

Moisture Issues in Homes with Brick Veneer

issues with brick's ability to absorb water and how moisture can lead to condensation and mold



Brick veneer is a porous material. Both air and water can penetrate it, allowing moisture to move toward the wood framed walls of a home. The air space behind the brick allows moisture to be forced upwards due to stack effect, which allows this warm moist air to condense on cold surfaces like roof sheathing in an attic. Moisture on wood sheathing members can also lead to rot and possibly mold growth, both issues of safety, health, and durability in a home. Through our work with builders, IBACOS has seen various problems caused by a lack of air and moisture management techniques in homes that are clad with brick veneer. The three most common scenarios are:

- homes with first-floor bay windows
- two-story homes with brick veneer on the first floor and vinyl siding on the second
- homes fully clad in brick veneer where little attention is paid to minimizing the movement of moist air into the attic

To increase the drying potential of brick veneer, every sixth mortar head joint should be removed at the bottom of the wall and at the top of the wall to create a ventilated brick air space. This practice is very effective to encourage drying and also to prevent any condensation problems.

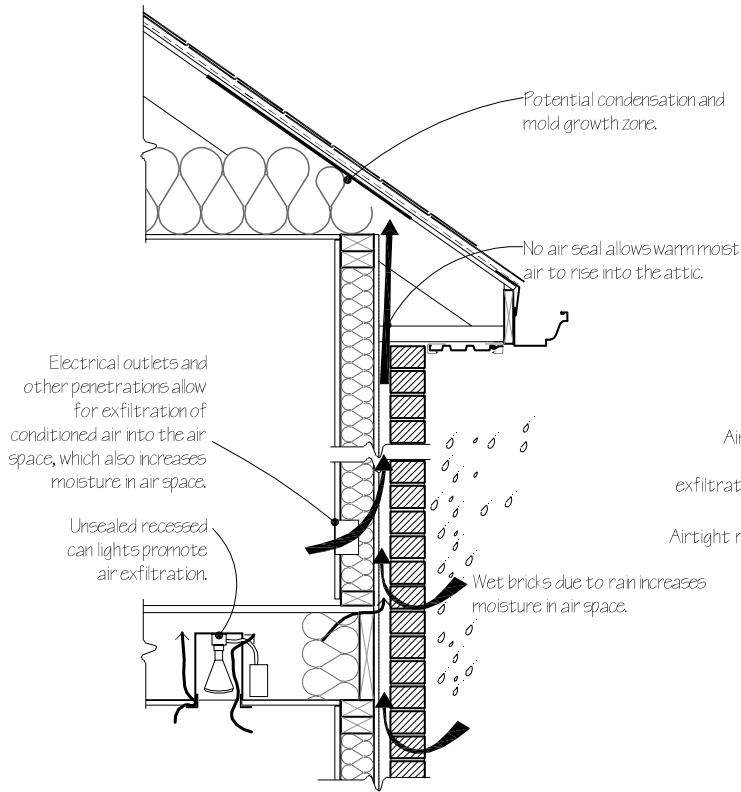
The details on the next two pages represent these three scenarios and examples of solutions. Following these details will help to ensure the durability, health, and safety of the home. Frequent inspections during construction to verify that proper techniques are being implemented are important to ensure quality.

Did You Know Water Passes Right Through Brick?

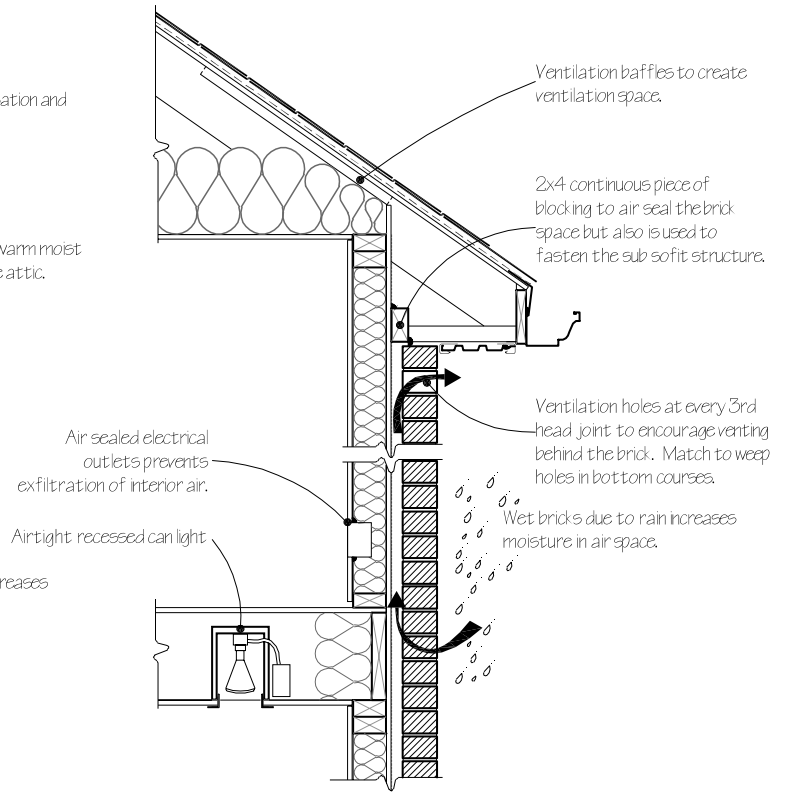
Packer Engineering, Inc. of Naperville, Illinois has conducted laboratory testing of a 12 square foot area of a brick façade subjected to a simulated wind driven rain. This testing revealed that the brick wall leaked one gallon of water per hour. If you're building a brick façade, make sure you apply a continuous drainage plane behind it.

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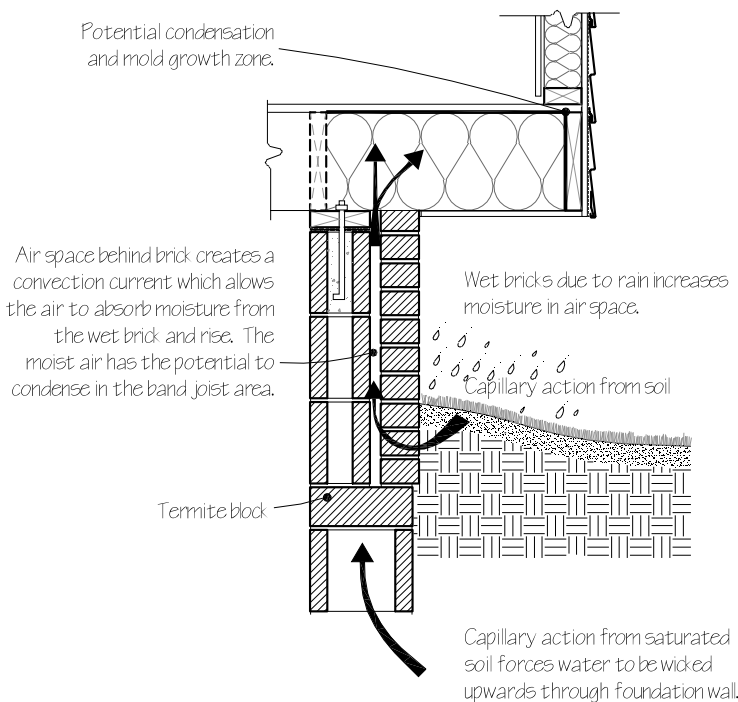
Roof Sealing Typical Practice



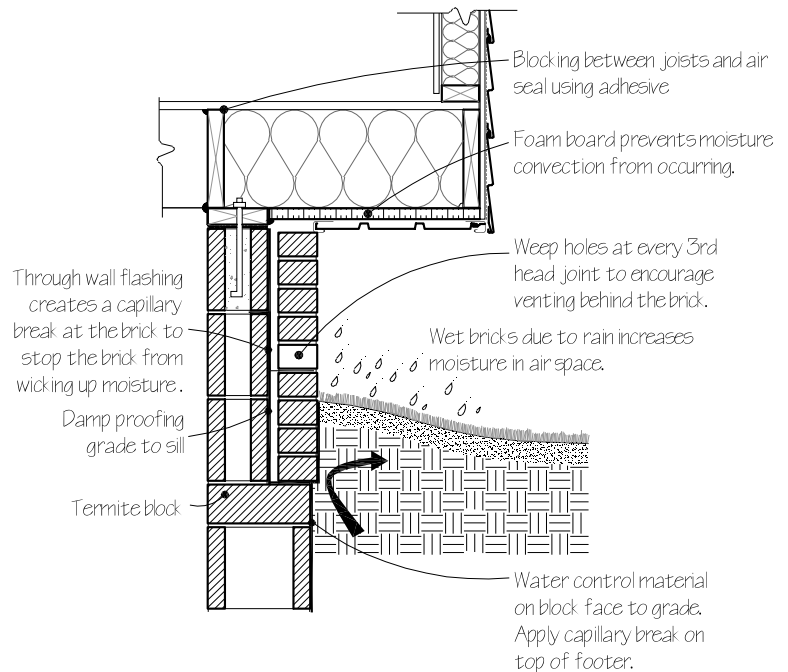
Roof Sealing Best Practice



Cantilevered Floor Typical Practice

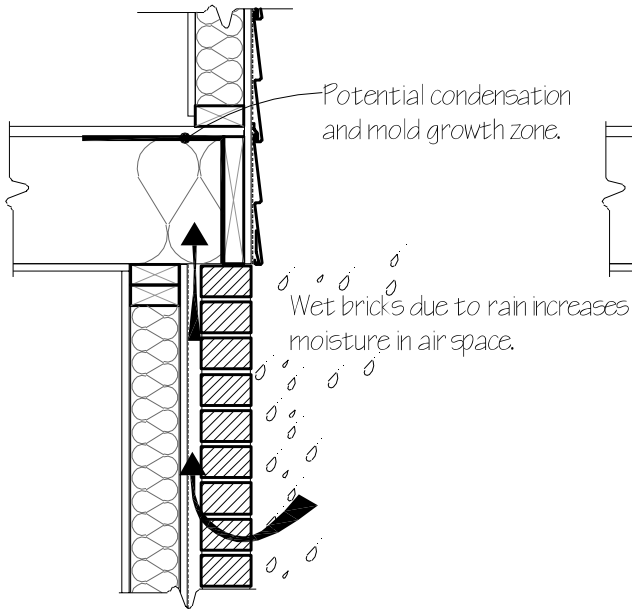


Cantilevered Floor Best Practice

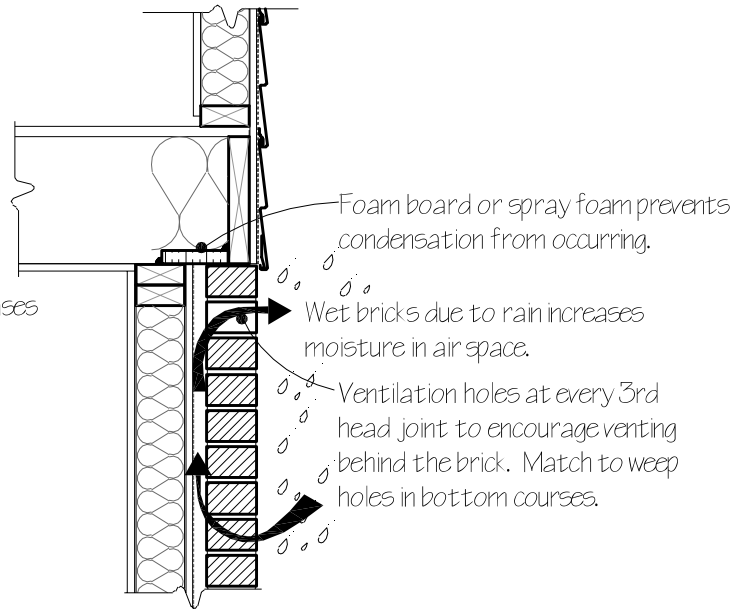


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Second Floor Sealing Typical Practice



Second Floor Sealing Best Practice



Additional Second Floor Sealing Options

