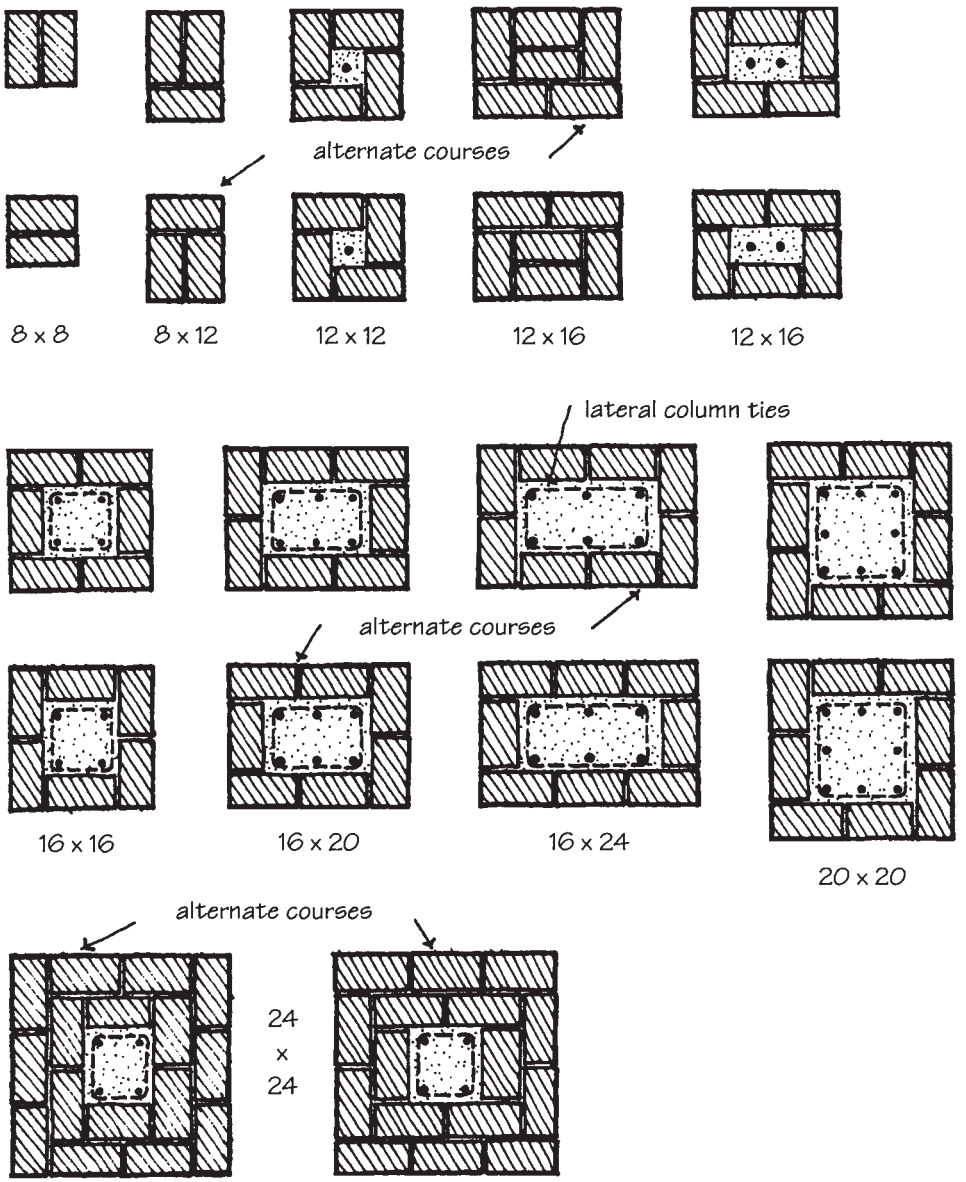

Figure 15-13 Brick column coursing. (*From Harry C. Plummer,* Brick and Tile Engineering, *and BIA* Principles of Brick Masonry.)

and may contribute to spalling and cracking if freezing occurs when the units are saturated. Bed joints should be laid full and unfurrowed, only slightly beveled away from the cavity to minimize mortar extrusion and droppings (*see Fig. 15-14*). The ends of the units should be fully buttered with mortar so that when they are shoved into place, mortar is extruded from the joint (*see Fig. 15-15*). Concrete block should always be laid with the thicker end of the face shell up to provide a larger mortar bedding area. For face shell bedding of hollow CMUs, only the end flanges of the face shells are buttered with mortar (*see Fig. 15-16*). Because of their weight and difficulty in handling, masons often stand several units on end and apply mortar to the flanges of three or four units at one time. Each block is then individually placed in its

mortar bridges can inhibit drainage and transport moisture across the cavity to the backing wall

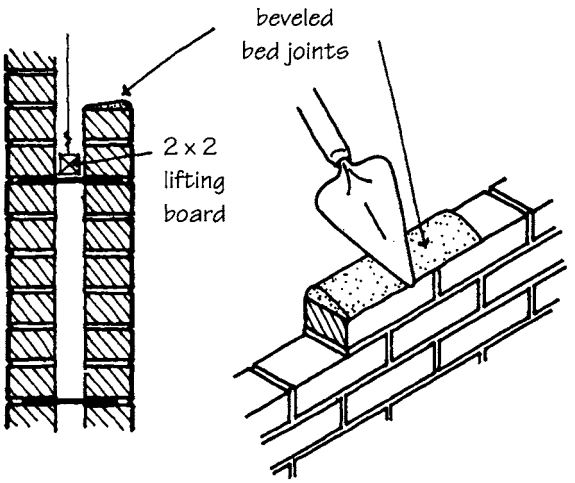

Figure 15-14 Beveled bed joints minimize mortar extrusions into the drainage cavity, and lifting boards can be used to remove mortar droppings. (*From BIA* Technical Note 21C.)

final position, tapped down into the mortar bed, and shoved against the previously laid block, thus producing well-filled vertical head joints at both faces of the masonry. When the last closure unit is installed in a course, all edges of the opening and all vertical edges of the unit should be buttered and the unit carefully lowered into place. If any of the mortar falls out, leaving a void in the joint, the closure unit should be removed and the operation repeated.

Bed joint mortar should be spread only a few units at a time so that the mortar will not dry excessively before the next course of units is placed. For both brick and block, a long mason's level is used as a straightedge to assure correct horizontal alignment. Units are brought to level and made plumb by light tapping with the trowel handle. This tapping, plus the weight of the unit and those above, helps form a good bond at the bed joint. Once the units have been laid, they cannot be adjusted or realigned by tapping without breaking the bond. If it is necessary to reposition the masonry, all the old mortar must be removed and replaced with fresh.