Q I'm building a house with 12-inch walls. Is it better to install windows on the inside or the outside plane of the walls?

A Steven Baczek, a residential architect from Reading, Mass., who specializes in designing durable, low-energy homes, responds: The answer is that the best window is the one that's installed properly. When you are installing windows in thick walls, a number of questions—regarding aesthetics, performance, and durability—play a role in deciding where the window should be placed in the wall system.

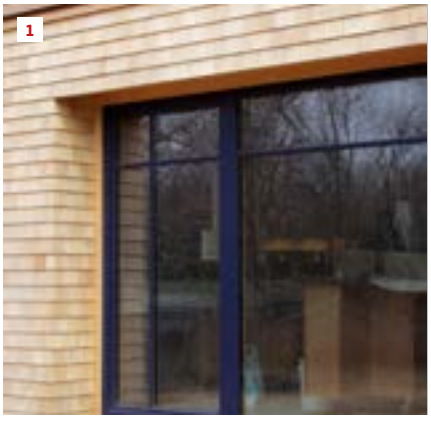
The aesthetics are determined in part by the size of the window, but the thickness of the wall can make the choice even more critical. Moving the window away from the outside of the wall requires exterior jamb extensions made from either the trim material or exterior siding **(1)**. The farther inward the window moves, the more you accentuate the thickness of the wall.

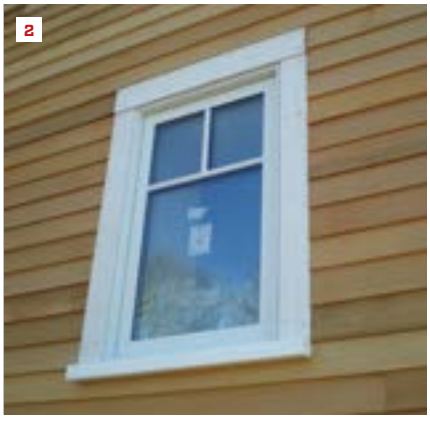
Performance. Next you need to consider comfort and the thermal performance of the window. From a thermal perspective, a window really should be placed in the center third of the opening to put it in the middle of the wall's "R" value—not too cold, not too warm, but just right.

Placing the window in the outer third of the wall puts the window in the colder part of the opening, and you risk creating a microclimate in the window pocket, especially with smaller openings **(2)**. This microclimate carries the risk of getting cold enough for moisture to condense on the glass (a good reason for triple glazing). A colder glass surface also makes you feel colder when you're standing next to it. As your body radiates heat toward the colder glass surface, you feel chilly.

From a durability standpoint, window placement is more complicated, because of the issues of water management. When exterior insulation is applied over the wall sheathing, I almost always align the window with the drainage plane/weather barrier to minimize the number of horizontal elements in the continuous weather-barrier system. Quick-draining, vertical scenarios make for a much more durable system. It's not to say that an inward window, with an assumed weather barrier on the outer surface of the wall, can't work, it's just that you need to heighten your water-management awareness to account for the additional risk.

When I place a window in the center third of the wall **(3)**, I need to create a system to drain water back out to the drainage plane on the exterior surface. I usually set the window on a piece of 5/4 or 1x3 to provide a "sill dam" that is my last defense for water intrusion. Then I install a tapered piece of wood such as cedar clapboard over the sill section of the opening and flash over the tapered board, running the sill flashing up and over the sill dam, and up the jambs at least 6 inches. As a result, I horizontally connect the window (part of my drainage plane) to the exterior sheathing (another part of my drainage plane), and the "innie" window is now integrated with the drainage system.





Photos: Steven Baczek

Q At a client's home, one of the interior doors always swings open by itself unless it is latched completely. The door meets the stop evenly. How can I best remedy the problem?

A Gary Katz, owner of Katz Road Show, editor of *ThisIsCarpentry*, and a presenter at JLC Live, responds: When a door swings open or closes by itself, most carpenters refer to it as a "ghost" door. The cause for the phenomenon is simple: The door jamb is out of plumb.

The jamb may have been installed in an out-of-plumb wall, but that's not always the case. In my own home, I installed a door that closed by itself even though the wall was perfectly plumb. I'd made that door in my shop from old Douglas fir 2x6s. The door was beautiful, but the wood had so much twist in it that I had to install the jamb out of plumb so the door would hang flush with the jamb. I fixed that "ghost" door with an old, tried-and-true technique—I bent the hinge pins.

The bent pins cause the leaves of the hinge to bind slightly, which stops the door from swinging on its own. In my experience, you can stop most ghost doors from swinging by bending just one pin. But my door jamb was so out of plumb that I needed to bend both hinge pins—and I had to bend them a *lot*.

It's easy to bend a hinge pin. Just set the pin on a hard surface—a concrete basement slab works great. You can put a piece of 1-by under one end of the pin, then smack the pin with a hammer right in the middle to bend it a little.

Put the pin back in the hinge and see if the door stops swinging. If the door still swings, bend the other pin (or pins), too. If the door still swings (like mine did), bend both pins even more!