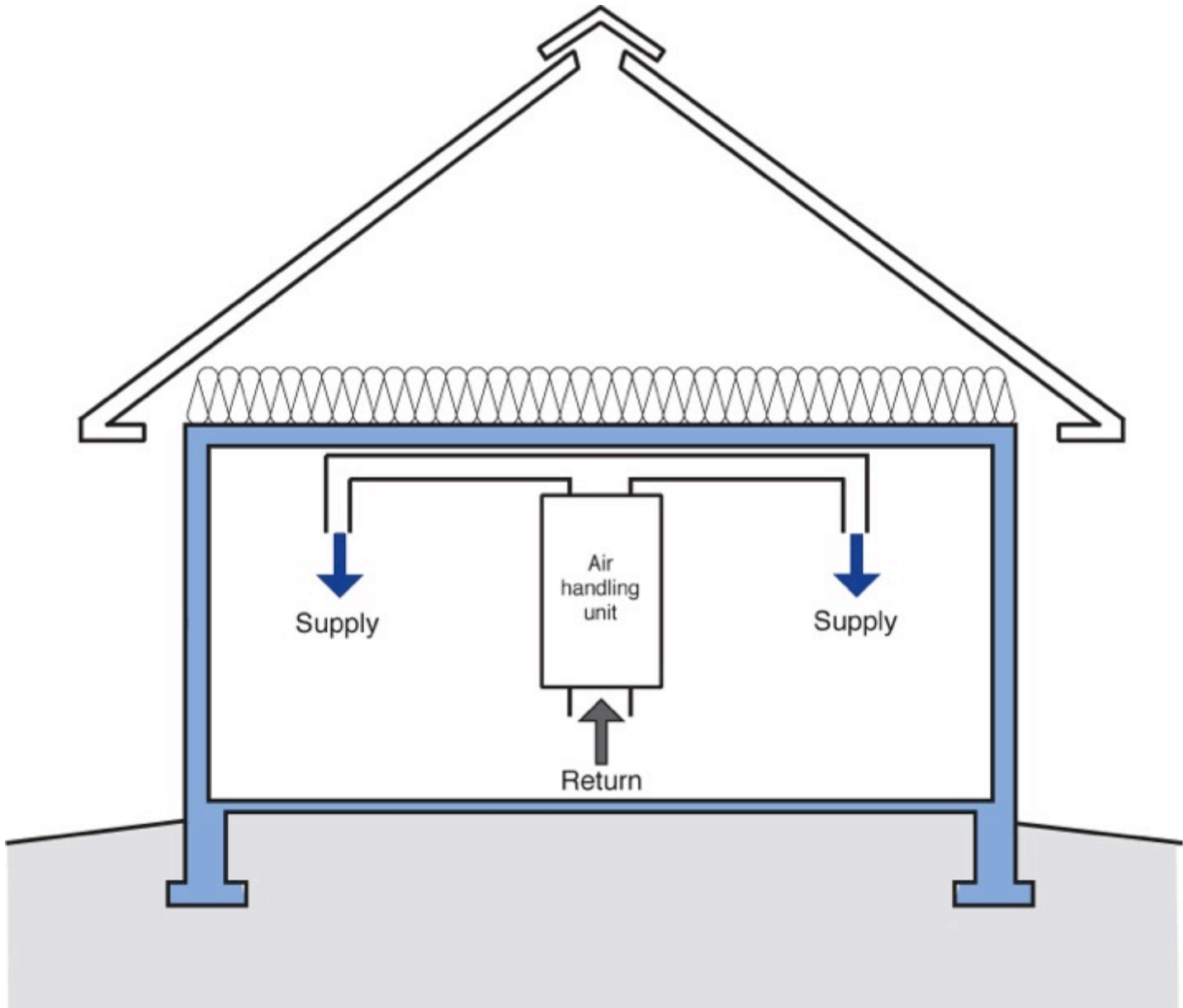




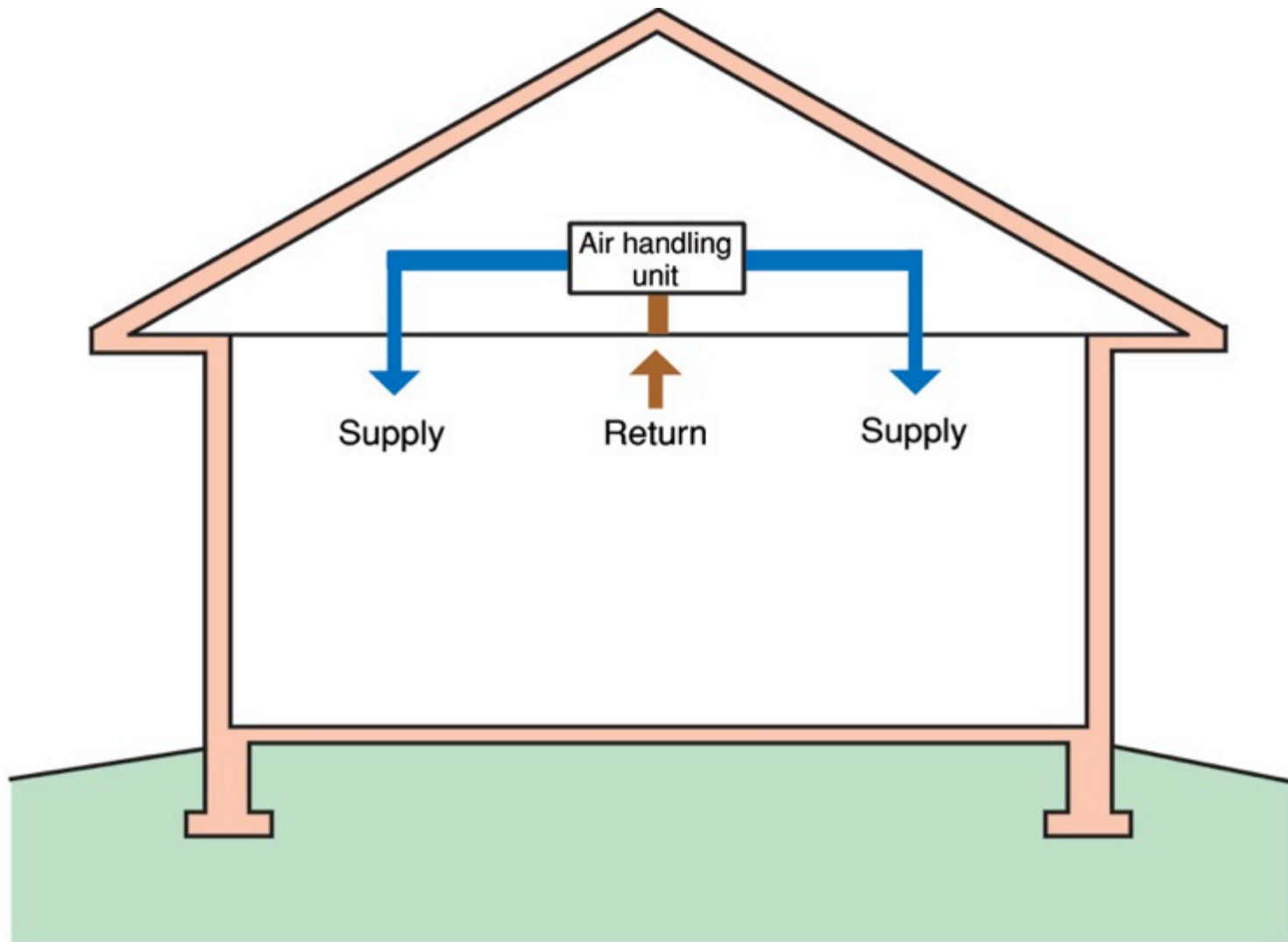
Note: Colored shading depicts the building's thermal barrier and pressure boundary. The thermal barrier and pressure boundary enclose the conditioned space.



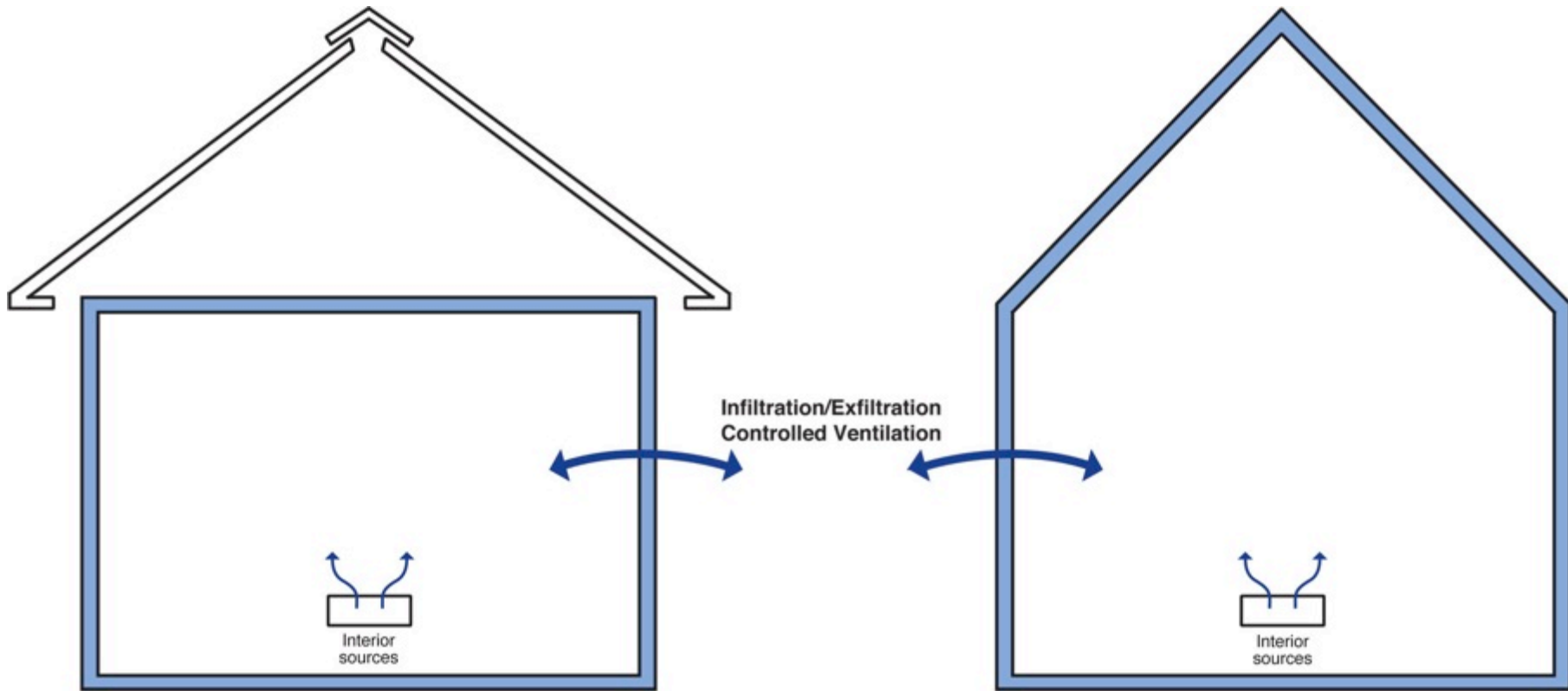


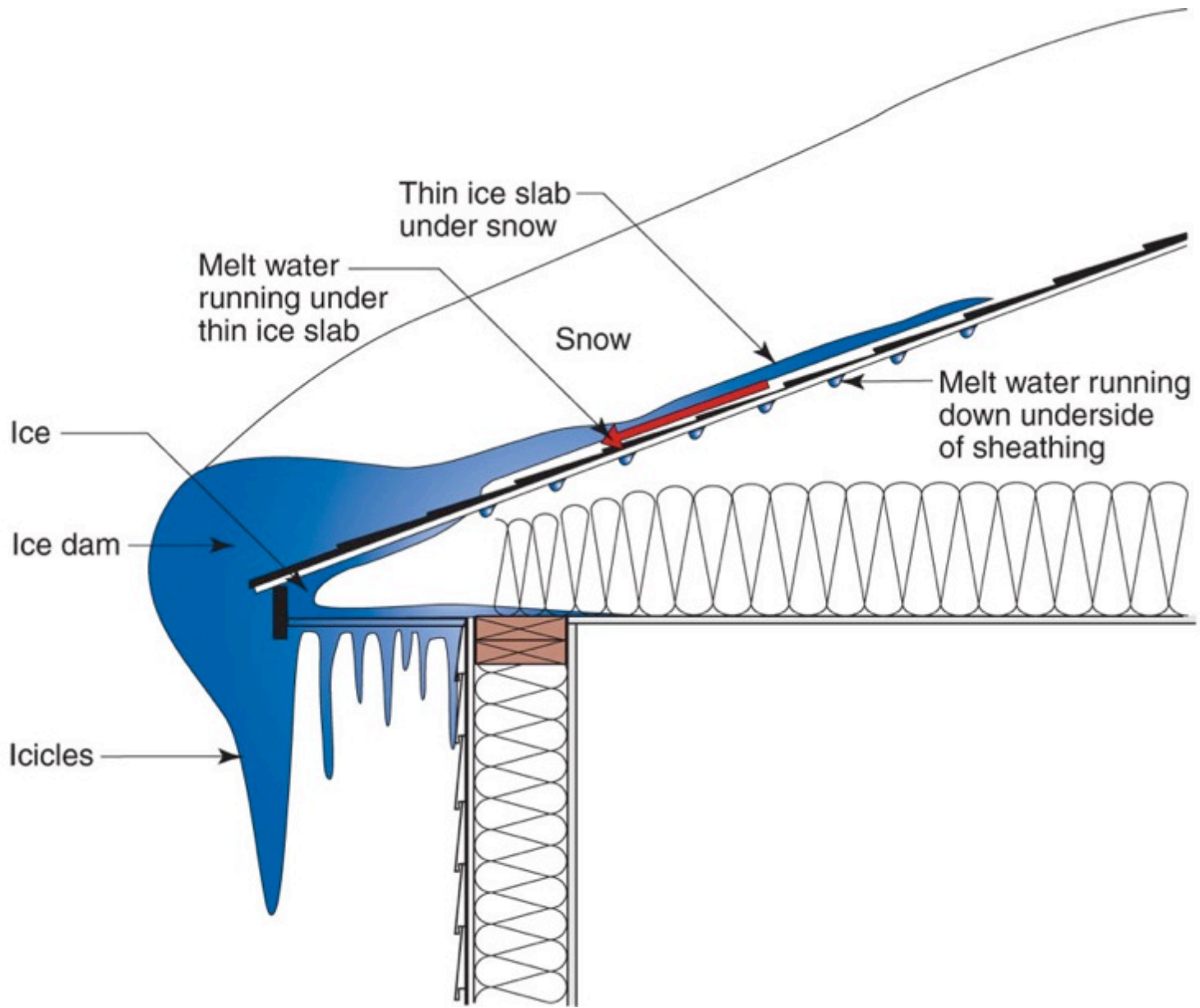




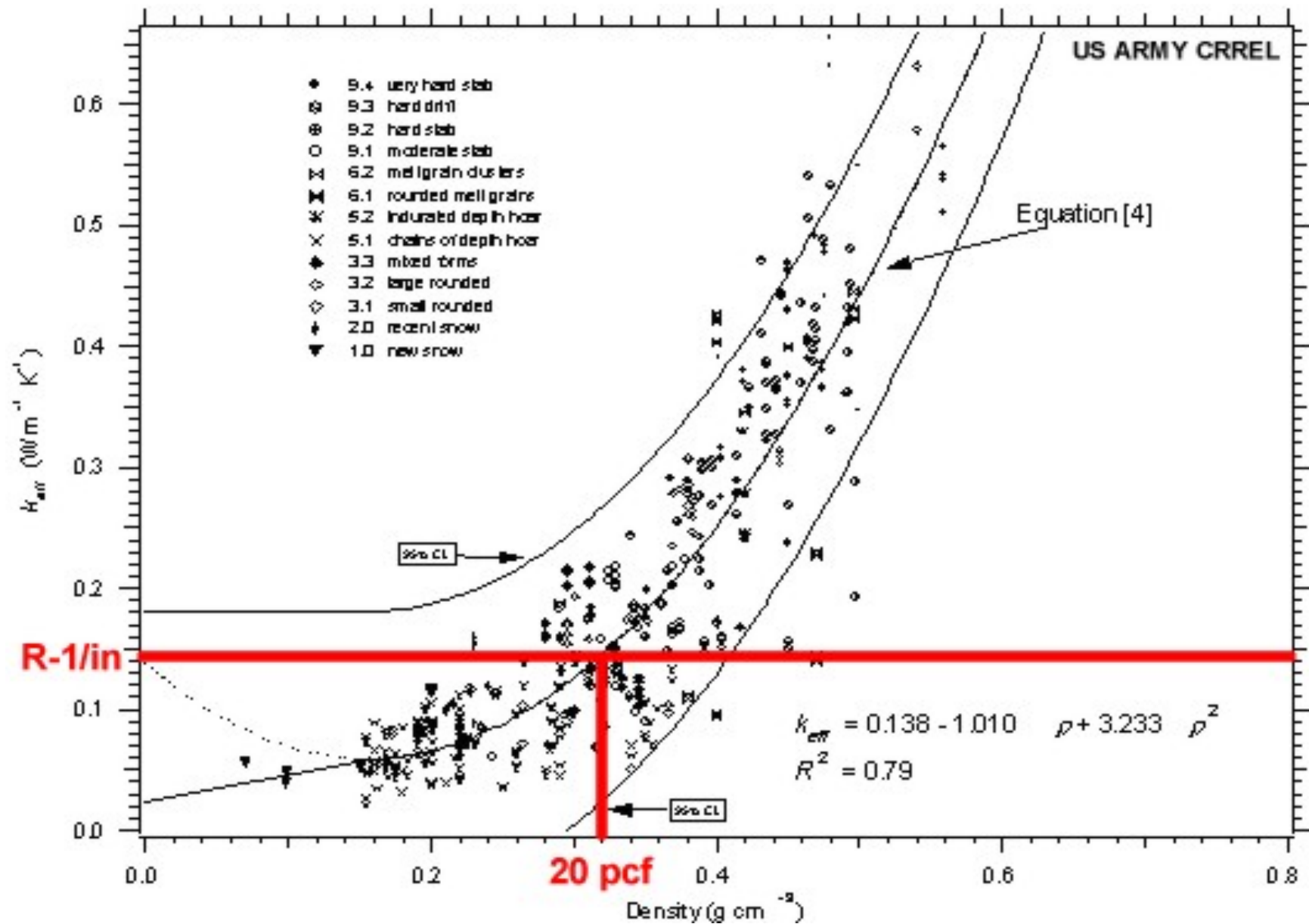


Note: Colored shading depicts the building's thermal barrier and pressure boundary. The thermal barrier and pressure boundary enclose the conditioned space.

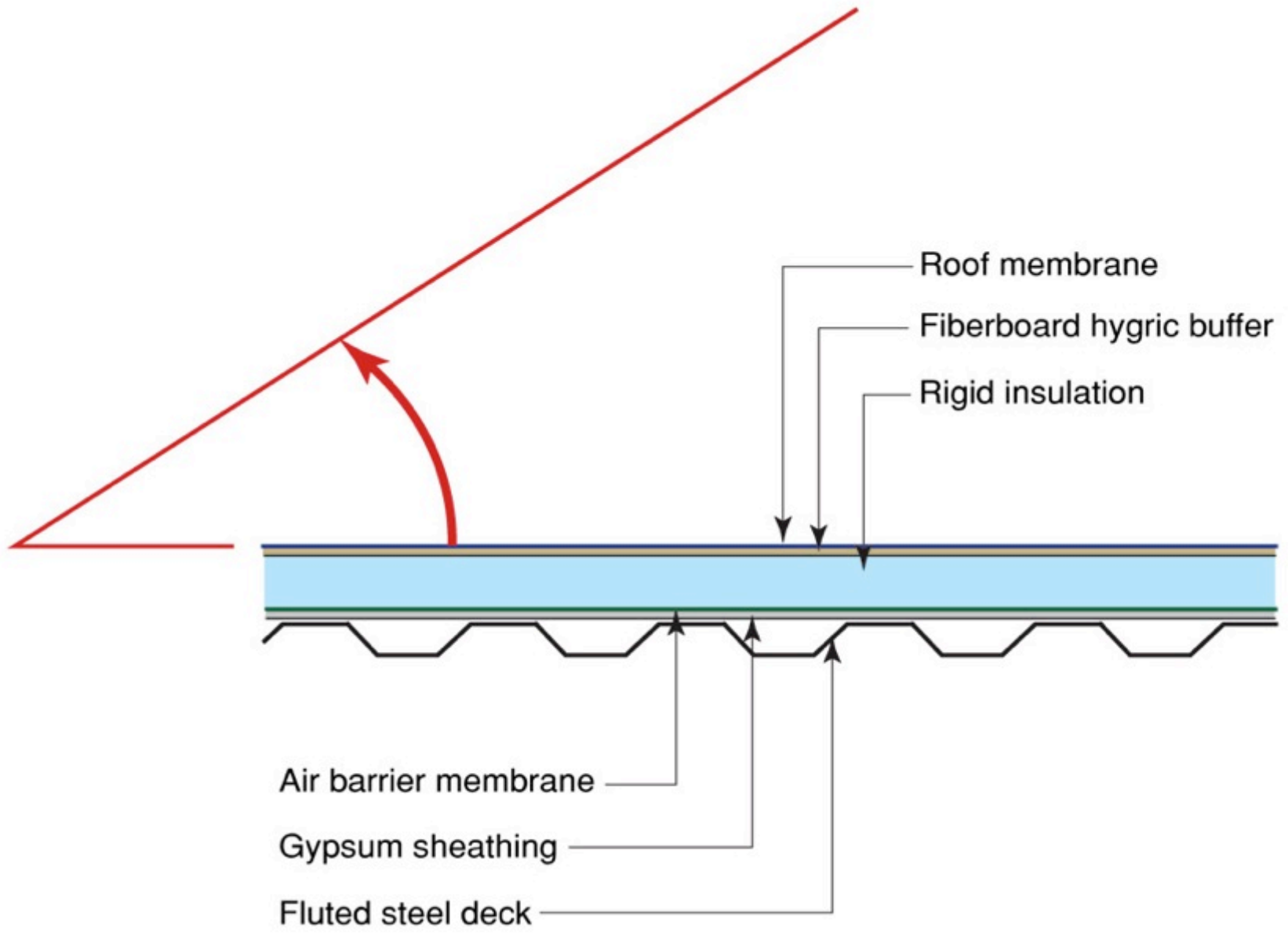


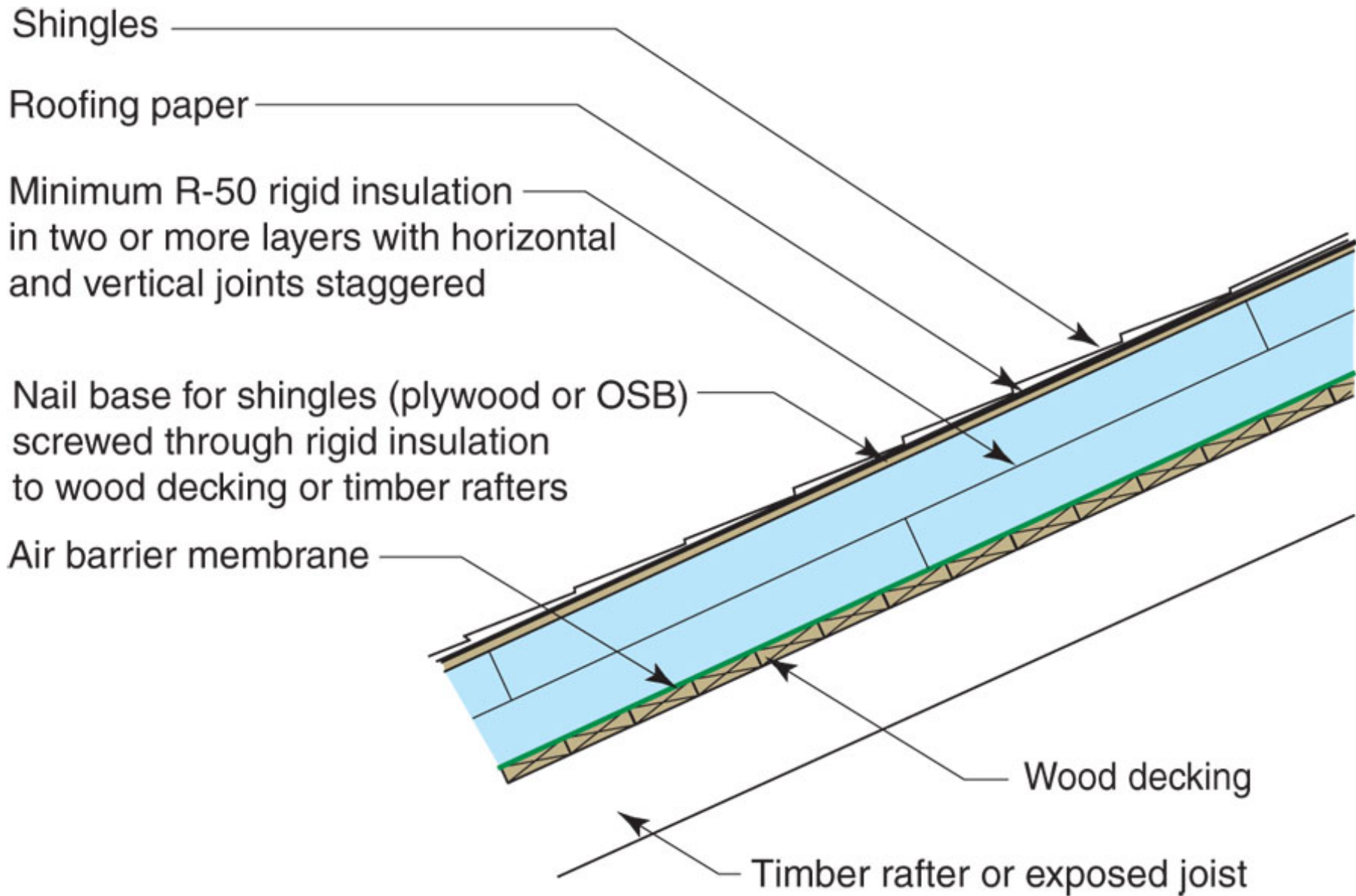


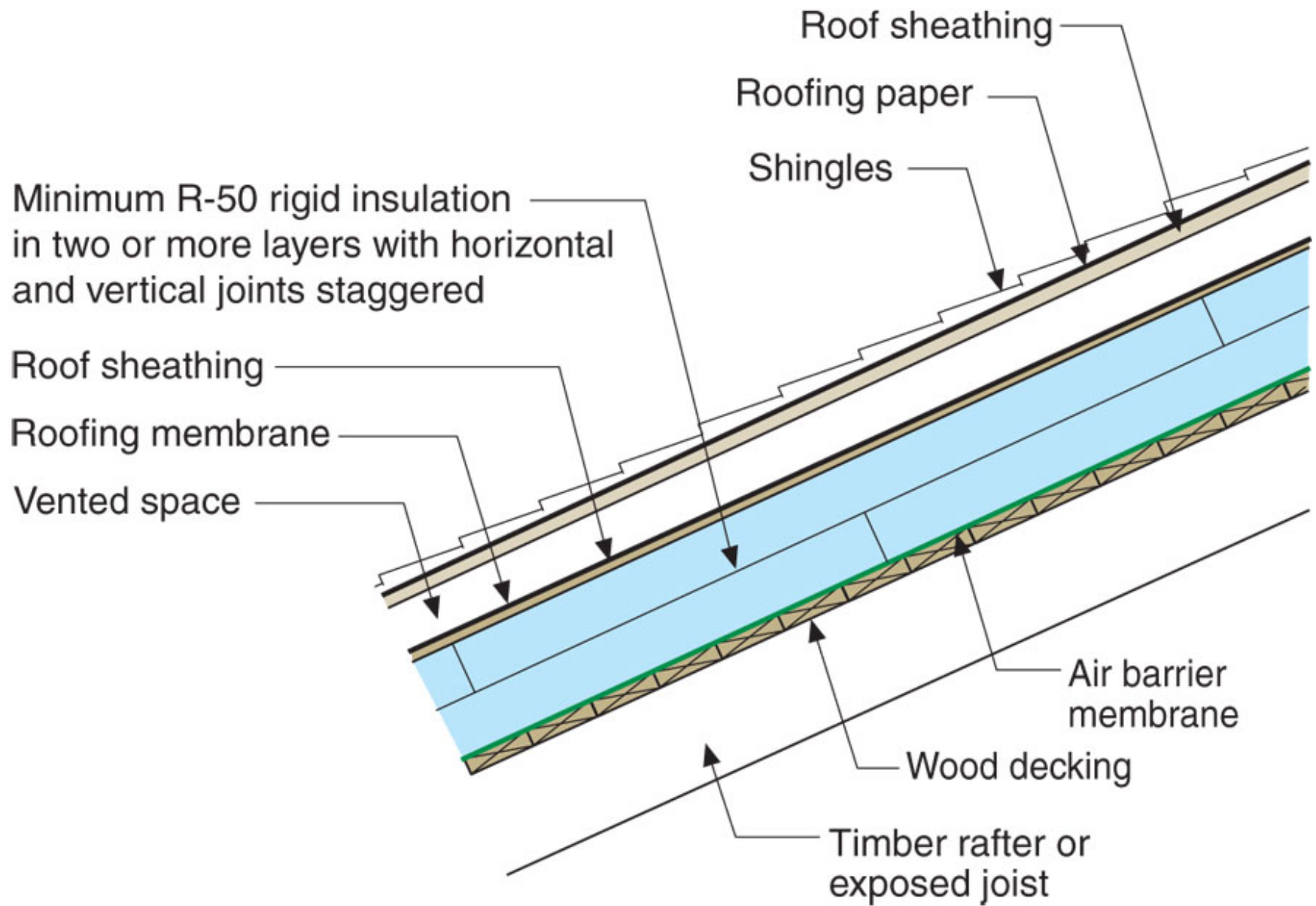


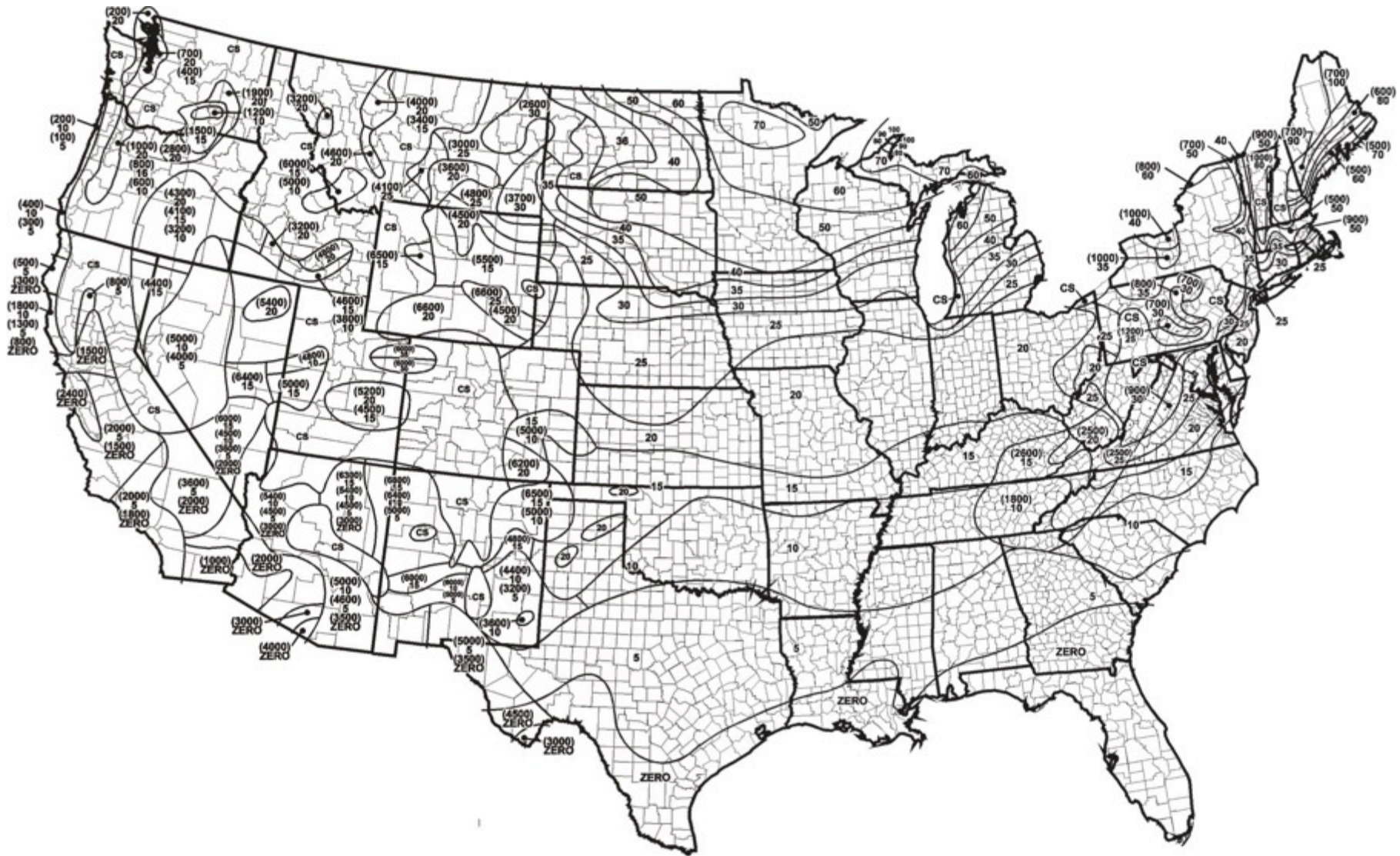


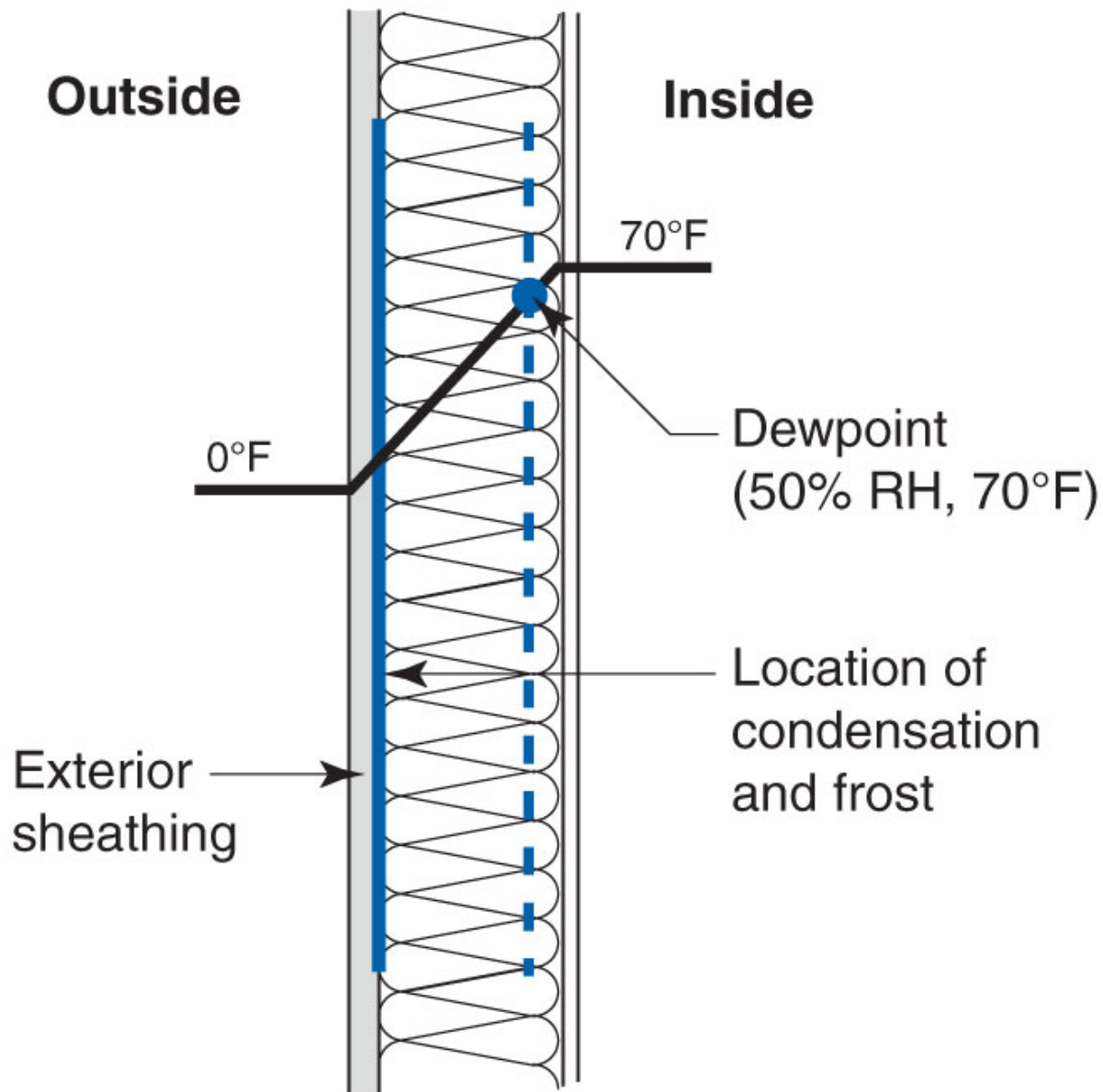




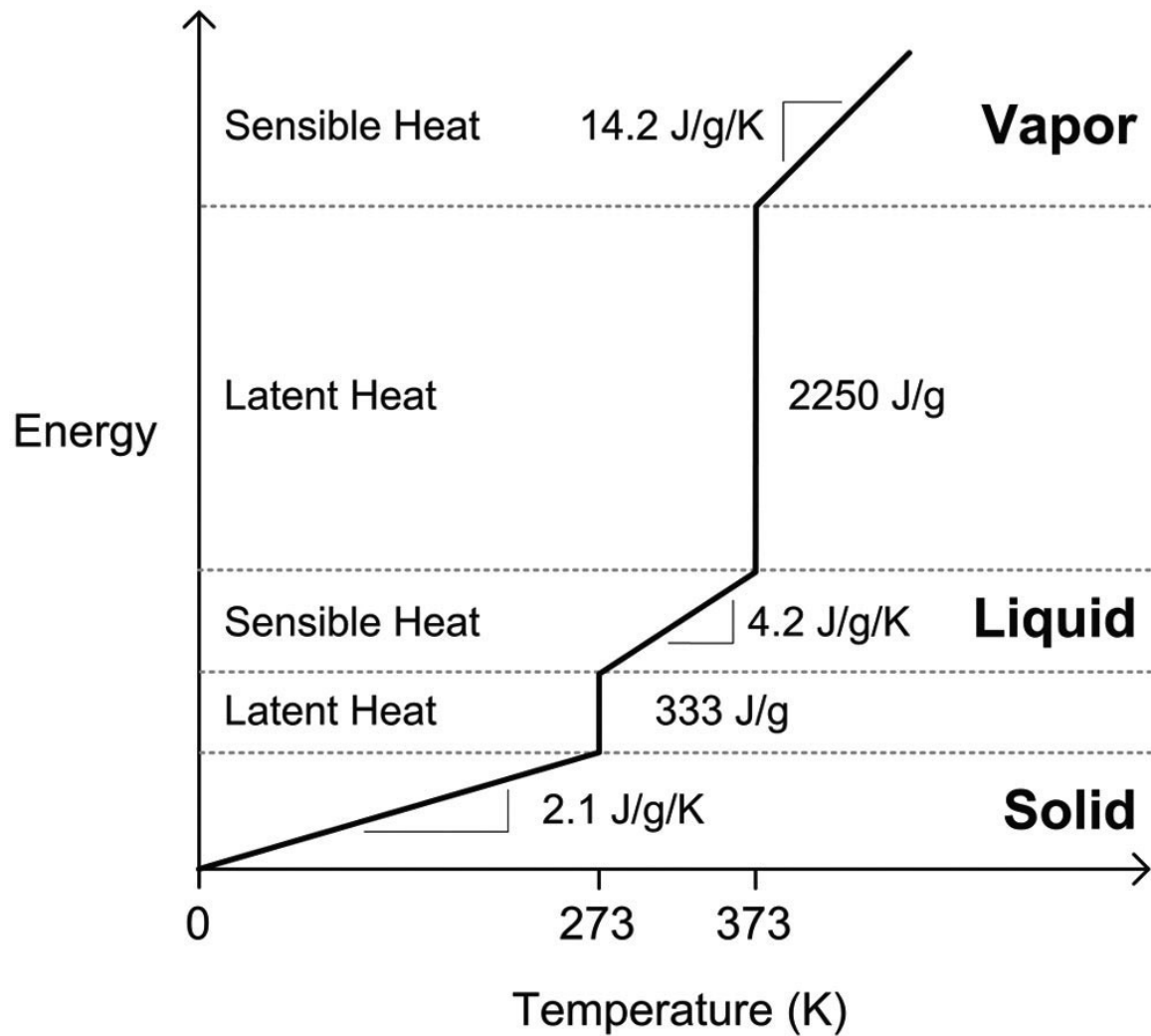








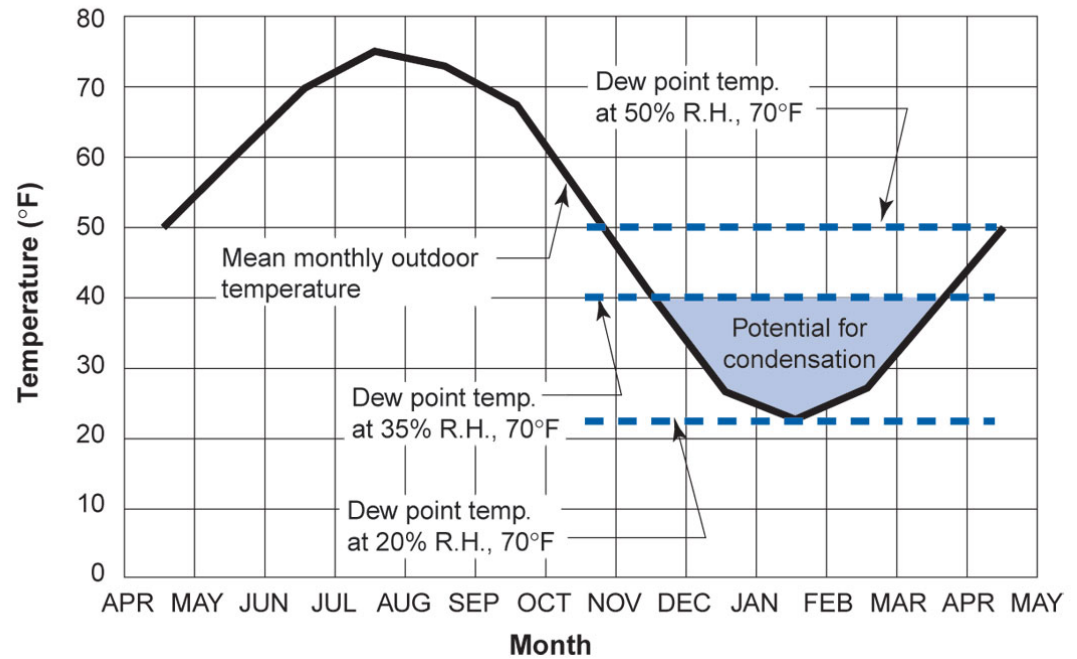
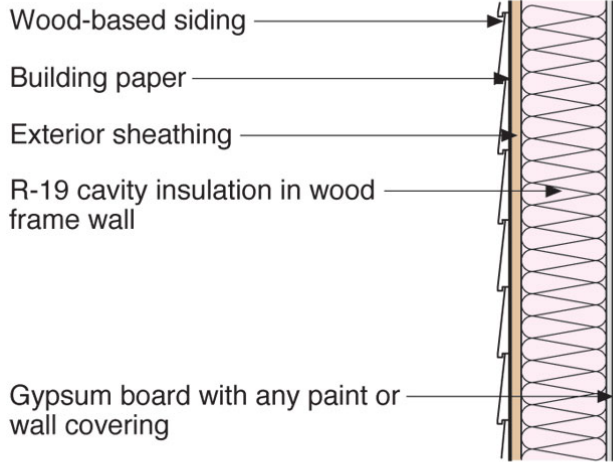


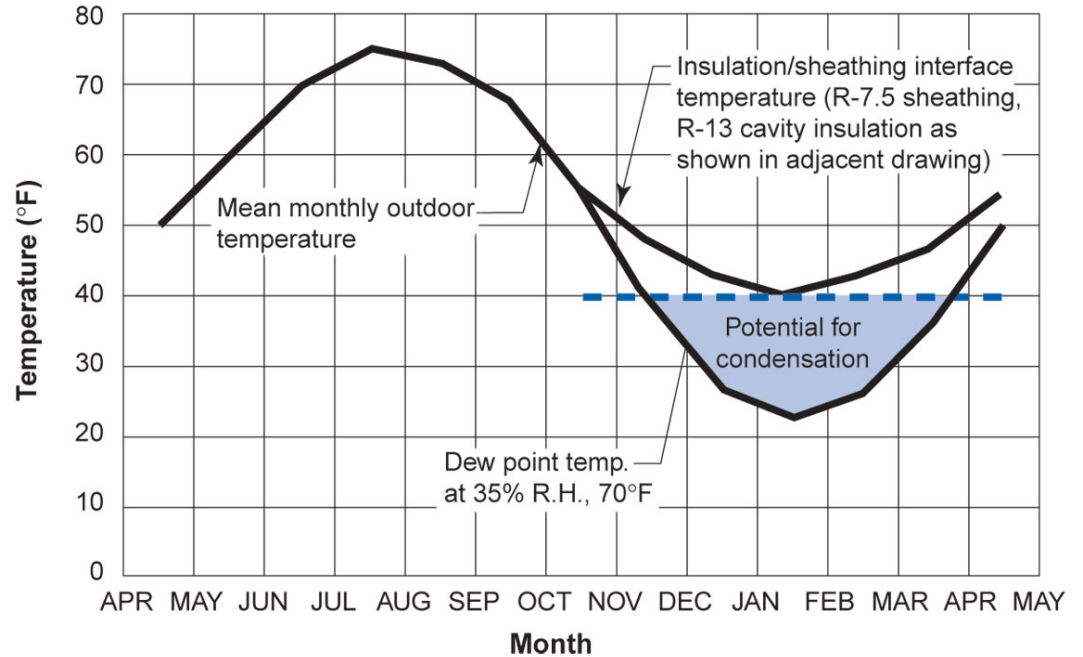
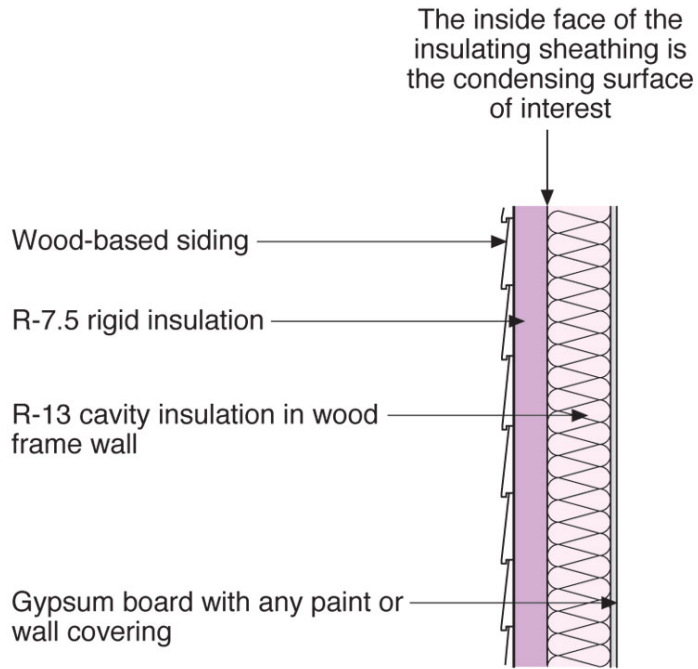


Simple linearized energy-temperature relation for water

From Straube & Burnett, 2005

The inside face of the exterior sheathing is the condensing surface of interest





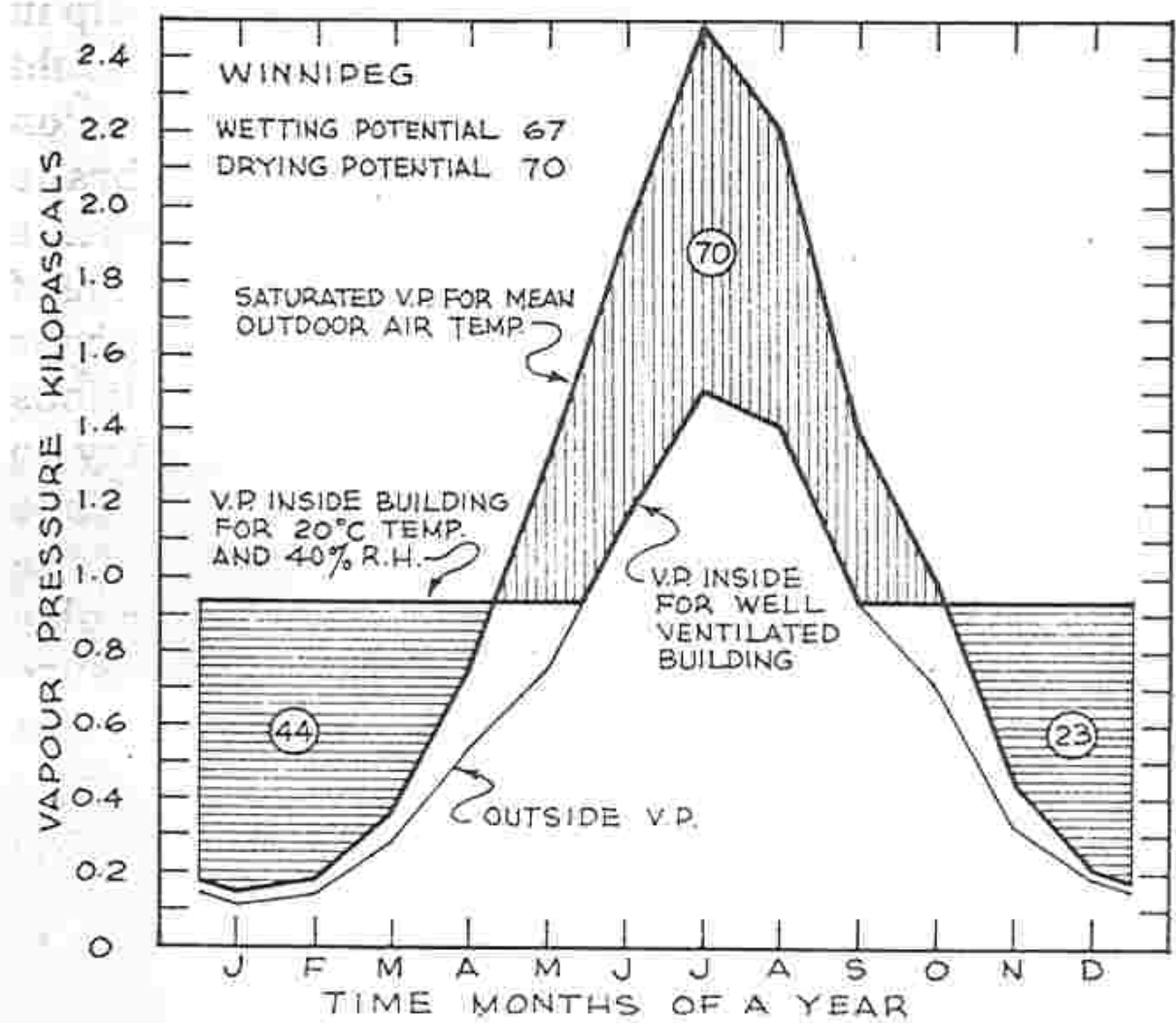
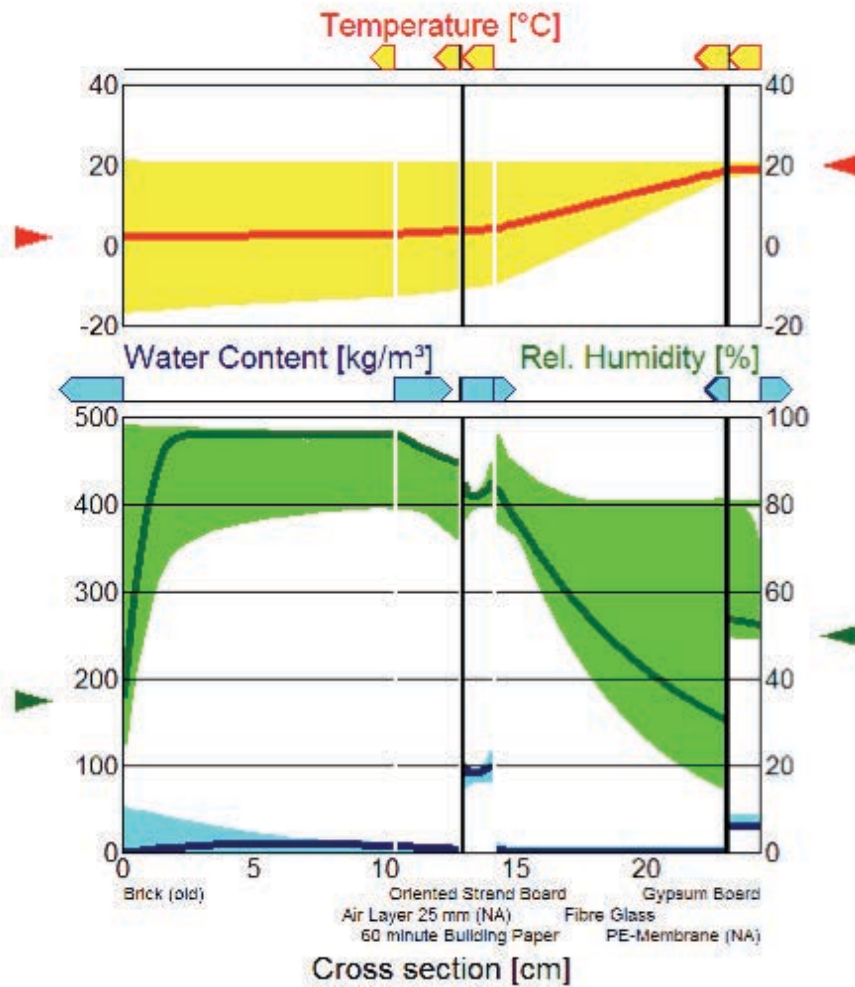


Figure 8-7. Outside vapour pressure, saturated vapour pressure and inside vapour pressure for Winnipeg.



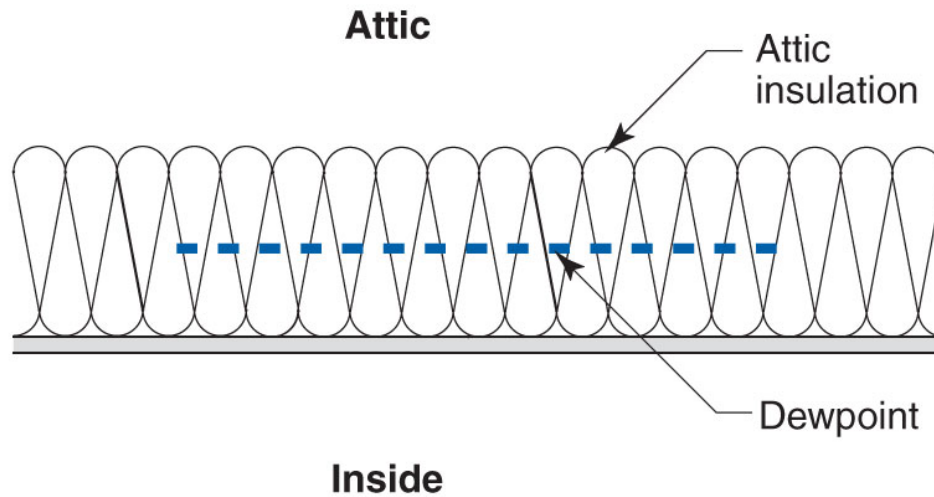
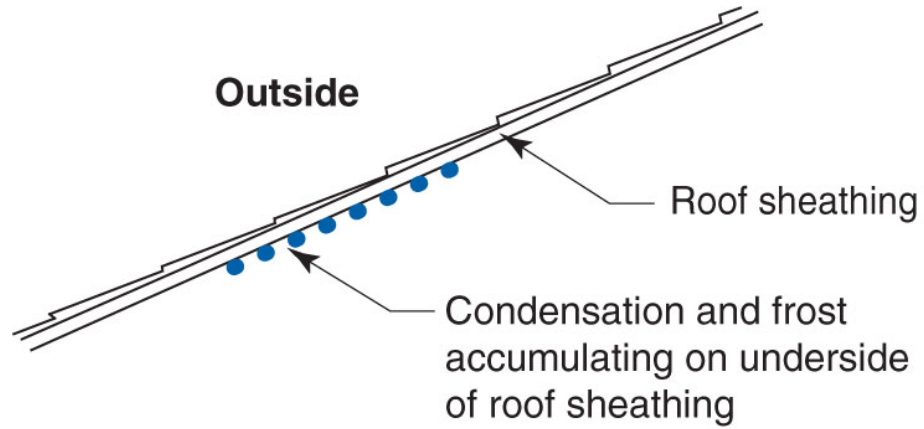
WUFI® 3.3 Pro. IBP
Run

16 Feb
2001

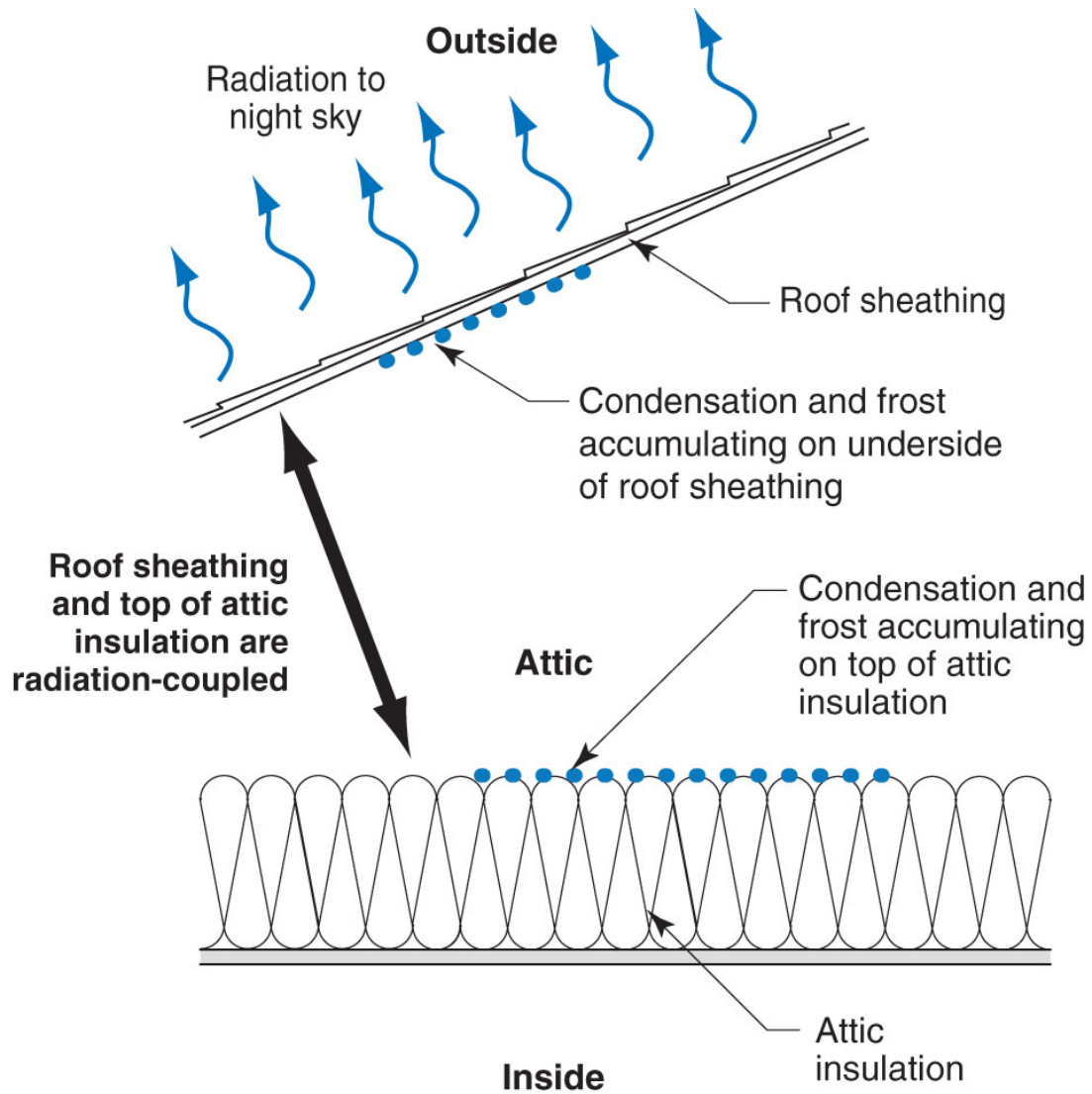
100%

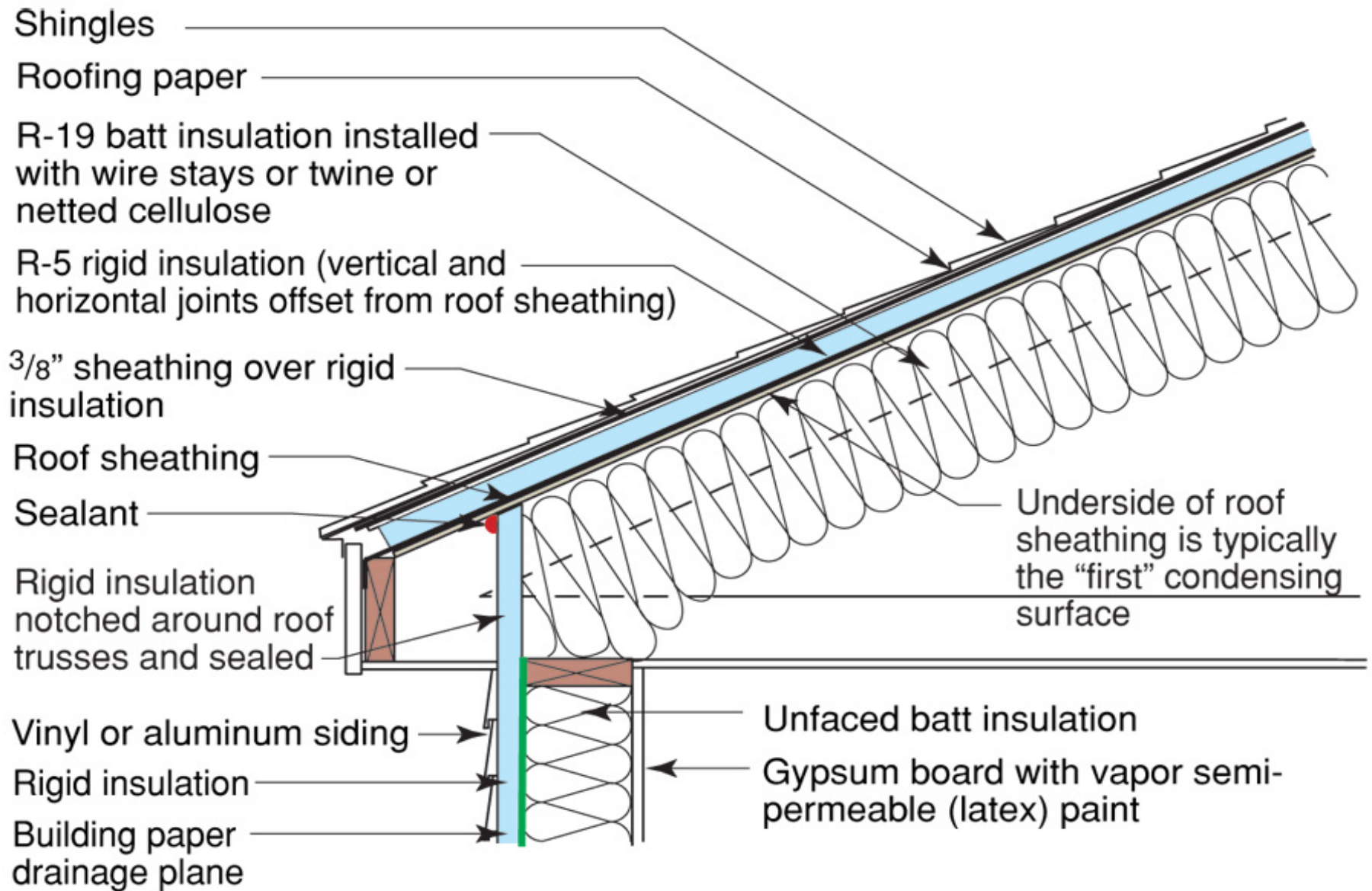
0% 100%

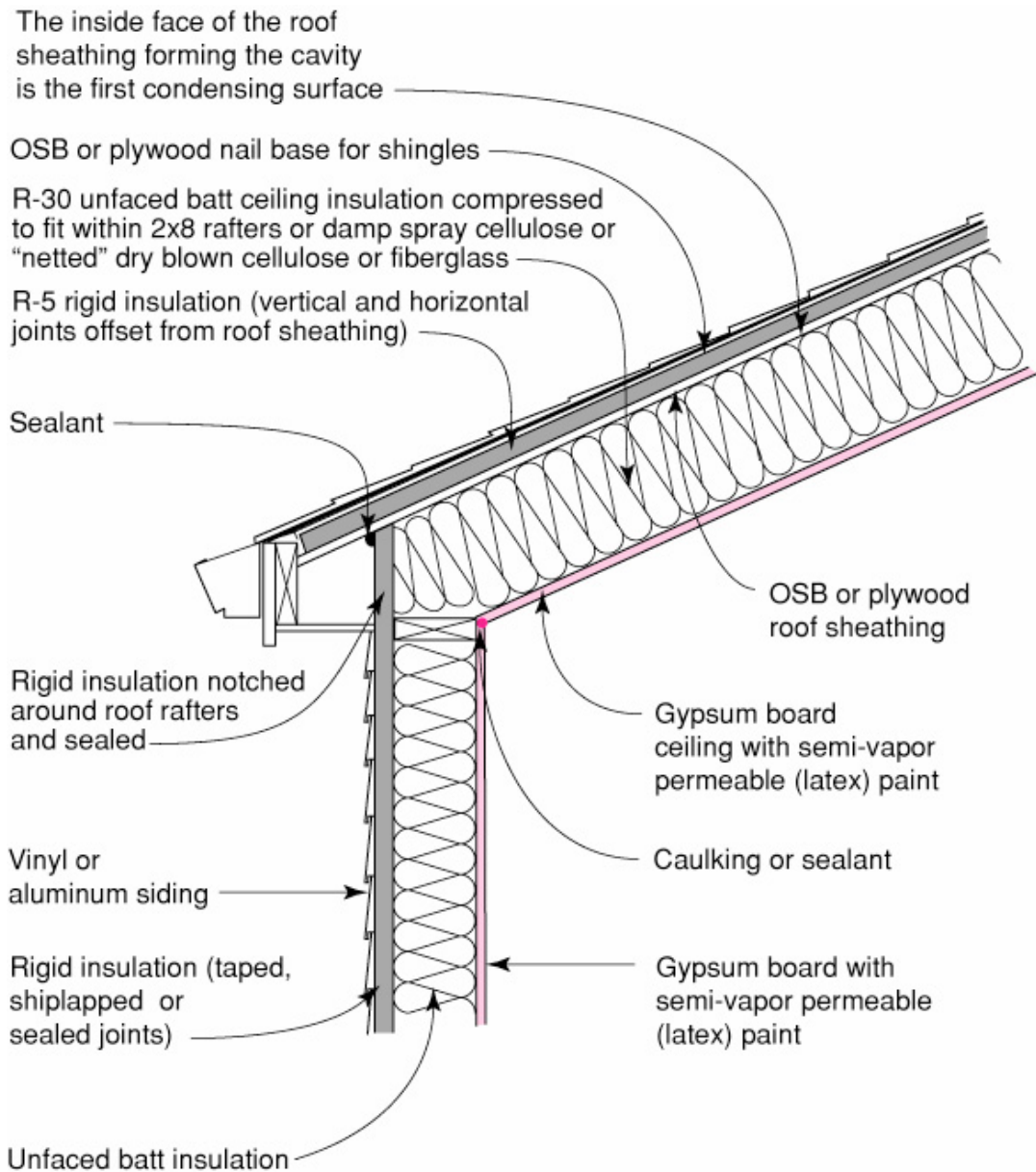
WUFI 3.3 Pro. IBP Run interface showing a circular navigation menu with icons for various simulation parameters, a date display (16 Feb 2001), and a progress bar.

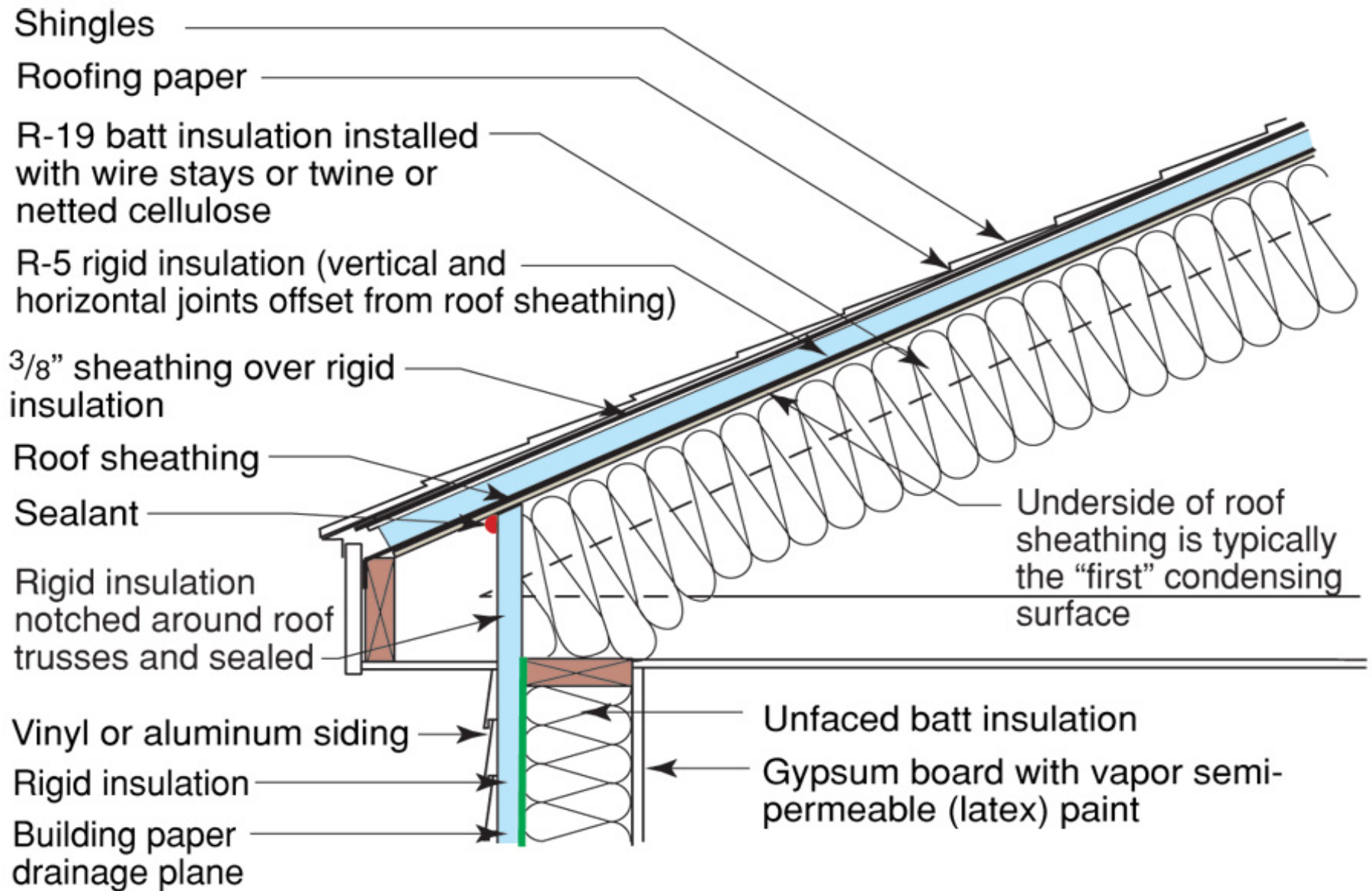


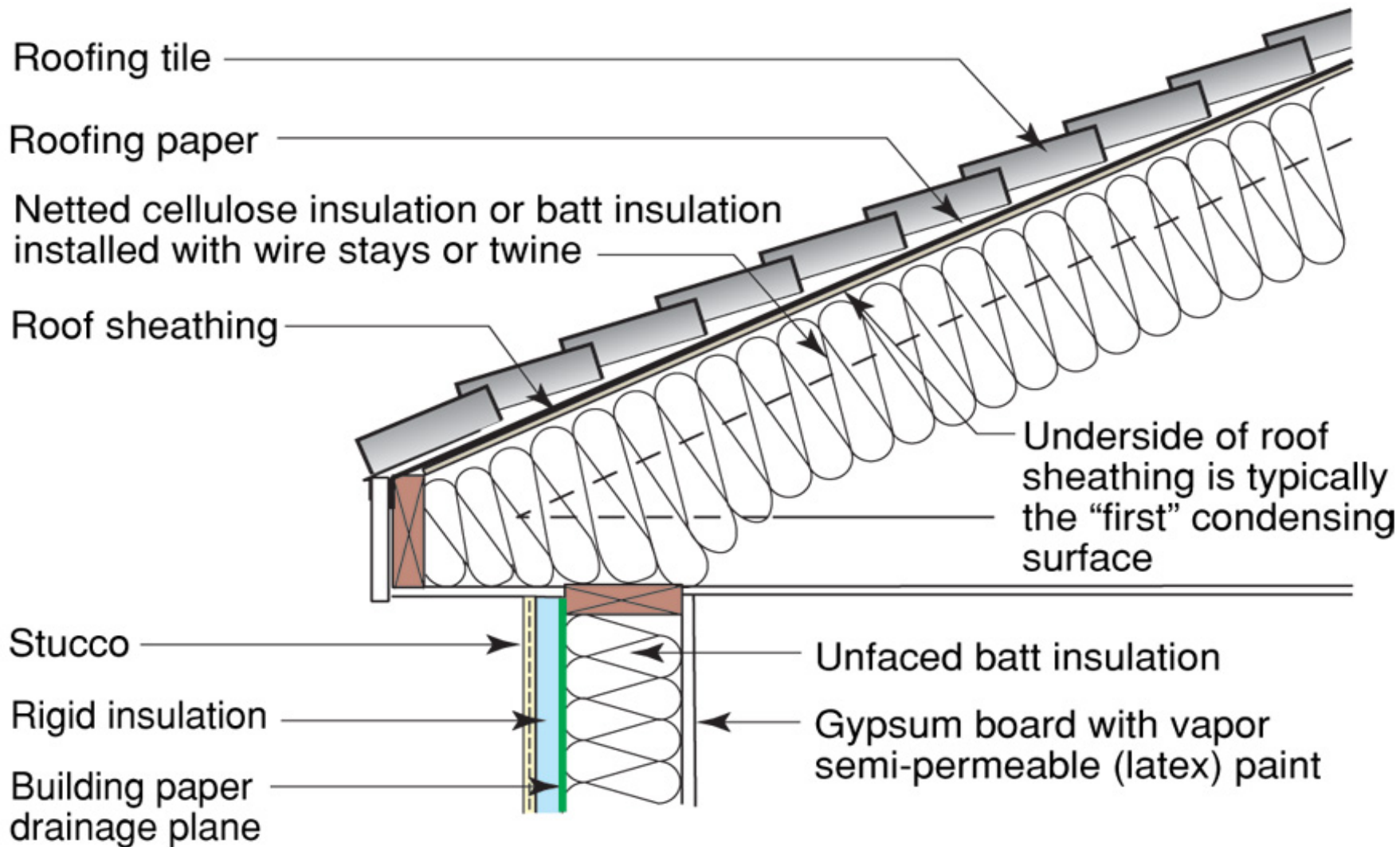








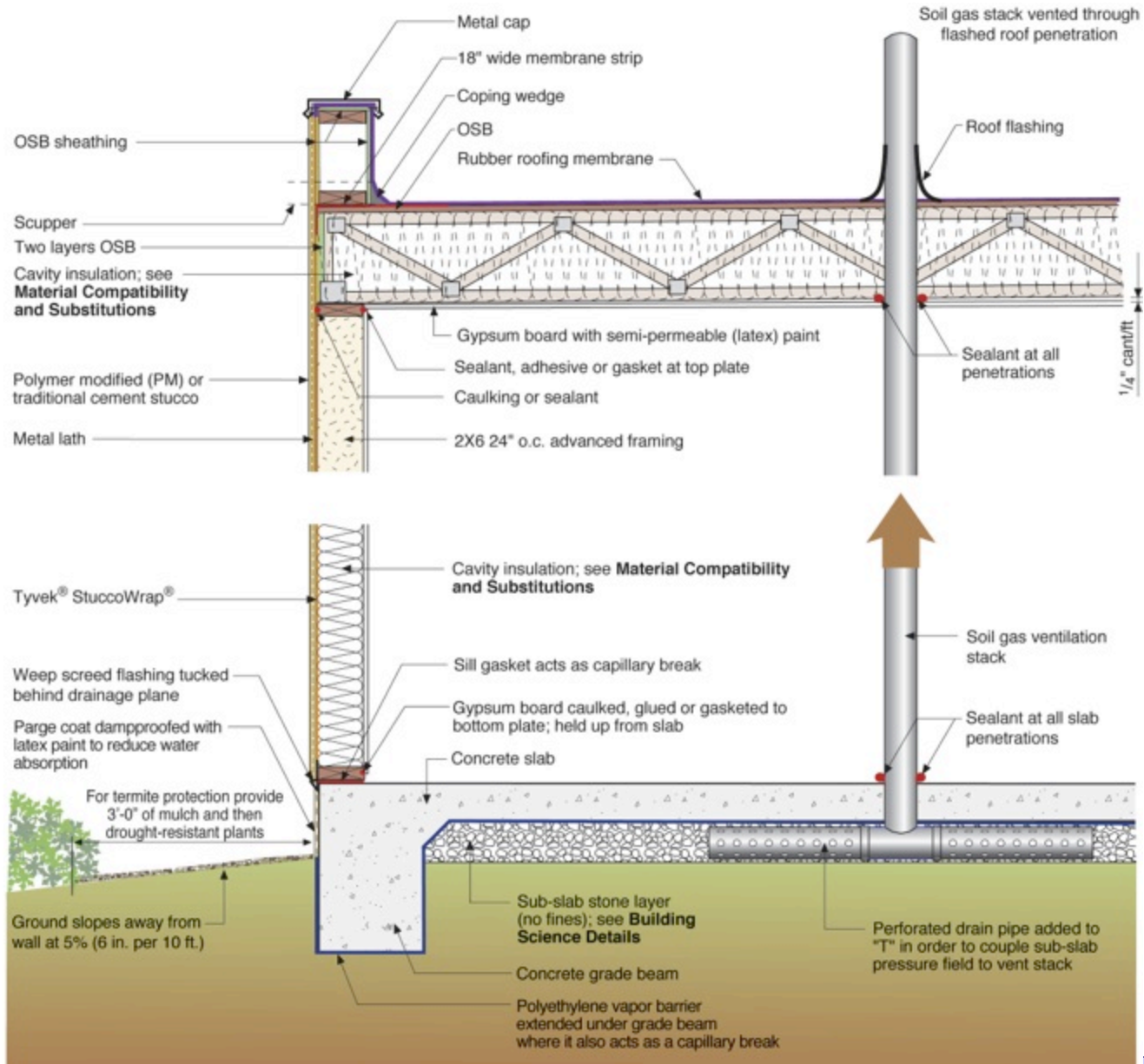


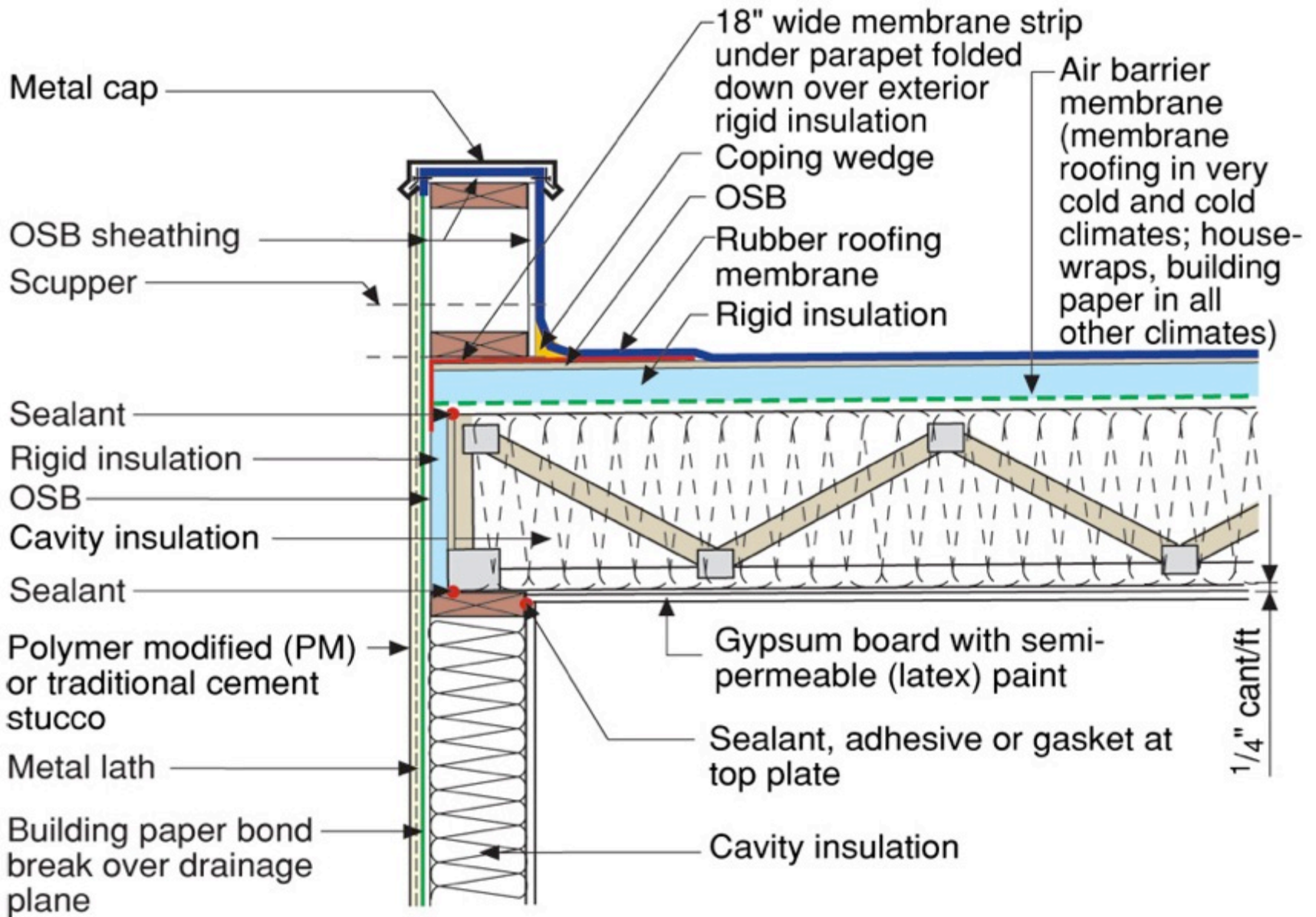


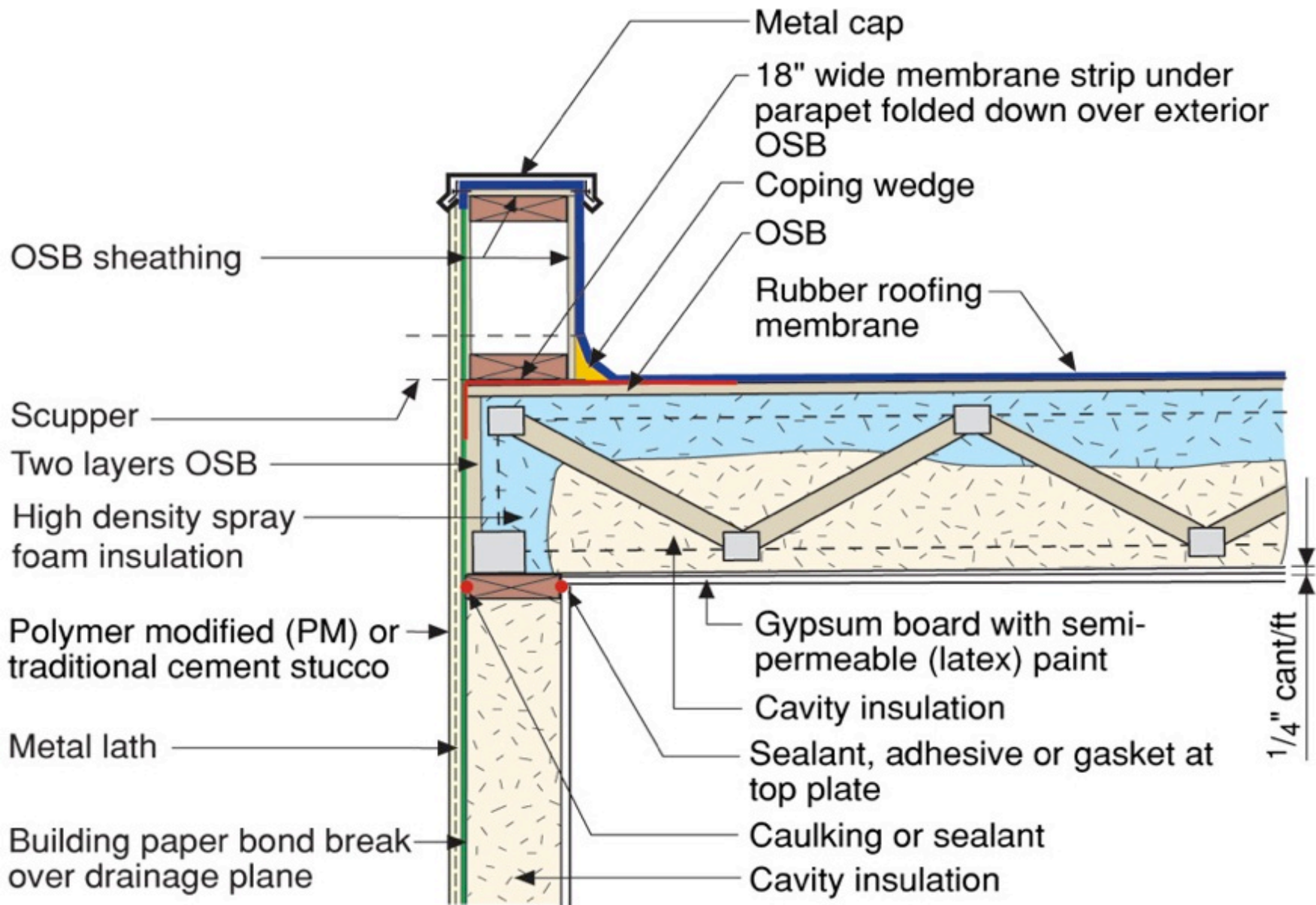




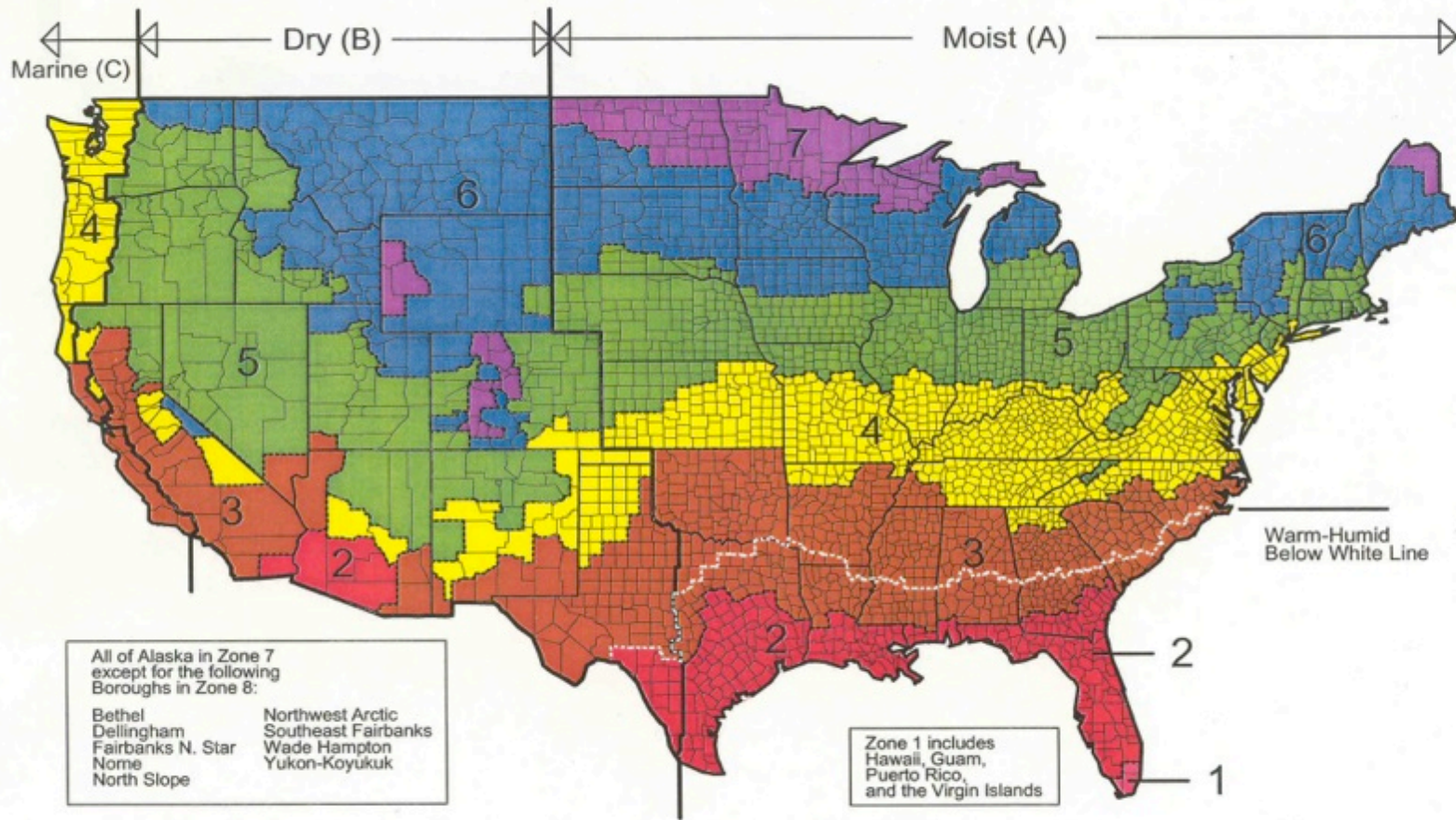




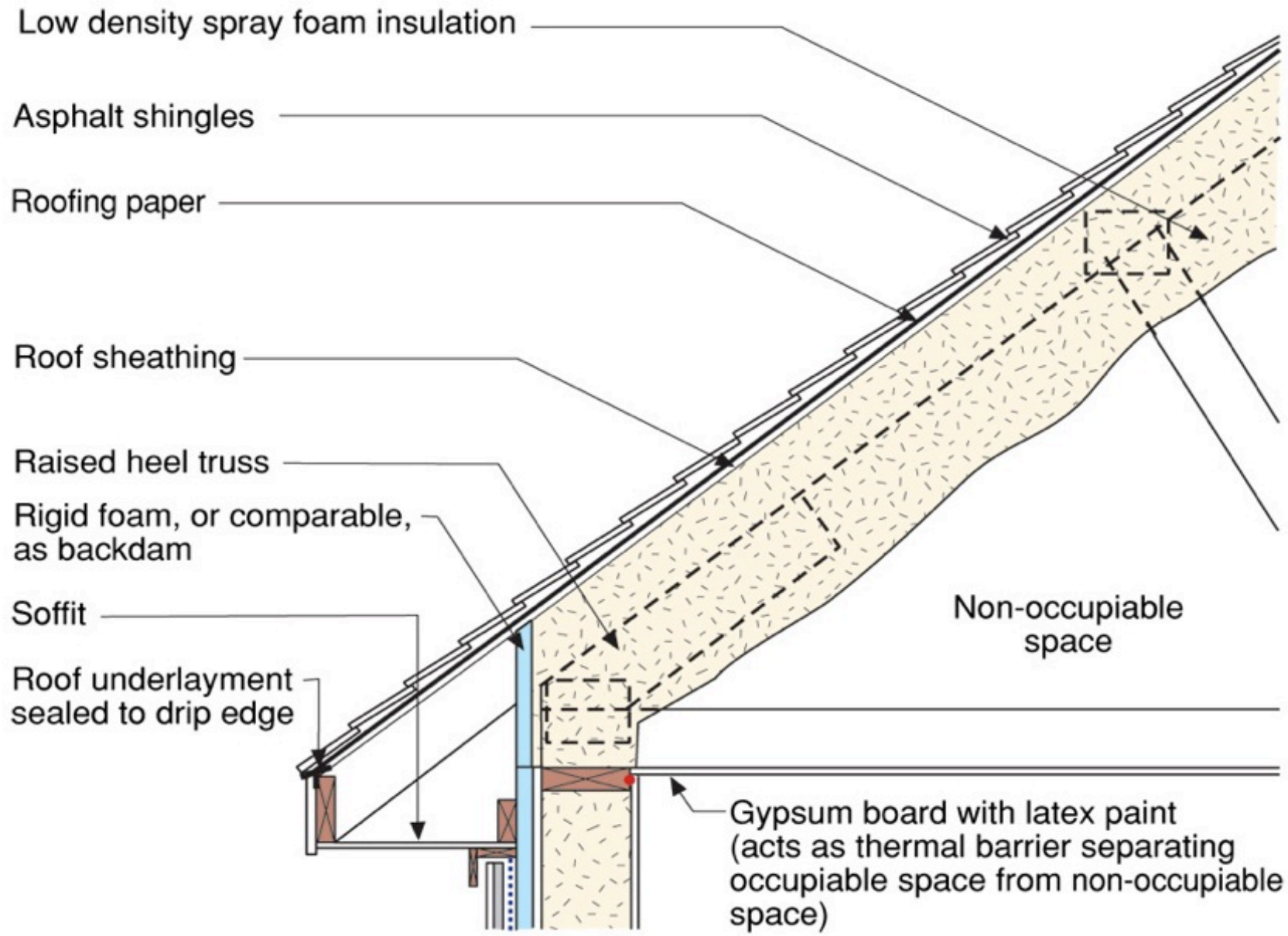




Map of DOE's Proposed Climate Zones



March 24, 2003

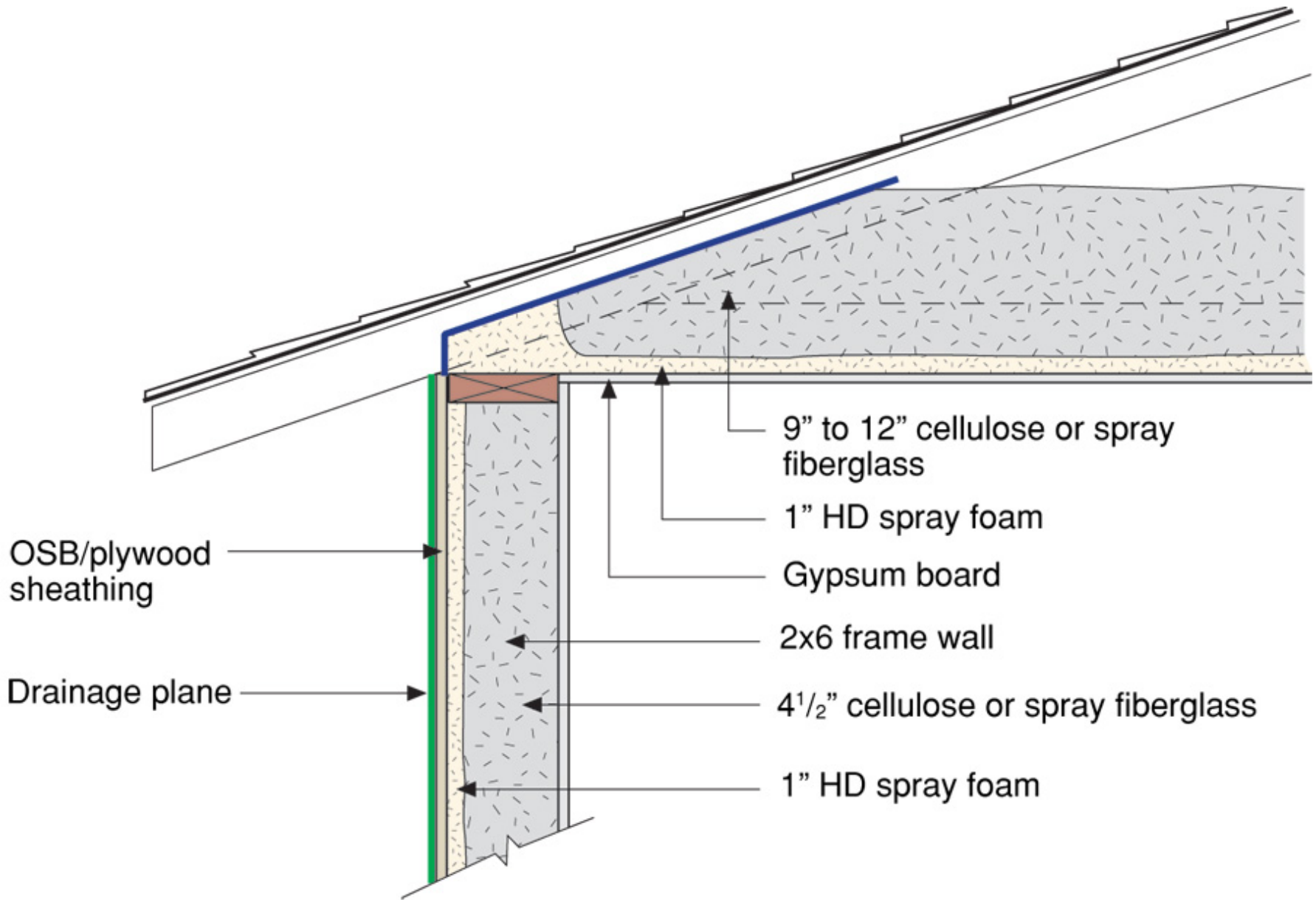


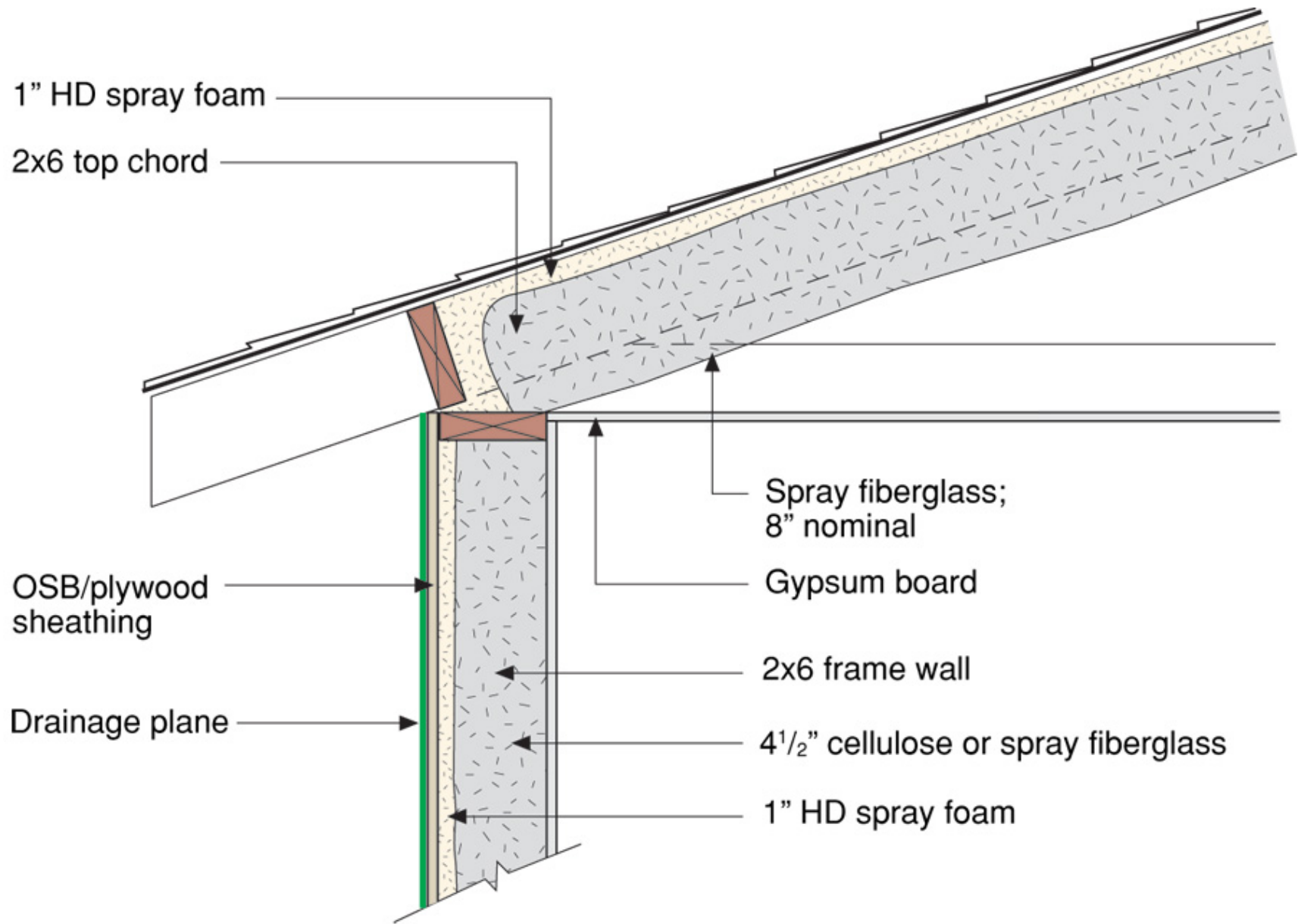


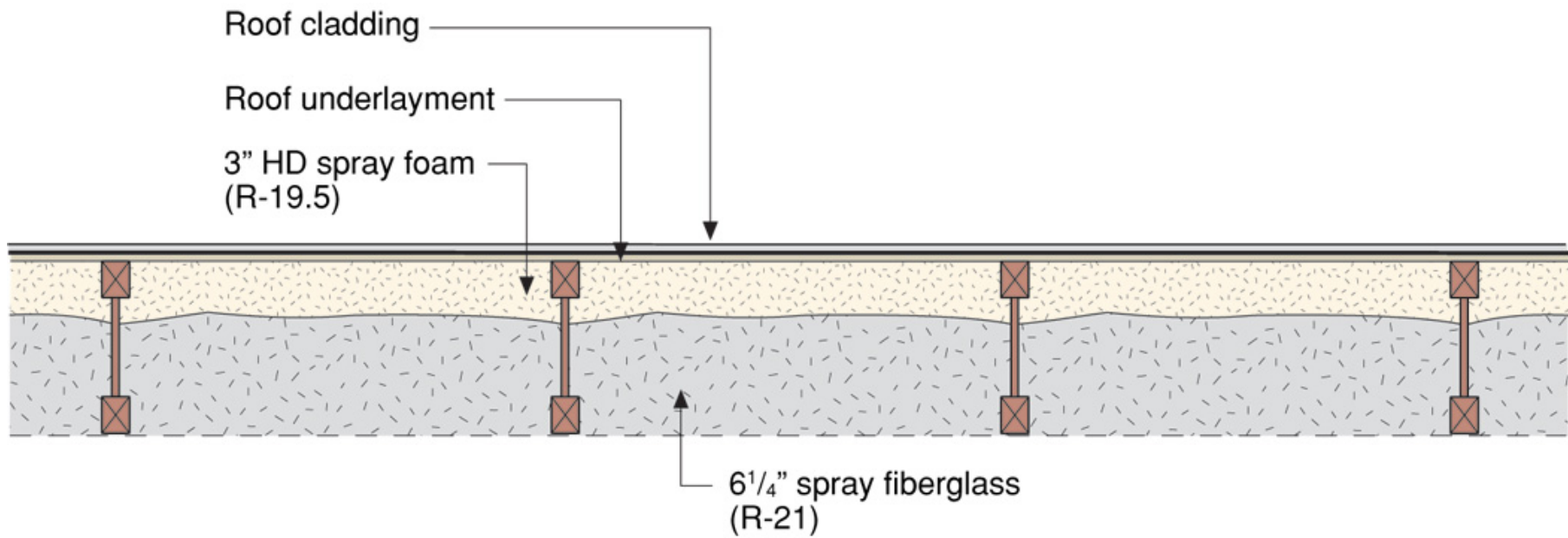












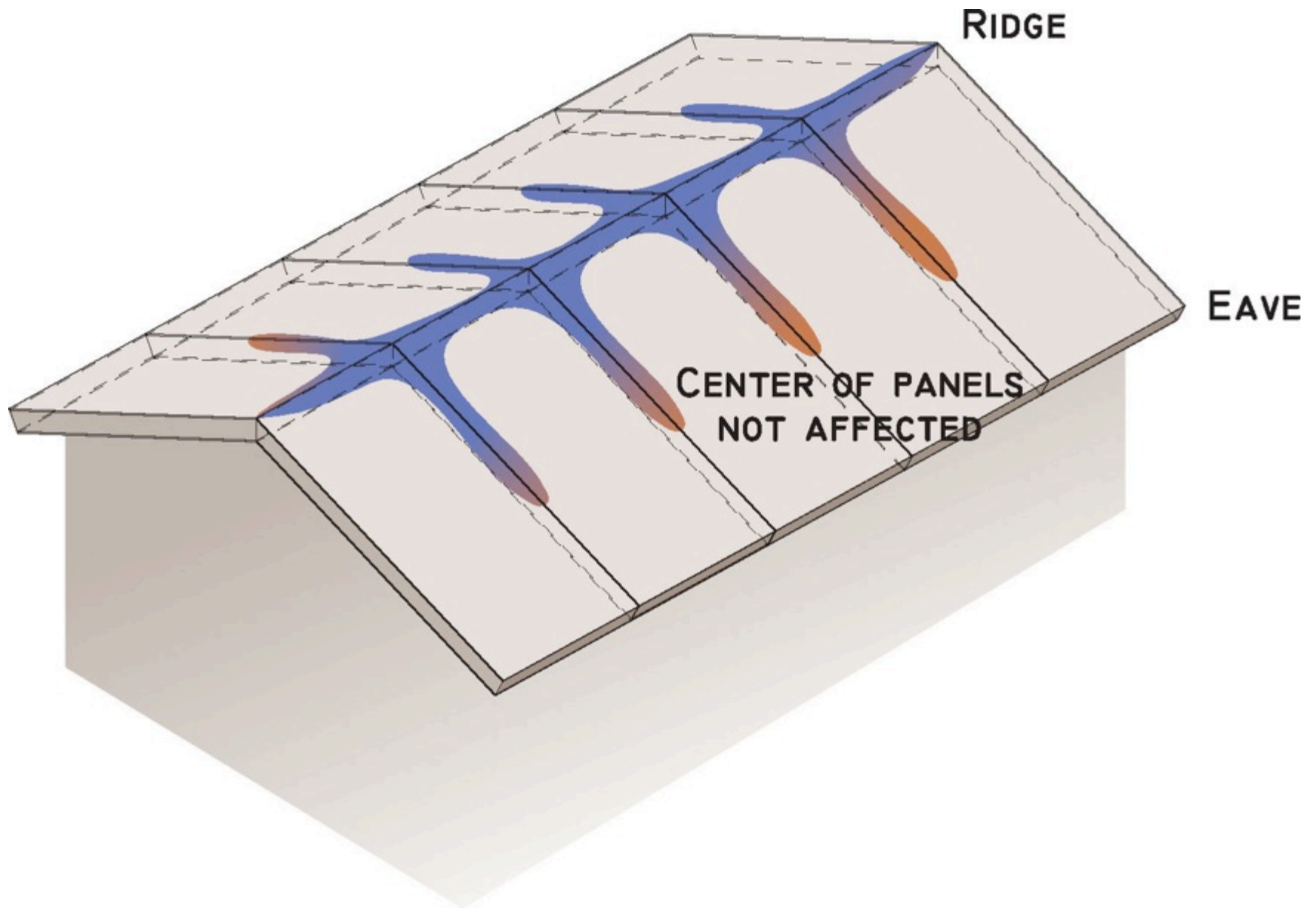


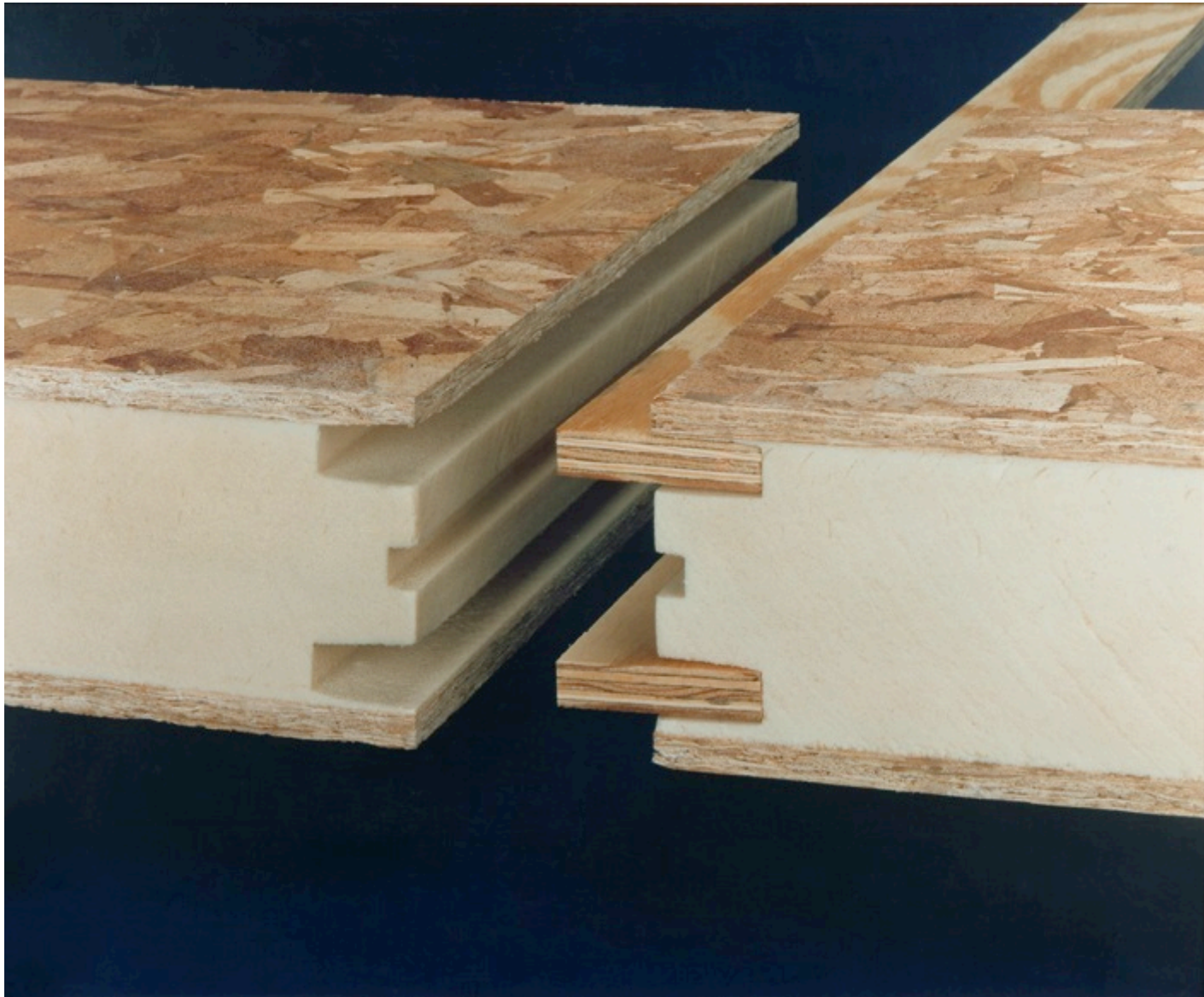












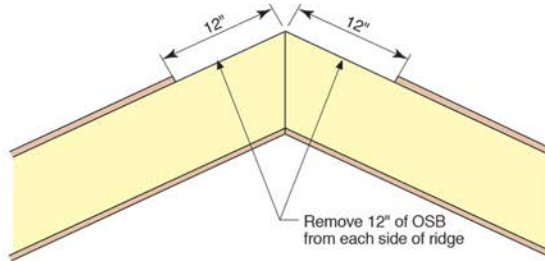






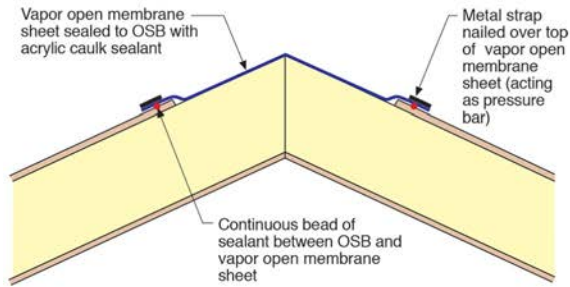
Step 1

- Remove strip of OSB from each side of ridge



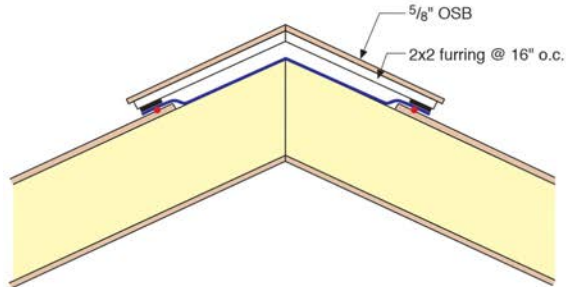
Step 2

- Create air seal with strip of vapor open membrane (tape seams)
- Vapor open membrane sheet sealed to OSB with acrylic caulk sealant
- Hold vapor open membrane sheet in place with metal strapping



Step 3

- Construct wood ridge vent with 2x2 furring

















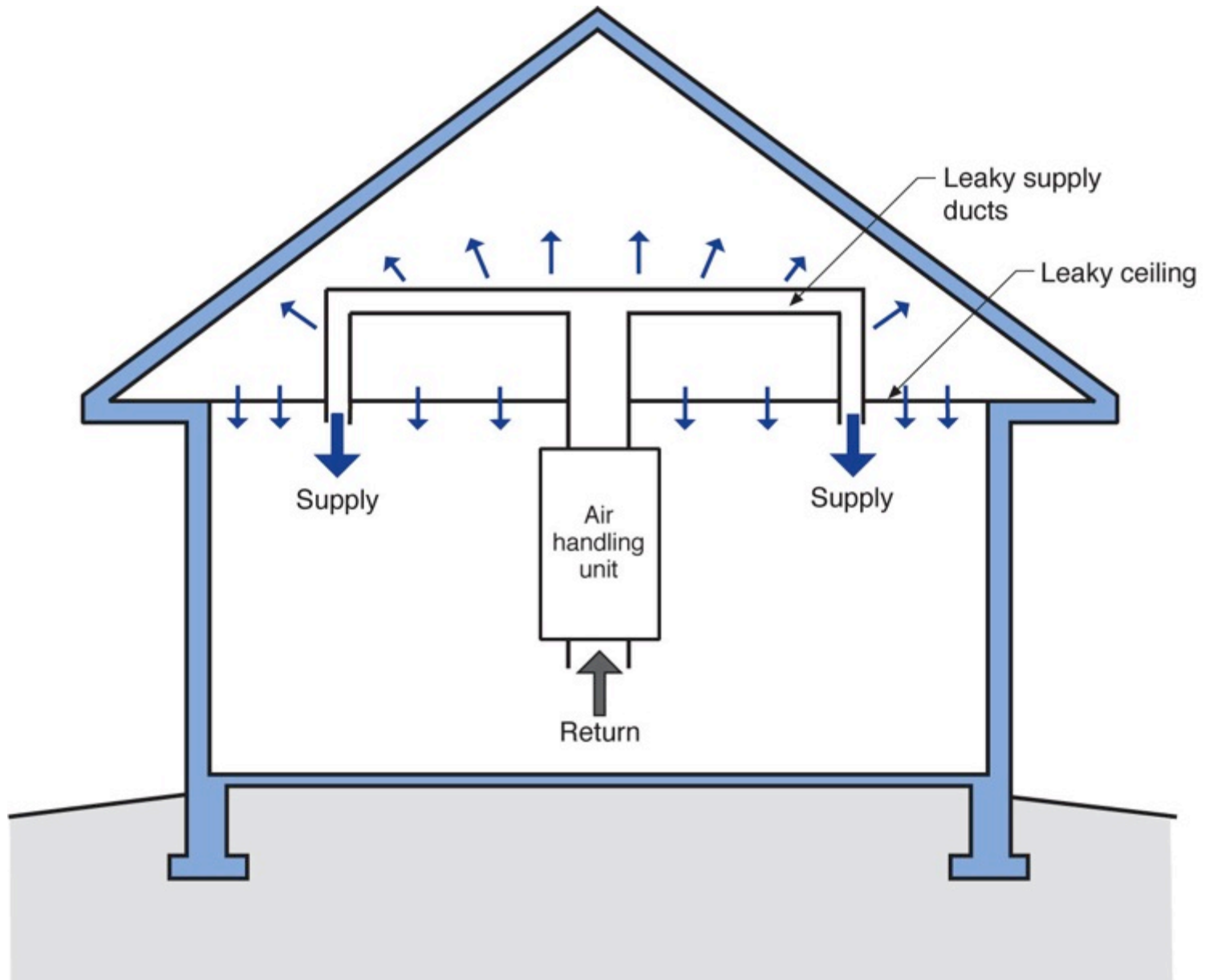




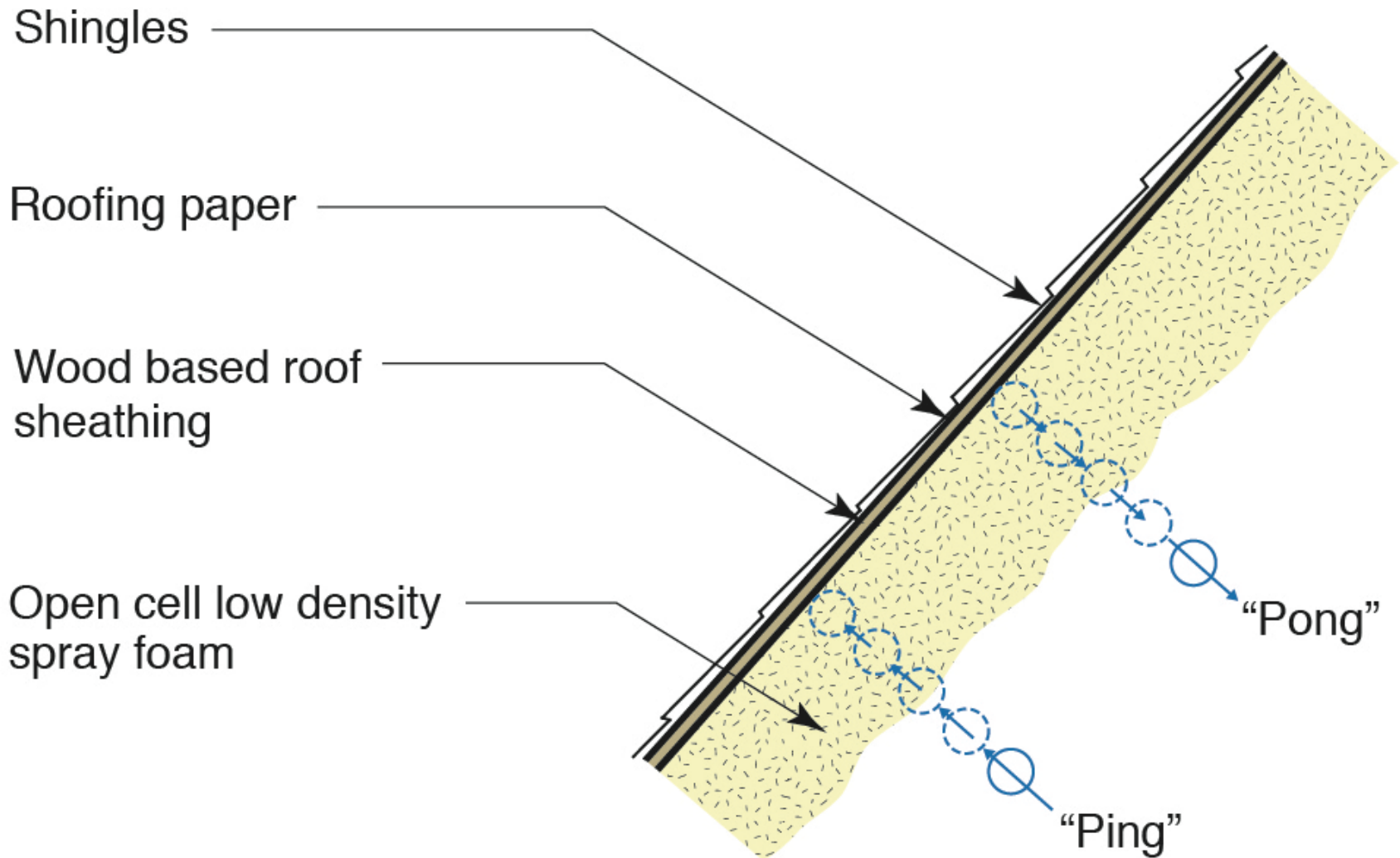


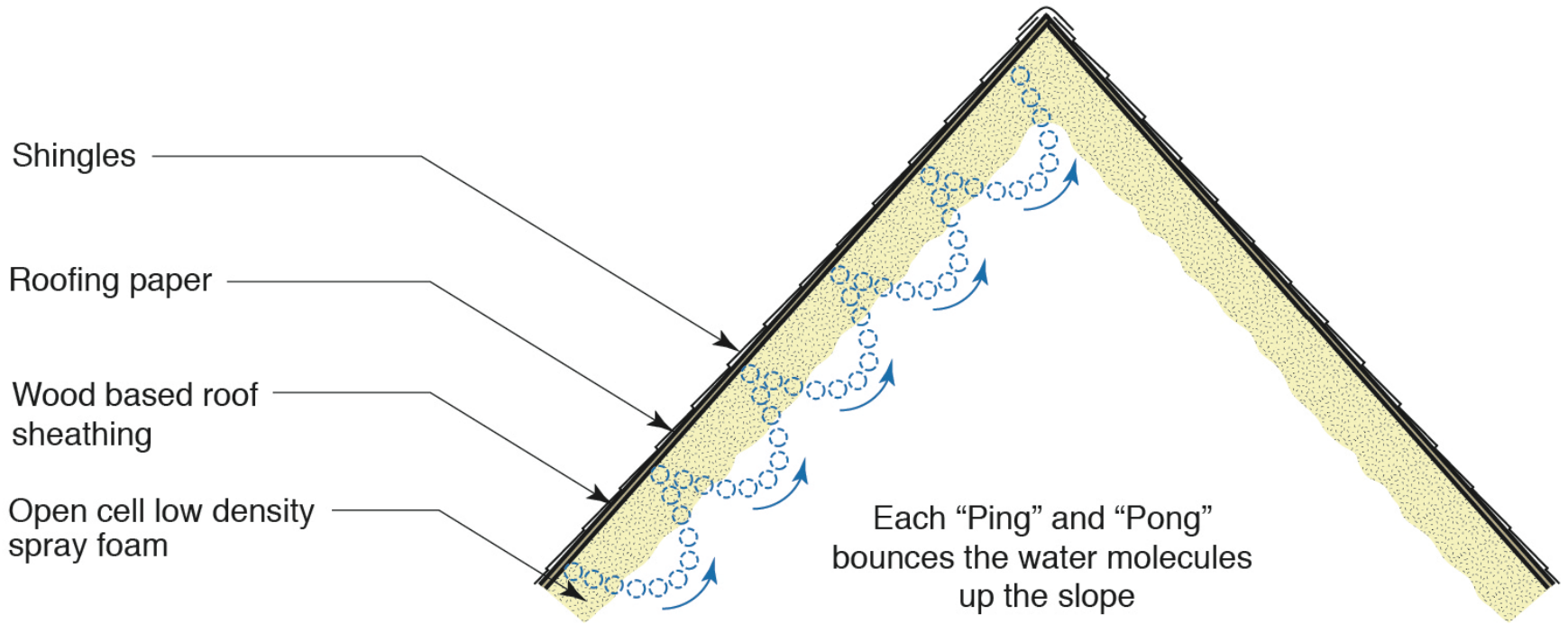


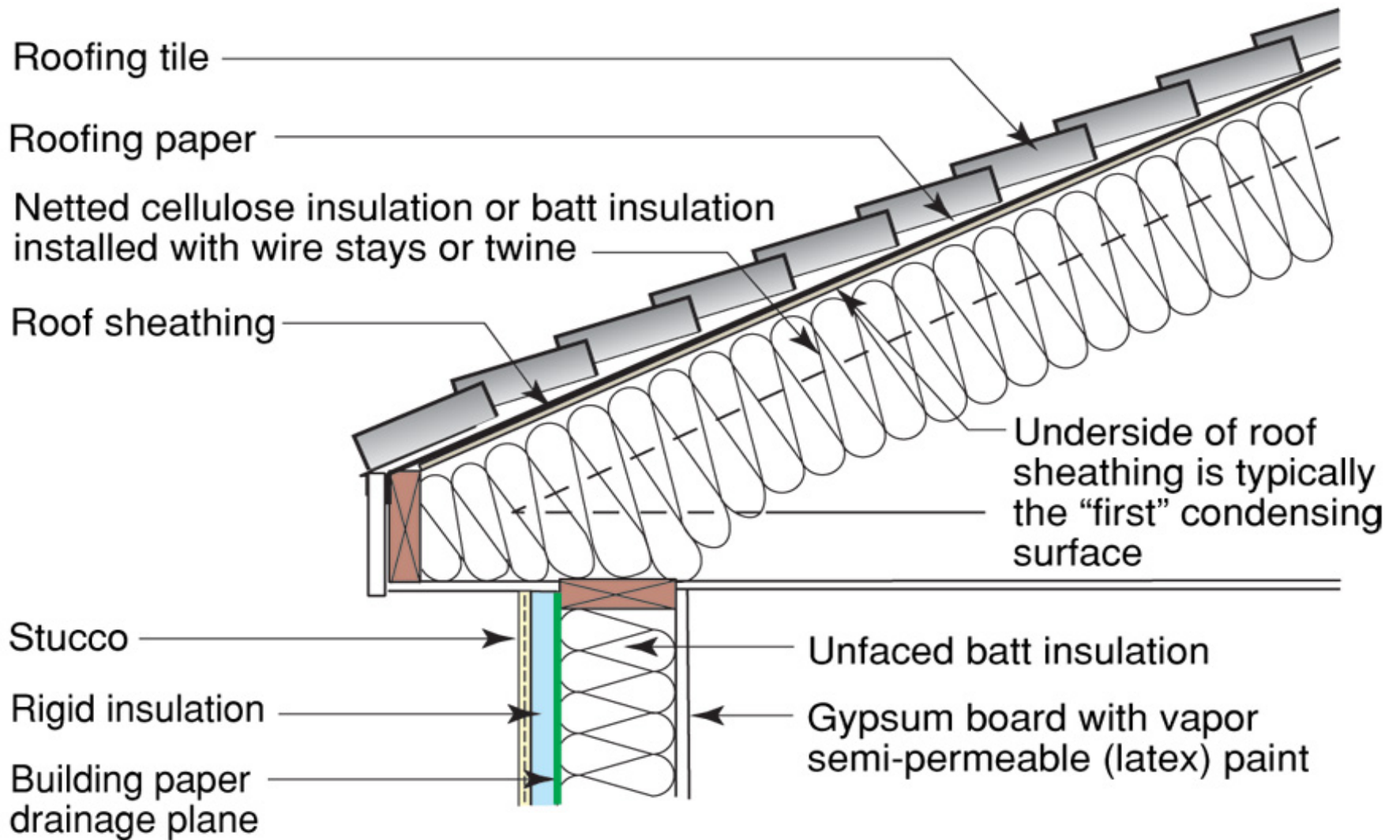


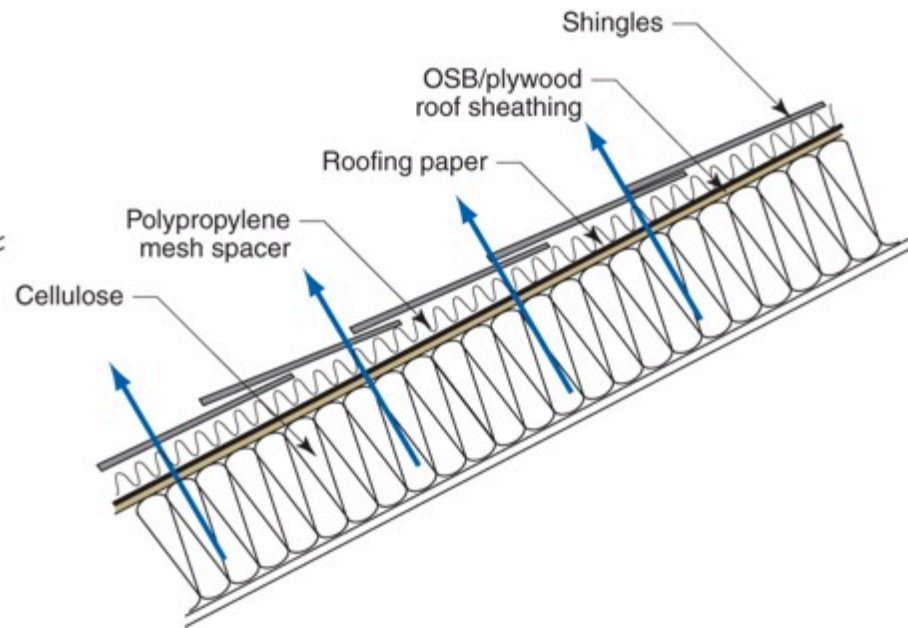
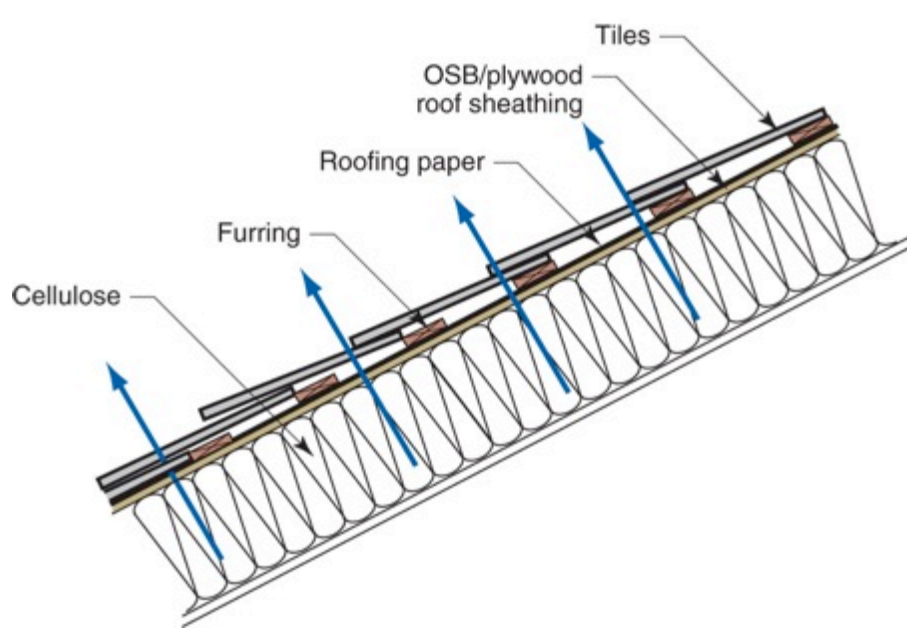


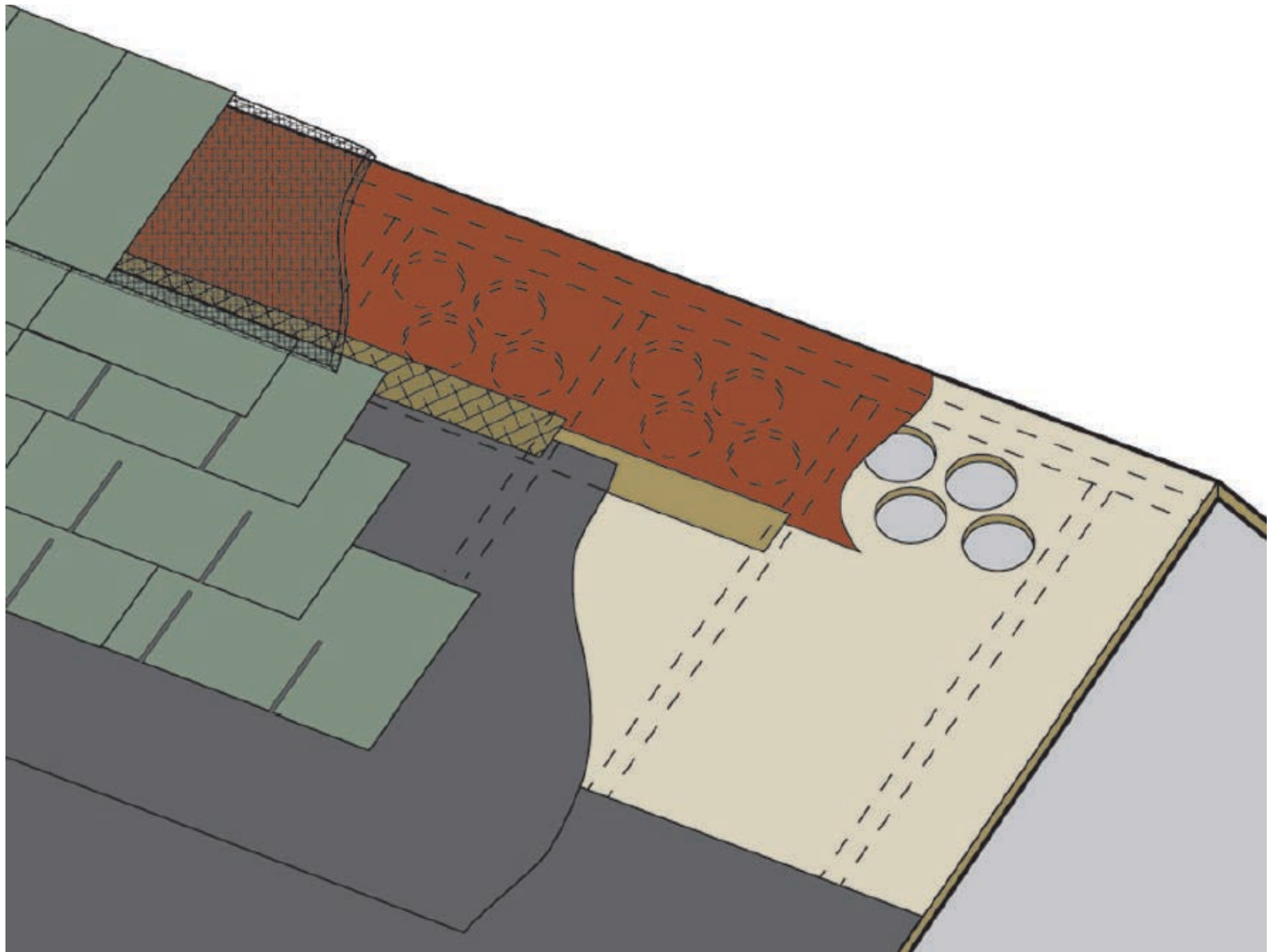


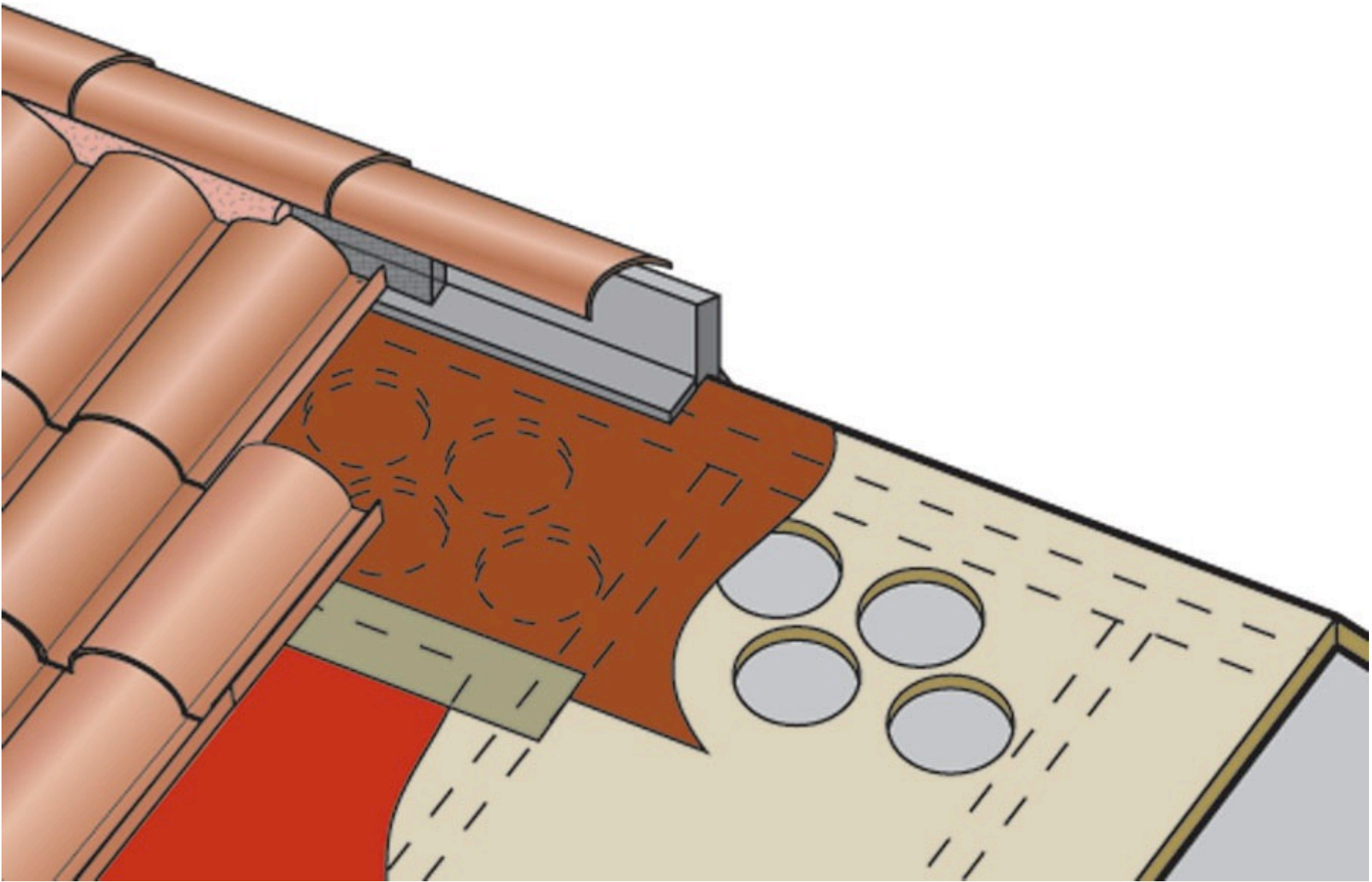


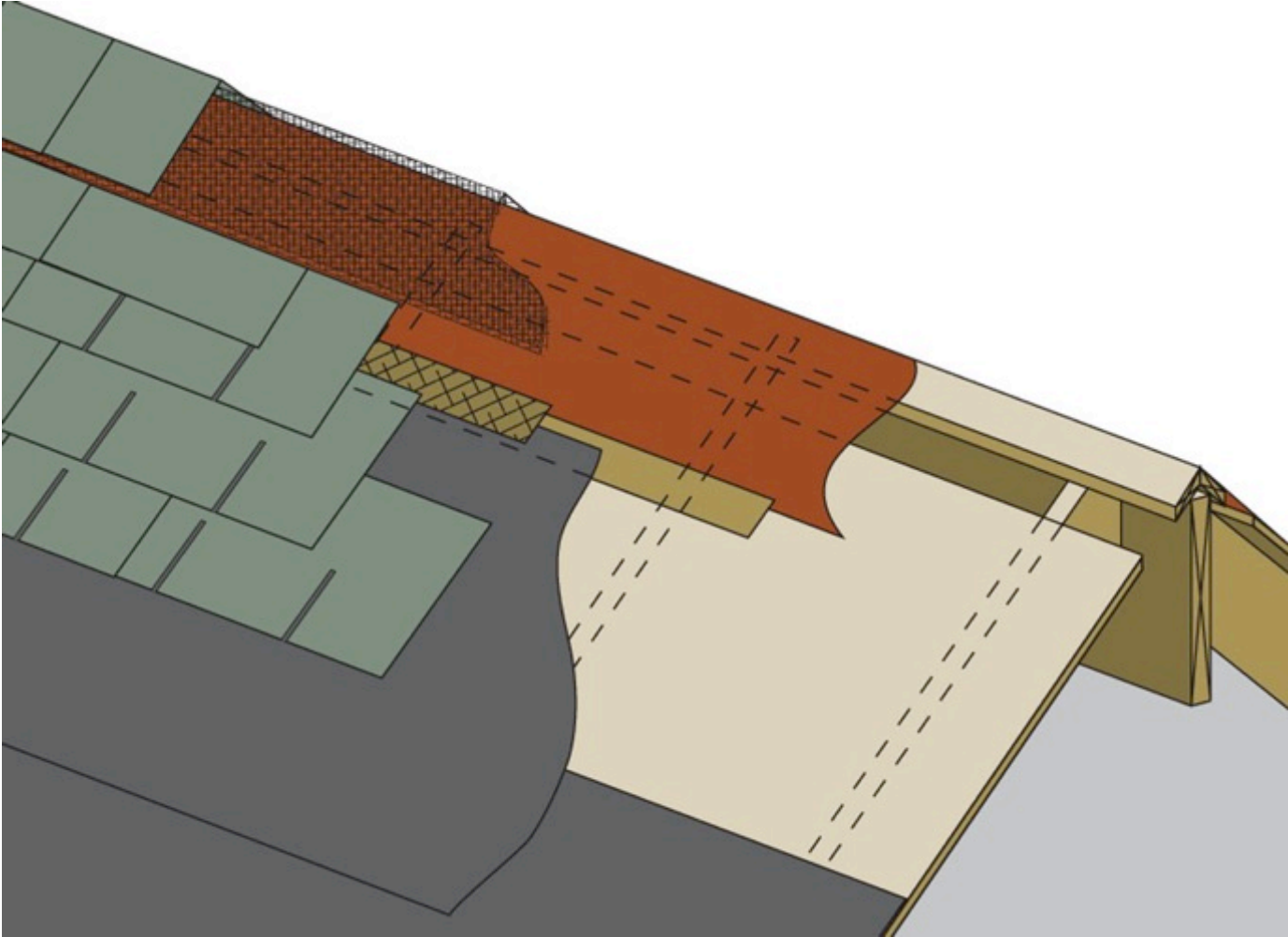


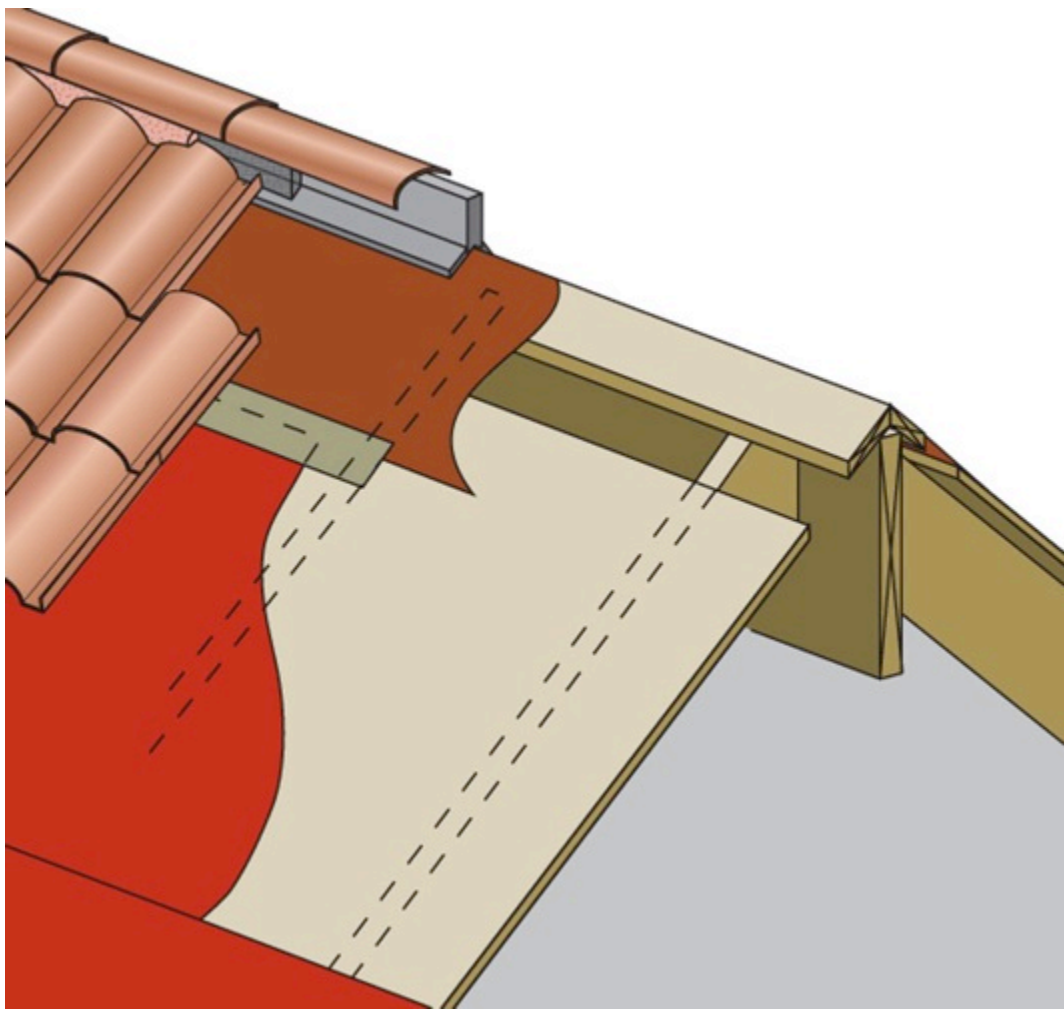


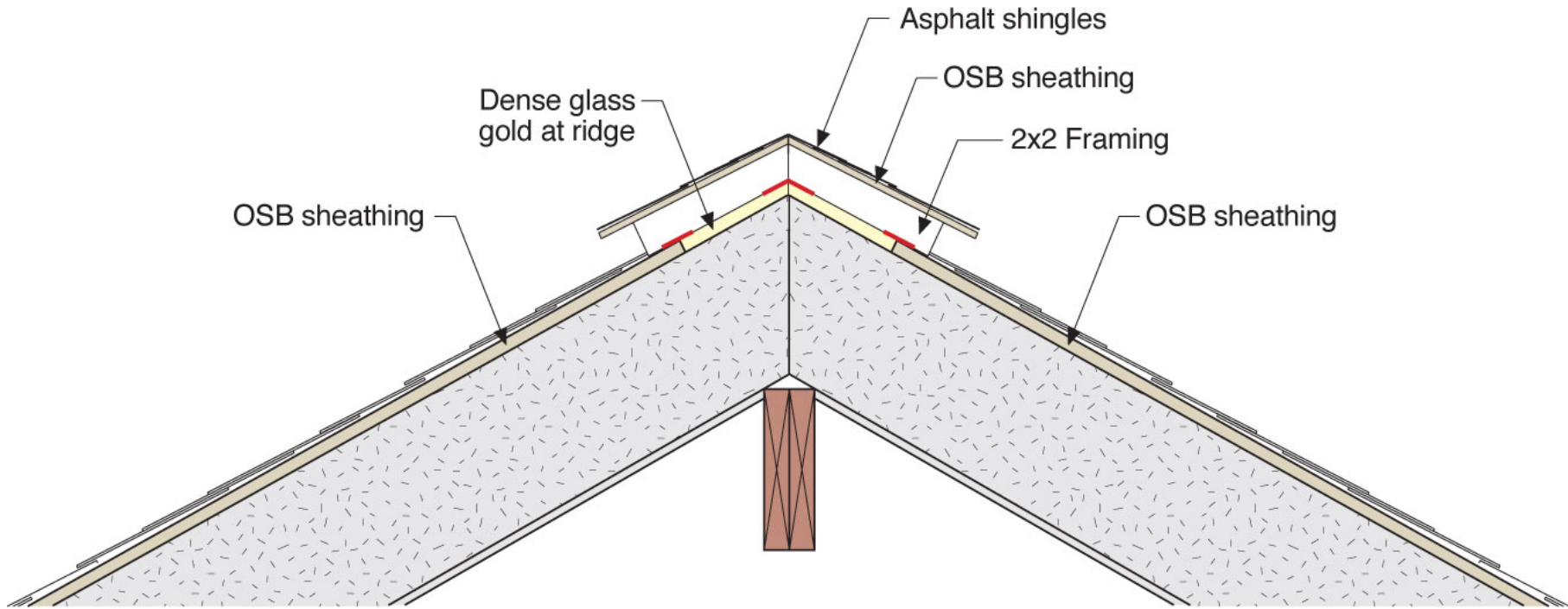










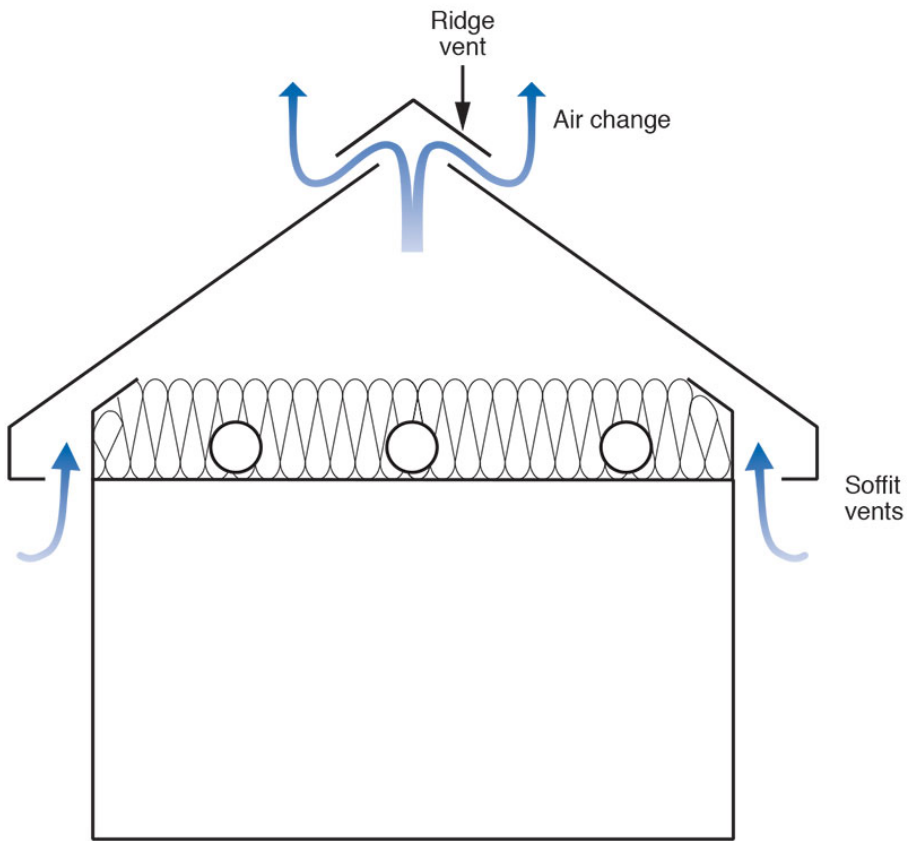




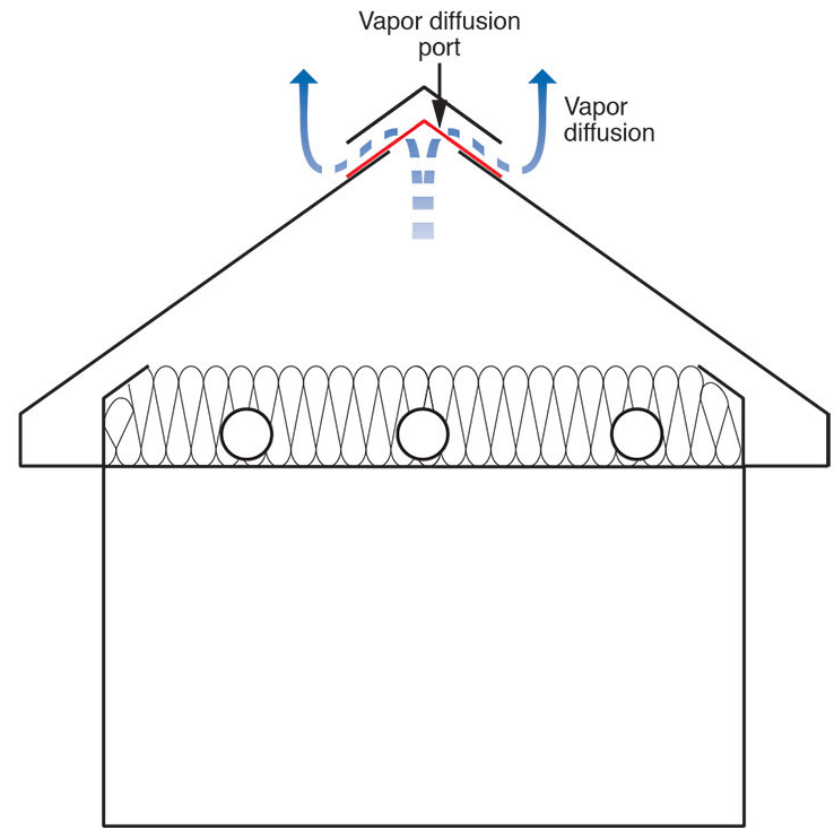








Classic vented attic



Unvented attic with vapor diffusion port

