

CRACKING OF MASONRY VENEER AROUND WOOD COLUMNS

WHY DOES IT CRACK?

Home builders often encase wood columns supporting porches or overhangs on homes with brick or other masonry veneers. Sometimes the masonry veneer will split, leaving a vertical crack near the base of the column. Usually these cracks occur because mortar droppings have fallen into the cavity and filled the space between wood and masonry. As wood absorbs moisture, it expands in both horizontal directions (tangential and radial.) If there is no air space or compressible material, expanding wood will split masonry. (See Fig. 1) Also, wood columns often twist and warp, which makes the splitting worse.

HOW MUCH EXPANSION?

Wood commonly used in construction expands about 10% from oven dry to saturated in the tangential direction. Most lumber used on the jobsite will have at least 15% moisture content, so a realistic total expansion is about half that, or 5%. This means that a 4x4 column will expand about 3.5" x 0.05 or 3/16". .

HOW TO PREVENT CRACKS?

Good workmanship is the main ingredient for problem-free brickwork. In this case, we must keep the wood column dry at the base and keep mortar out of the cavity. We recommend the following steps to help prevent splitting:

1. Set wood column on a Simpson AB series (or equal) metal post base to keep column base dry.
2. Install flashing all around the column at the base, including corners. Provide at least two weep holes at bottom to drain away excess water.
3. Wrap column with tarpaper or Tyvek full height. This keeps any mortar from contact with wood.
4. Keep the cavity clean and free of mortar. Placing products such as Mortar Net at the bottom of the column per manufacturer's instructions may help prevent mortar build-up.

