

Flashing wood-frame, brick-veneer construction

Detailing and installing flashings properly at the foundation and at openings can help prevent moisture problems

By Walter Laska

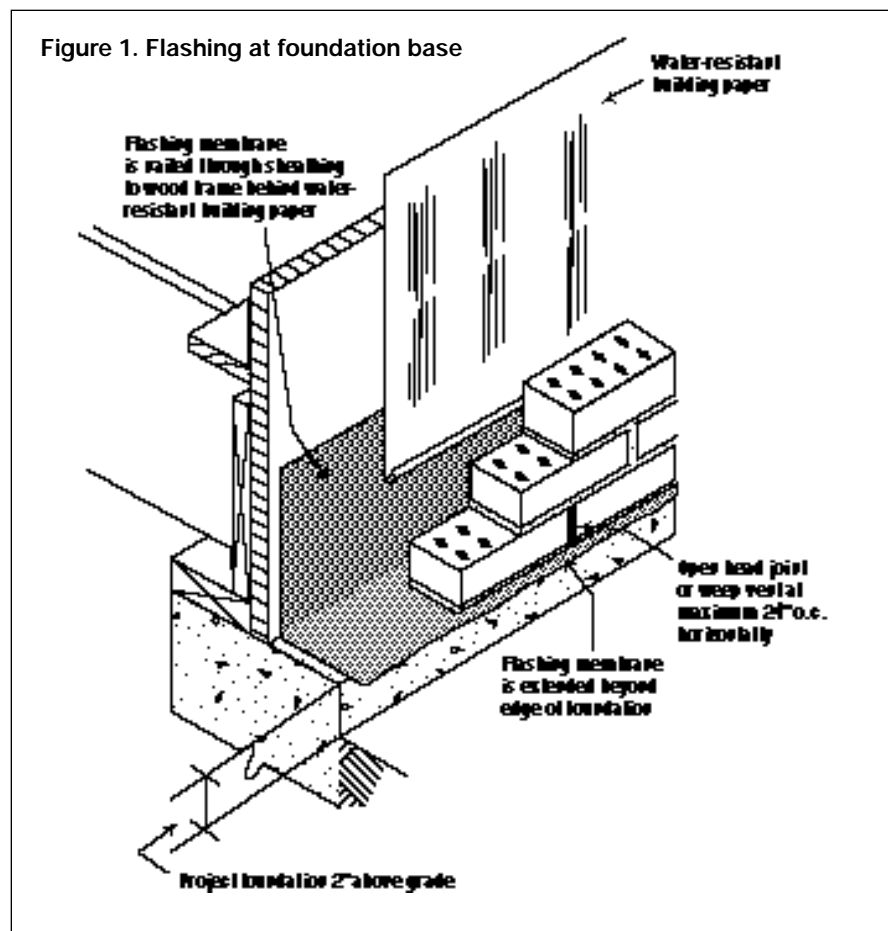
A designer detailing a masonry veneer wall should closely scrutinize any area where water might infiltrate the wall system. Proper flashing details and installation are important in any brick-veneer system, but they often are overlooked in wood-frame, brick-veneer construction. Fortunately, this construction method is used primarily for residential construction, which is restricted by building codes to three stories or a maximum of 35 feet high.

In residential construction, walls often are protected from rainwater by eaves and overhangs. This greatly reduces the amount of water running down the surface of the wall, helping to minimize moisture infiltration. For this reason, buildings that are improperly flashed or not flashed at all generally do not experience immediate water infiltration problems after being exposed to normal rainfall.

Improperly flashed wood-frame, brick-veneer buildings will experience moisture problems after several days of continuous rainfall or after a heavy rainstorm with swirling winds. Problems usually occur at the foundation where base flashing should be installed.

Base flashing

Figure 1 illustrates the proper way to flash the base of a brick-



veneer wall. An oversight that can critically affect wall performance commonly occurs in the handling of the flashing end. The designer must clearly indicate and note on the drawings that the flashing is to be lapped *behind* the water-resistant building wrap or building paper. The flashing

should not be merely nailed to the sheathing over the building paper.

Proper construction prevents moisture that bridges over the air space to the sheathing from flowing behind the flashing, onto the foundation, and into the building. This water infiltration problem is often attributed

Figure 2. Flashing above window opening

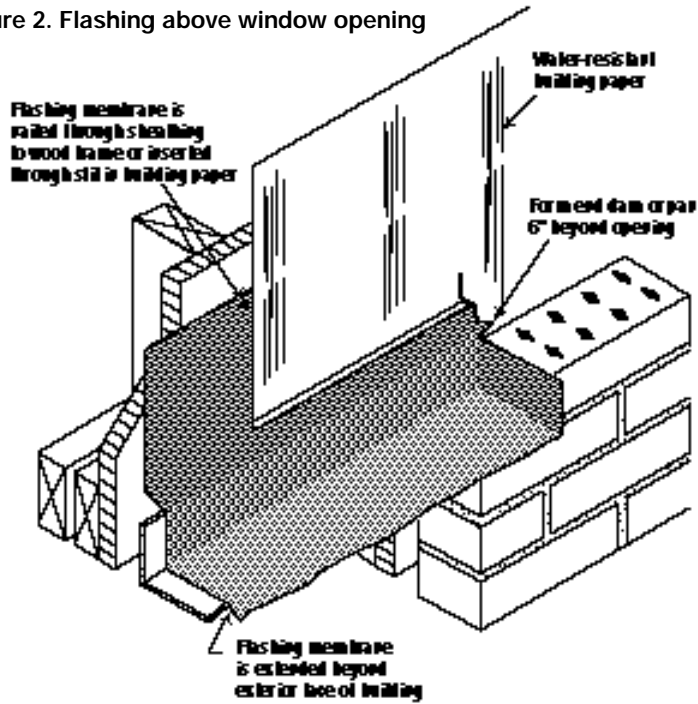
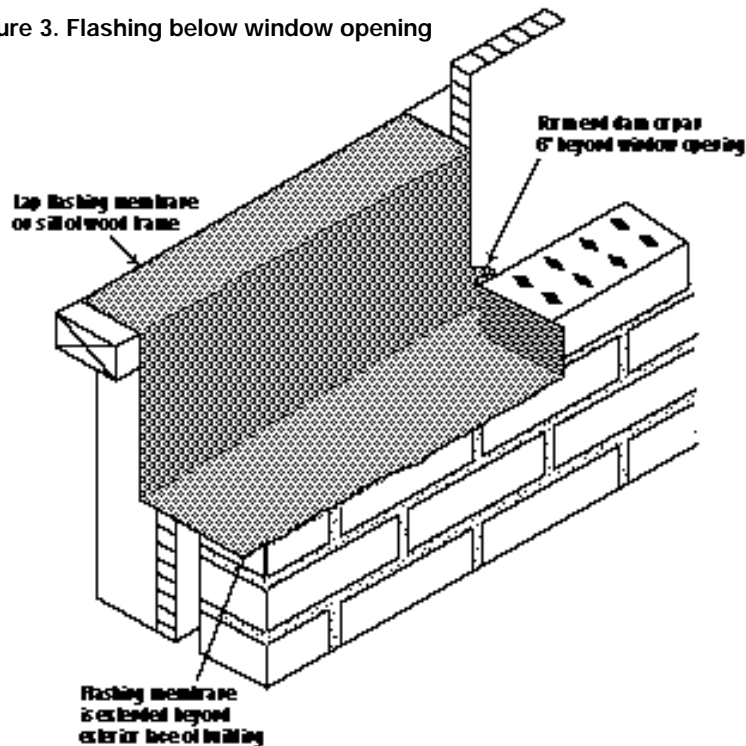


Figure 3. Flashing below window opening



by the owner to a leaking foundation.

Another critical need is to extend the flashing out beyond the exterior wall face. If the flashing stops short of the outer wall face, then water may flow

under the flashing and back into the building.

The designer also should detail the foundation to extend approximately 2 inches above grade. Unless this is clearly indicated on the drawings and enforced during

construction and final grading, flashing and weep holes can be buried beneath the ground during backfilling or landscaping. Flashing and weep holes below grade are totally ineffective. Also, when brick comes into contact with moist soil, capillary action (suction) draws moisture and salts from the ground into the wall, resulting in efflorescence.

Flashing at openings

It also is critical for wood-frame, brick-veneer walls to be flashed at openings. Flashing should be detailed both above and below window openings (see Figs. 2 and 3). Designers should note on the drawings the need to form end dams or pans at these locations.

The flashing should extend at least 6 inches beyond each opening and be turned up to form a dam. If flashing is left flush with the jambs or without end dams, water can easily run down the sides of the window jamb and make its way into the building.

The flashing also must be lapped behind the building paper to prevent water from flowing behind the flashing and into the building. If necessary, the mason should slit the building paper and tuck the flashing beneath it so water flows onto the flashing and out of the building.

Install flashing below the window opening in a similar manner. The sill should be pitched away from the window so water runs off and doesn't build up or run toward the opening. The sill also should project beyond the outer face of the wall.

Most local codes require flashing to be installed in all buildings. Though wood-frame, brick-veneer buildings seem a little more forgiving, you can be sure that if flashings are deleted or poorly installed, problems eventually will occur. ■

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