Q What's the best way to install exterior flat-stock trim around a flanged window?

A *JLC* Staff responds: The trick to installing exterior flat-stock trim around a flanged window is having the trim sit flat (in plane with the wall) while the trim's outer face is proud of the siding for aesthetic reasons. If you just use 1-by stock (3/4 inch thick) and rabbet the back inside edge to go over the flange, the edge thickness won't completely cover up most lapped siding (such as side-wall shingles that are 3/4 inch where the layers overlap).

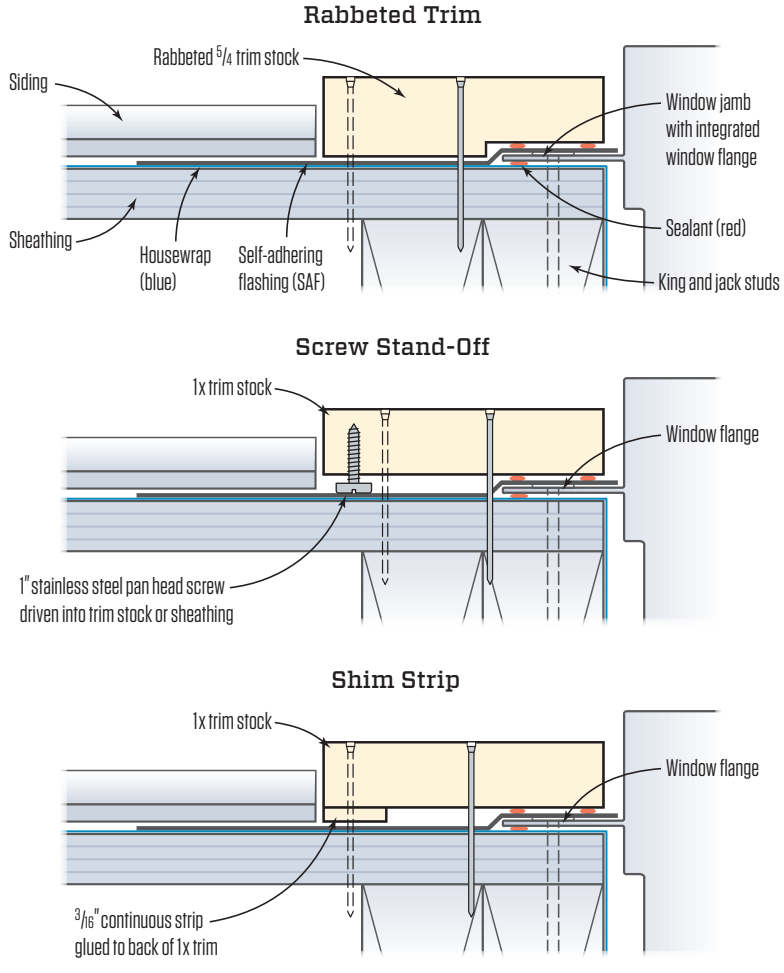
The first and most obvious solution is to rabbet 5/4 stock (with a nominal thickness of 1 inch) for the trim. The first drawback to that method is cost: 5/4 stock is more expensive than 1-by stock. The second problem is the added weight of 5/4 stock. It might not seem like much until you have to carry a bunch of large preassembled trim kits up the ladder for second-floor windows. In addition, there is the time and energy of rabbeting the stock, which typically requires two passes on a table saw—easy enough, but the extra time adds up.

An alternative to using thicker stock is installing some kind of backer or shim behind the 1-by trim to keep it in plane while it rests against the window flange. One type of backer is a thin strip of material attached to the back outside edge of the trim stock. While this method can work well, it still requires ripping material—most likely on a table saw—and then attaching the strip to the trim stock with either glue or tacks or both.

Manny Silva, a frequent contributor to *JLC*, drives stainless steel pan-head screws either into the back of 1-by trim stock or into the wall just inside the outer edge of the trim. He leaves the screws proud of the trim or the wall about the same amount as the thickness of the flange. The large, flat surface of the screw heads lets them function as adjustable stand-offs, keeping the trim in plane with the wall. If you try this method, drive the screws every 8 to 12 inches, depending on the flexibility of the trim stock, and use a straightedge to make sure the trim stays flat.

The easiest and most effective way to trim a window is to build a "picture frame" on the ground, assembling the pieces with pocket screws. Bed the trim frame to the flange with a good-quality adhesive caulk before fastening it in place with stainless steel nails or screws. If you've used Silva's stand-off screw method, mark where the screws are located and drive fasteners near those locations to keep from distorting the trim while driving the fasteners.

Trimming Out a Flanged Window



To keep flat stock trim in plane with the wall while creating a place for the siding to die into, either rabbet thicker trim over the flange or hold 1-by stock off the wall with a shim strip or stand-off screws.

Illustration by Tim Healey

Q My clients want to put a conventional masonry wood-burning fireplace and chimney in their Energy Star home. What are the code requirements for controlling outside air?

A Glenn Mathewson, a code educator and consultant from Colorado (buildingcodecollege.com), responds: Before we dive in to the code, let's define the terminology. Fire requires oxygen, so any fireplace with real fire from a source such as wood or gas requires a renewable supply of incoming air. This is often referred to as "fresh air," though the IRC also calls it "combustion air."

The code lists different methods for getting this air to the fire, the most common of which is from outside the house, so the IRC uses terms such as "outside air" and "exterior air." There is other air that can be part of combustion air, such as "ventilation air," which is used to ventilate or exhaust an appliance (or fireplace), and "dilution air," which mixes with the exhaust gases to dilute them. The code also references "make up air" and "inside air." But let's clear the air and just call it "exterior air," which is the title of the code section we'll be discussing.

Chapter 10 of the 2018 IRC is the most up-to-date source of information on this topic. (Bear in mind that local and state governments often amend the IRC when they adopt it. It's always good to stay current with your local code.) Section R1006, titled "Exterior Air Supply," includes only five short sections and a differentiation between factory-built and masonry fireplaces.

For factory-built fireplaces, the IRC leans on a familiar phrase: "... in accordance with the manufacturer's installation instructions." Fireplaces, their vents, and their exterior air are all governed this way. The only IRC requirement that applies to both factory-built and masonry fireplaces is that the outlet for the exterior air coming into the fireplace must be at the back or side of the firebox chamber or outside of the box, at the height of the hearth, and not more than 24 inches away from the firebox.

The final requirement in this section first appeared in the 1992 CABO Code and hasn't changed since. Compared with many of today's provisions, this one seems rather vague: "The outlet [at the firebox] shall be closeable and designed to prevent burning materials from dropping into concealed combustible spaces." In other words, you need to be able to close off the exterior air supply, and it must be configured to prevent burning material (think coals popping off a burning log) from entering the supply duct.

For masonry fireplaces, the area of the exterior-air passageway must be at least 6 square inches but not more than 55 square inches. There is no sizing criteria that relates to the size of the firebox or chimney, just the range of minimum and maximum sizes for each. If you're ducting the air to the firebox, the most flexible installation will come from a listed combustion-air duct installed per the manufacturer's instructions. For an unlisted duct, a minimum 1-inch clearance to combustibles is required for the first 5 feet of the duct length, measured from the outlet at the firebox. The inlet end of the duct can terminate outside the house or in a ventilated attic or crawlspace. The inlet must have a minimum of 1/4-inch, corrosion-resistant mesh covering the opening to keep out debris and critters.

Wood-burning masonry fireplaces are nice but come at a cost. No matter how well they're integrated into a building's thermal envelope, they don't offer much resistance to heat loss when not operating. Most masonry fireplaces also don't burn as cleanly and efficiently as factory-built units, and local ordinances often prohibit new installations or restrict days they can be operated. Factory-built fireplaces, on the other hand, often include catalytic converters that help with emissions. These alternative fireplaces can be built into enclosures that give the same rustic feel as a classic masonry fireplace.