

# A Few Bucks of Prevention

BY GREGG HODGSON



**I**n 2007, just weeks after it was completed, a four-story, 75,000-square-foot, state-owned building costing \$10 million began leaking at several of its interior window heads.

Before it was over, those leaking windows turned into a nine-month, \$1,750,000 remediation nightmare. It included a total re-cladding and numerous other repairs, and the replacement of its copper fabric flashing with a product that didn't even exist when the building was being designed.

Since settlement negotiations are still in progress, the complete details of why this brand-new building could need so much remediation are hard to come obtain. However, some background information from the building's architect, Edwin Elberson, AIA, a principal of Somdal Associates in Shreveport, La., was available. (After designing the building in 2000, Elberson handed off the project to a colleague, but returned to oversee the remediation.)

"When wetness was discovered at the window heads," Elberson says, "it became apparent that the windows hadn't been flashed." He thought it was no big deal, and that some brickwork could be removed from around the windows, flashing installed, everything replaced, and it'd be done.

But the state's inspectors for this project suspected that the leaking windows could be just the tip of a larger iceberg. So, they insisted on having all the brickwork removed, and they eventually prevailed.

"Frankly, I'm glad they did," Elberson says. Then he lists some of the workmanship flaws that were uncovered when the building was stripped of its brick veneer.

"Lap-joints on the copper fabric flashing were erratic, and often weren't adhered properly. The flashing had been cut too far back from the building's face, leaving no drip edges. The cut-back flashing wasn't adhered adequately, leaving space for water to enter the building. The heads of the lag-bolts holding the ledge angles had often punctured the copper flashing. Many of the ledge angles didn't meet properly, either, creating gaps for water to pass through."

His solution: "We welded the gapped ledge-angles together wherever possible, but we still had to replace perhaps 15 percent of them. Then, we installed TotalFlash in place of the poorly installed copper flashing. Finally, we replaced the brick veneer."

Note that there was just one new ingredient in this mix: TotalFlash, the "all-in-one" flashing panels made by Mortar Net USA. Why the change from copper flashing? "Back when I was designing

the building, TotalFlash hadn't been invented," Elberson explains. "Otherwise, we might have avoided most of these problems."

"TotalFlash's 'automatic' overlaps were a huge plus," he continues. "So were the multiple drainage elements and the stainless steel drip edges – all of them built right into the flashing panels. It also installed more neatly than anything else I'd seen, making it extremely easy to inspect."

"After what we'd been through with this building, I needed the most dependable moisture control, and I needed it installed quickly. TotalFlash gave us both."

To install the TotalFlash, Elberson turned to a 60-year-old company that had never touched the product before.

"It was no problem at all," says Russell Bagwell, owner/manager of Thomas & Parker, in Shreveport, La., which specializes in waterproofing and historical restoration. "Mortar Net USA gave us lots of help, even though the product is so user-friendly that we would've figured it out pretty easily ourselves. They even sent a couple guys to give us on-the-job training. They were terrific people to work with."

He says the job went smoothly. "From the start, we were installing each 5.5-foot panel in two to four minutes. Once we got a system down, it went even faster."

"I was a little worried about those bolt-heads that had punctured the copper flashing, but the 40-mil. panels covered them easily," Bagwell continues. "Since the building was bare, we used the regular-sized TotalFlash panels. But I learned it comes in sizes for restoration jobs, where we just remove a few courses to install the flashing. We're using it on another job right now."

Perhaps surprisingly, Mortar Net USA itself has mixed emotions about big remediation jobs like this one. On the one hand, Earl Bickett, general manager of the Gary, In., company, is definitely happy that TotalFlash can help buildings acquire a new lease on life. "Everyone's trying to extend building longevity these days," he says, "which means making sure the exterior walls don't fail."

What bothers him, though, is the environmental cost of tearing apart a brand-new building. He says, "Just think of the energy it took to make all that brick, and then transport it to the jobsite. Having to do it twice is a downright shame."

"Sure, I'm glad we can help put buildings like this back into long-term service," Bickett continues. "But like Mr. Elberson, I'd rather see the moisture protection done right the first time."

Whoever foots the bill for that \$1,750,000 remediation job would probably agree. **IMAS**