

Figure 15-19 Concrete block bond patterns. (From NCMA TEK Bulletin 57.)

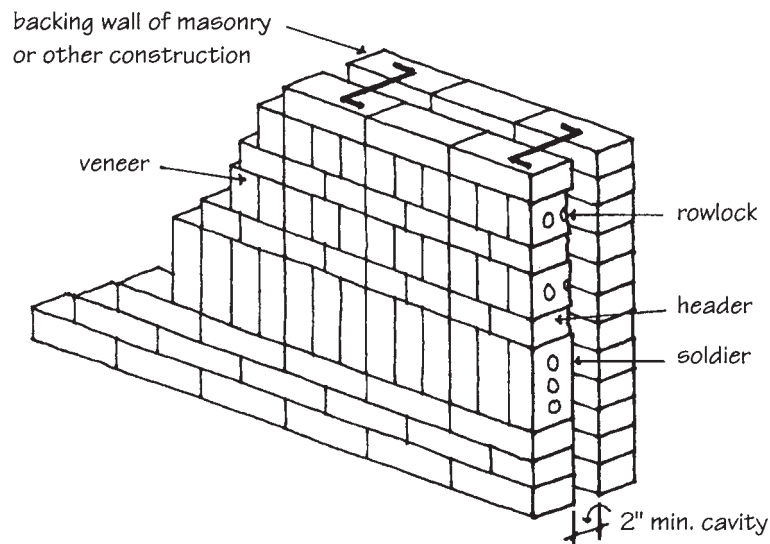


Figure 15-20 Half rowlocks and half headers used in a cavity wall to simulate the appearance of a masonry bonded wall.

penetration and are recommended for use in areas subject to heavy rains and high winds. *Rough-cut* or *flush* joints are used when other finish materials, such as stucco, gypsum board, or textured coatings, are to be applied over the masonry. *Weathered* joints are more difficult to form since they must be formed from below, but some compaction does occur, and the joint sheds water naturally. *Struck* joints are easily cut with a trowel point, but the small ledge created collects water, which may then penetrate the wall. *Raked* joints are made by scraping out a portion of the mortar while it is still soft, using a square-edged tool. Even though the mortar is slightly compacted by this action, raked joints allow more water penetration than concave or V-tooled joints. The cut of the joint does form a shadow, and tends to give the wall a darker appearance. *Weeping* joints leave excess mortar protruding from the joint to give a rustic appearance, but again allow more water pene-

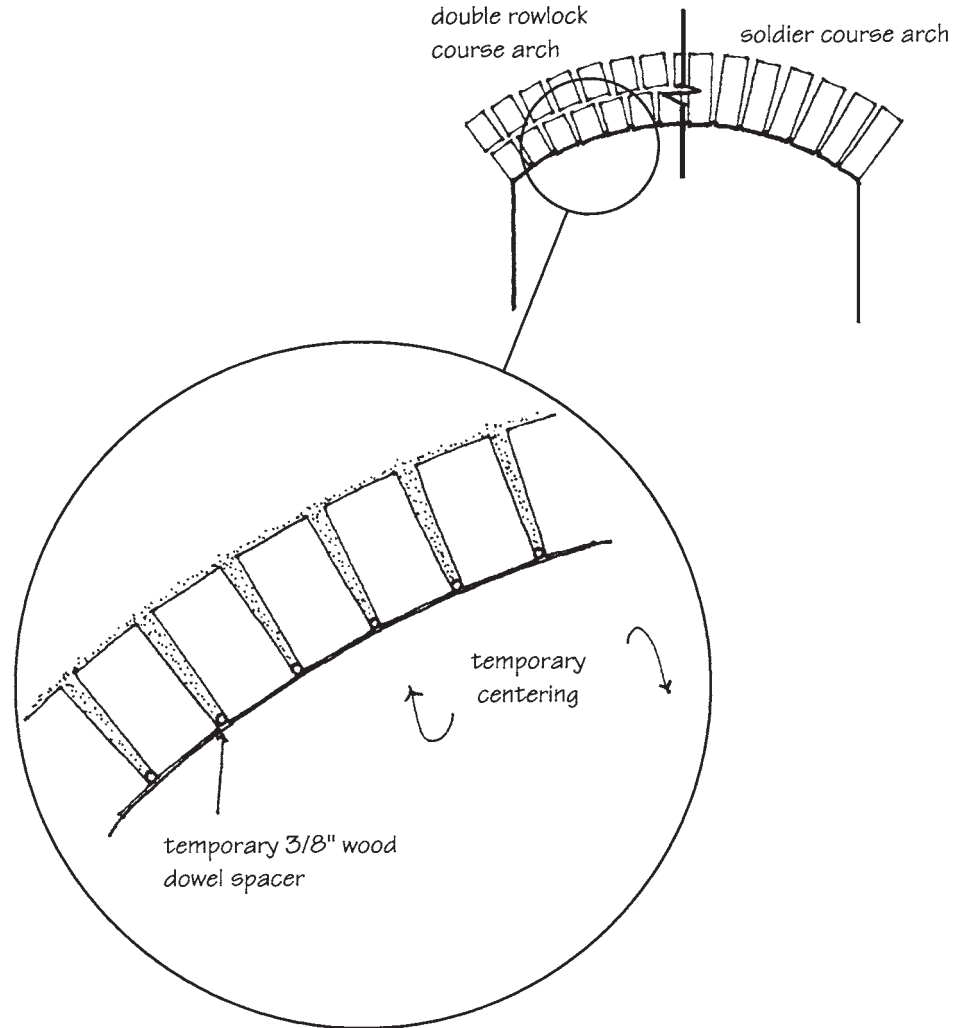


Figure 15-21 Constructing brick arches. (From Beall, *Masonry and Concrete for Residential Construction*, McGraw-Hill Complete Construction Series, 2001.)

tration than concave or V-tooled joints. Other, more specialized effects can be achieved with tools to bead or groove the joint.

The most effective and moisture-resistant joints are the *concave* and *V-shaped* tooled joints. Mortar squeezes out of the joints as the masonry units are set in place, and the excess is struck off with a trowel. After the mortar has become “thumbprint” hard (i.e., when a clear thumbprint can be impressed and the cement paste does not stick to the thumb), joints are finished with a jointing tool slightly wider than the joint itself (see Fig. 15-23). As the mortar hardens, it has a tendency to shrink slightly and separate from the edge of the masonry unit. Proper tooling compresses the mortar against the unit and compacts the surface, making it more dense and more resistant to moisture penetration (see Fig. 15-24). Joint tooling is especially critical in single-wythe walls where there is little or no secondary defense against water penetration. However, full head and bed joints and good mortar bond are equally important to moisture resistance. Other joint treat-