



Figure 15-29 Flashing that does not extend through the outside wall face can allow moisture to flow around the front edge of the membrane and back into the wall.



Figure 15-30 Trim flexible flashing flush with outside face of wall. (Photo courtesy BIA.)

Expansion joints are used in brick, terra cotta, and structural clay tile construction to accommodate the permanent moisture *expansion* that all clay masonry products experience as they reabsorb atmospheric moisture after firing. Expansion joints are also used in stone cladding systems to accommodate thermal movement. Clay masonry moisture expansion always exceeds reversible thermal expansion and contraction, so expansion joints cannot contain mortar or other hard materials (see Fig. 15-40). Lateral support is provided by placing an anchor or tie on either side of expansion joints. During construction, plywood strips can be used to prevent mortar from bridging the expansion joint and restricting subsequent movement, but such rigid materials *must* be removed when the masonry construction is complete (see Fig. 15-41). Soft joint filler materials such as neoprene rubber sponge may also be used to keep mortar out of the joint during construction, but may be left in place only if they are sufficiently compressible to allow the expected movement to occur. Joint fillers that are left in place must be set deep enough in the joint to allow room for a backer rod and a sealant joint of the proper depth (refer to Chapter 9). Filler materials should not be used as

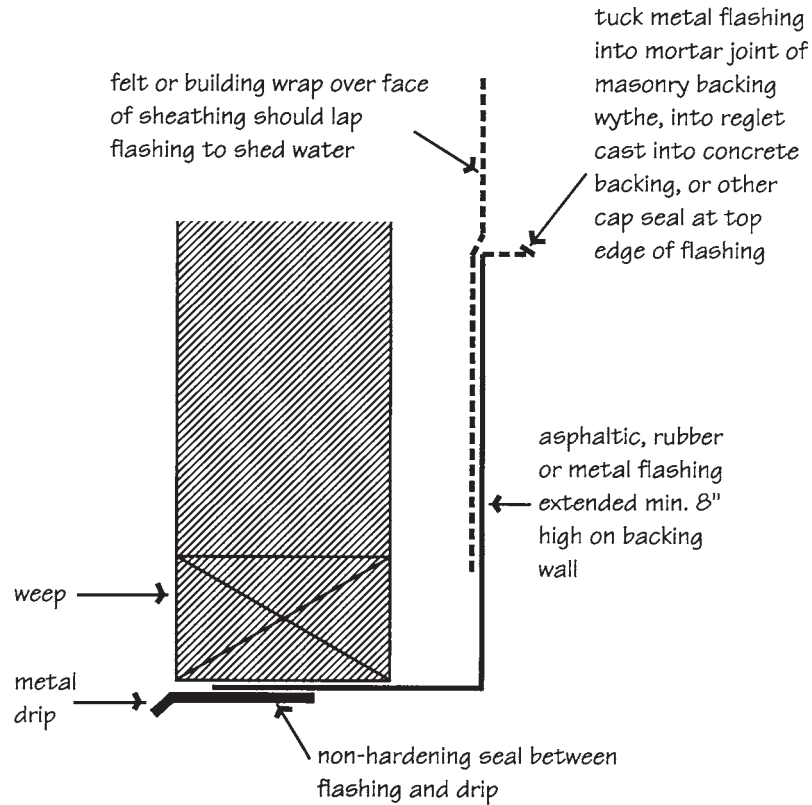


Figure 15-31 Lap flashing over a separate metal edge to form a drip, to avoid ultraviolet exposure, or to accommodate variations in cavity width.

backing for the sealant because of potential problems with compatibility, adhesion, and consistent joint depth-to-width ratios.

In cavity wall construction of brick with block backup, control joints and expansion joints, in the backing and facing wythes, respectively, should occur at approximately the same locations but need not align exactly. Joint reinforcement should not continue across movement joints.

15.3.4 Accessories and Reinforcement

Metal ties, anchors, horizontal joint reinforcement, and steel reinforcing bars are all placed by the mason as the work progresses. Anchors, ties, and joint reinforcement must be corrosion resistant, properly spaced, and placed in the mortar to assure complete encapsulation and good bond. Joint reinforcement anchors and ties are usually laid directly on the units. When the mortar is placed, it surrounds and encapsulates the wire because of irregularities in the wire and unit surfaces. All metals should be protected by a minimum $\frac{5}{8}$ -in. mortar cover at exterior joint faces (see Fig. 15-42).

Vertical reinforcement in a cavity wall is easily placed, and the masonry built up around it. Bar positioners are required at periodic intervals to hold the reinforcing bars in vertical alignment. If horizontal steel is required in the cavity, it is tied to the vertical members or may rest on the spacers at the proper intervals (see Fig. 15-43).