

CHECKLIST FOR A THOROUGH AIR BARRIER

Any air barrier, including one incorporating the airtight-drywall approach, must be thorough. An air barrier is about more than just the drywall; it requires sealing areas like the rim joist and penetrations like electrical boxes. It also requires sealing all large holes, including attic hatches, access holes under bathtubs, exterior walls behind tubs or shower units, kitchen soffits, recessed lights, and zero-clearance fireplaces. Here's a basic checklist to ensure a continuous air barrier.

Drywall perimeter. Use a continuous bead of caulk or drywall gaskets along the bottom plates and top plates of exterior walls, along the top plates of partition walls under insulated ceilings, and around the perimeter of all rough openings.

Intersecting walls. On partition walls that intersect exterior walls, seal both sides of the stud nearest the intersection. With caulk, seal the crack between the first stud in a partition wall and the partition's bottom plate and top plate.

Windows and doors. Seal between window frames and window rough openings using low-expanding foam, gaskets, or backer rod and caulk. If your windows have drywall returns, install gaskets on the faces of the rough-opening studs (behind the drywall jamb extension) rather than the edges of the stud. Caulk window and door casings to the drywall.

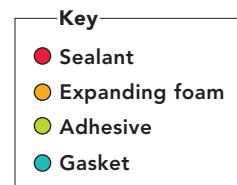
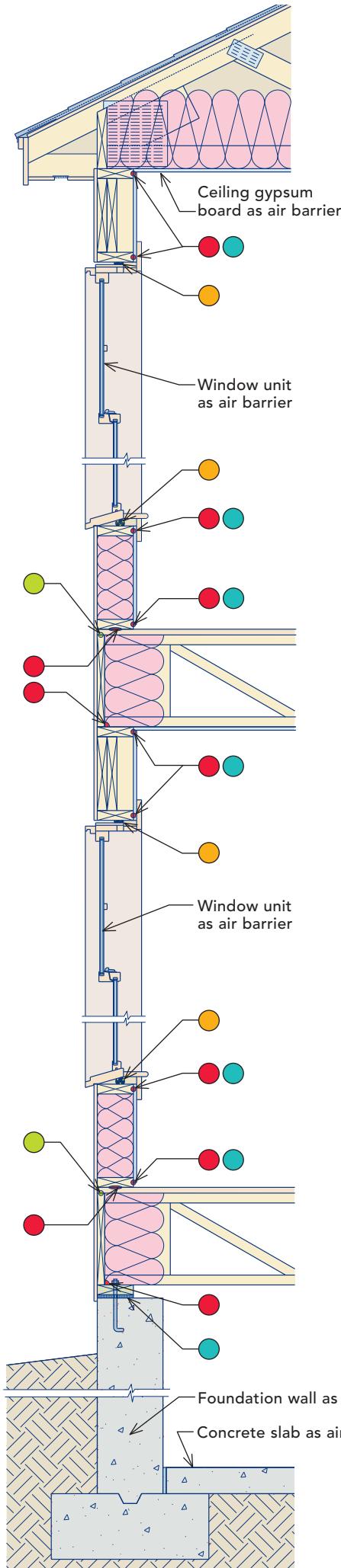
Penetrations. All of the penetrations through the drywall need to be sealed, including electrical boxes. It's also important to seal plumbing and wiring penetrations through top and bottom plates in exterior walls and partition walls.

Rim joist. Install sill seal between the foundation and the mudsill. When installing the rim joist, don't forget to install a gasket or caulk between the bottom of the rim joist and the mudsill. Similarly, second-floor rim joists need a gasket or caulk between the bottom of the rim joist and the top plate it sits on. You can air-seal and insulate rim joists in one shot with spray foam.

Corners. Use caulk to seal the last floor joist to the intersecting rim joist. At corners of the building, it's also important to seal the joint where one mudsill butts into another.

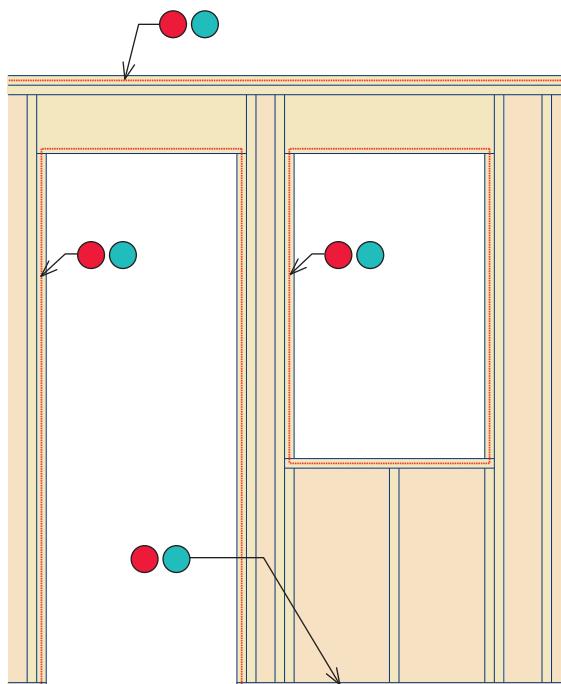
Subfloors. Install a continuous bead of subfloor adhesive between the subfloor and the perimeter joists. Install a gasket or caulk to seal between the subfloor and the bottom plates of exterior walls.

Slabs and foundation walls. Seal all penetrations with urethane sealant.



A good air seal never stops

Whether you are sealing around window and door frames with expanding foam or along plates and rough openings with sealant and gaskets, the key to a tight house is a continuous air seal. Along framing, you can use sealant or a gasket; the latter offers greater performance.



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