Masonry Walls:
‘Flashed’ before your eyes

By Steven Fechino
As we all know, the economic downfall is not directly related to how we individually run our businesses. It does, however, create opportunities for our businesses to be operated differently. For example, our yards no longer have surplus wall wire, anchors, or rolls of flashing lying around, and I’ll bet the payrolls are smaller than desired. We are all affected by this, and we have to work through it. We have to be a bit stronger and a bit smarter than before, so we can look back on this tough time later.

Shown is Mortar Net’s TotalFlash product.

Today’s market

A GOOD MASON CONTRACTOR understands that the value engineering he brings to the table must work, or the savings are not worth the efforts; long-term weather can challenge the best design; and workmanship still prevails as his most valued asset to a project.

Masonry walls vary in widely from the past, thanks to engineered rain screen systems, cast stone, precast stone, and natural stone veneers as well as many types of brick, concrete masonry units (CMU) and unlimited variations that combine materials. Today’s masonry walls are similar to those in the past as well. We still need to manage water infiltration and create pathways for the water to return to the exterior of the building in a timely fashion. As a mason contractor, this is important, since this is, in part, the area from where many call backs stem.

There are many means for water to enter the walls of our projects. In restoration projects, it becomes an opportunity to repair a wall. In new construction, it becomes a goal to keep out of the wall. In either case, the mason needs to gain access to a cavity as his starting point.

Flashings are familiar to masons, since we install them using propriety systems, and we install them conventionally. Flashings, when performed correctly, are usually a built-in job cost for the contractor in labor, scaffolding/equipment and gathering of various materials. For the mason, the choice of what to use and who installs the flashing in the field is a decision that becomes important for a cost accounting point of the task.

Flashing choices

MANY PROJECTS are constructed using a cavity wall with a cavity width of one to three inches. The choice of flashing used in the cavity must function as designed, be non-staining to the veneer, and be capable of withstanding exposure during construction if left uncovered for a long period. Many products in the conventional application of flashing require that the mason prime the flashing surface; form fit the membrane or woven fabric directly
to the cavity; cut and create special folded pieces for end dams and corners that must have all the seams properly sealed. A termination bar at the top of all flashing is required to keep it from sagging on the wall. This work requires skilled supervision and should be as respected as critical in the wall’s performance.

Walls that require brake metal such as copper or stainless steel have a different set of preconstruction requirements as they take more time to plan, due to varied lengths of materials, fabrication time and proper transportation to the jobsite. Though the brake metal flashings typically are supplied by others in our new construction projects, the restoration market in most areas takes responsibility for the fabrication of this product.

Fewer of today’s projects terminate the brake metal into a sawn reglet as the termination bar has become a standard for attaching the metal to the backup wall. A sealant bead at the top of the termination bar is recommended for keeping water from behind the flashing. Proper lap splicing and sealing of laps typically is handled using single-component polyurethanes, and terminations at the ends of the flashings can be performed using a preformed boot or roll membrane to field fabricate for each condition. Soldering brake metal joints as necessary has become rare, and can become a valuable skill for a contractor in today’s market.

Recently, a manufacturer took all of the components of a conventional system and combined it with the astetics and functions of a brake metal system, and then patented a preassembled flashing system that has the full benefits of both systems as well as ease of installation and convience. The factory-fabricated system has preassembled membrane flashing with a hemmed stainless steel or copper drip edge, termination bar and non-clog drainage mat that will allow water to pass out of the wall in weeps found under the veneer. The flashing system has predetermined lap spacing and can be engineered to specific projects at no additional expense to the mason. The pre-engineering of the system is completed prior to bidding of the project as to help reduce the waste on the project and to allow job fabrication time, so the mason does not have wasted material on the project. The system is completely furnished in the box and allows for one-stop shopping of flashing components that can land directly on the jobsite. It is supported by a hands-on representative who can work with the masons to help solve any flashing needs (see Figure 1, page 14).

Single-wythe through wall flashing in a standard dimensioned CMU wall has been an issue for masons for a while, due to the start-and-stop method of using smaller dimensioned materials turned on end. This method forms a path for the flashing to pass through the wall, using two bed courses, one vertical course apart. The start-and-stop method can potentially create a bond break as the membrane is placed on the CMU directly, with the mortar then placed on top of the membrane to support the following courses. This method also requires the mason to return to the flashing course after the smaller unit (usually only one side) has set, before completing the main body of the wall. Often, it can be weeks before the general contractor is ready for the mason to return, which can create a possibility for water to enter the foundation walls in areas where rainfall is prevalent.

A single-wythe, through-wall flashing alternative is available to the contractors nationally. The product is a drainage pan that sits directly on the standard or decorative CMU and protects each cell individually, using a pitched and insect-protected weep joint. The component bridges the gap between cells and has a removable tab for grouted joints. Simply place the pans on the wall, spread your mortar as you would typically, and continue to lay directly on top of the flashing course. A quick precut piece of drainage material is placed in the course above to keep mortar droppings clear of the weeps. Sometimes a quick flip with a pointing tool is required to ensure that the weeps are clear (see Figure 2, page 16).

Reflecting on a project

With all of the flashing options available, whether metal, membrane or fabric, it is important to remember that flashings are a key ingredient in a well-crafted installation. When installed correctly, they can repay the mason big dividends in the form of repeat customers and fewer project call backs. The ability to reflect on a project with pride of a job well done is what we work so hard for in this industry. MAE

Steven Fechino is engineering and construction manager with Mortar Net USA, makers of TotalFlash and Blok Flash. For more information, call 800-664-6638, or visit www.mortarnet.com.