Over the past five years, the EIFS (synthetic stucco) industry has been at the center of a controversy as to whether or not its products are effective wall claddings.

We at the EIFS Industry Members Association believe that the fundamental issue is whether any wall cladding can be an effective baffle against moisture intrusion if builders and contractors fail to adhere to sound construction practices. More specifically, can any wall cladding be expected to perform to the manufacturer’s specifications if there are deficiencies, or omissions in the exterior wall envelope, which includes the windows, root downspouts, diverters and gutters?

Compelling evidence is now surfacing that moisture intrusion, especially in the wall cavity, is a problem that reflects shoddy construction practices and inadequate flashing, rather than the merits of any particular wall cladding.

Ironically, the latest revelation that moisture intrusion is an “equal opportunity” nemesis comes from the New Hanover County (Wilmington, N.C.) Inspections Department, where the EIFS debate originated nearly five years ago.

The county’s chief building inspector did a complete turnabout when he later conceded that wood rot resulting from moisture intrusion has been an ongoing problem in all types of residential construction in the Wilmington area, including homes sided with wood, brick and...
In many cases, the damage is not covered by homeowners insurance policies.

vinyl. That assessment was substantiated by a local contractor, who told Greater Wilmington Business that there is evidence of moisture intrusion in 95 percent of new construction in the Wilmington area.

The chief building inspector further suggested that state-mandated vapor barriers have exacerbated the problem and should be banned in wet, coastal areas. He also, for the first time, cited windows as “culprits” in the moisture-intrusion debate. In the meantime, no homes have been built with EIFS in the Wilmington area for nearly five years. Yet, by previously insisting that only EIFS-clad houses were susceptible to serious moisture damage, the Inspections Department created a cauldron of doubt and fear that has done untold harm to the EIFS industry and to thousands of owners of EIFS homes that have lost their market value.

The overriding message in the chief building inspector’s advisory is that moisture intrusion is a fact of life in poorly constructed homes.

More Facts of Life

And there appears to be an ample inventory of poorly constructed homes in this country. Barry Eliason, owner of a St. Paul, Minn., stucco company that tests for water problems in conventional stucco, says he hasn’t seen a “single home that is less than 20 years old that doesn’t have a significant area of moisture intrusion.” In many cases, the damage is not covered by the homeowners’ insurance policies and can surface after the warranties have expired, leaving the homeowner to pick up the tab, or sell the house to an unsuspecting buyer.

While nobody has specifics on the severity of the moisture intrusion problem, it’s significant enough that the federal government has launched studies to explore water problems in new homes, according to a June article in the Minneapolis Star Tribune. According to the article, “The Forest Products Laboratory in the U.S. Department of Agriculture has been studying water problems in houses for two years, but it may be two more years before conclusions are reached.”

Ever since the energy crisis in the 1970s homebuilders have been constructing tighter houses in efforts to reduce energy costs and make homes more comfortable. At the same time, new engineered-wood products have replaced traditional wood boards for sheathing and even I-beams in residential construction. Along the way, rainwater has become a dangerous villain, suggests the Star-Tribune article.

Flash and Seal

To be sure, rain has always been a problem for houses. But unlike walls in older homes, newer walls are more prone to hold
Some of the problems can be attributed to unskilled labor.

moisture. That makes the task of keeping water out more important than ever. Yet, some proven techniques for keeping moisture out of walls are no longer used, or are used improperly.

For any cladding to be effective, moisture entry points must be adequately flashed and sealed, and other watershed components must be properly installed and maintained.

Bill Rose, a research architect at the Building Research Council at the University of Illinois, says that at least some of today’s moisture intrusion problems can be attributed to the increased reliance on unskilled labor at construction sites. Many of these jobs were once held by seasoned professionals who knew how to keep water out of a building, he says. Today, the situation is different.

Indeed, homes are complex entities consisting of thousands of components that must be carefully integrated. Moreover, the performance of any home can be drastically affected by factors such as wind, rain, snow and soil moisture. In addition, every home must be properly maintained to remain in peak condition. Those that are not will be more susceptible to experience moisture damage, especially if they were built or remodeled since the mid-1970s.

In recent years, much has been written and said about the need to protect wood sheathing from moisture in residential construction through the use of house wraps or building paper. The wide range of products available for use as weather bafflers, many with different performance characteristics, has created a great deal of confusion. Building paper—even 15-pound felt—can negatively impact a wall’s drying capability if a significant amount of water seeps into the wall cavity.

The best way to avoid moisture problems in walls, regardless of the cladding or the local climate, is to employ only code-compliant application practices and high-quality, properly installed wall components, including effective flashing and sealants around critical moisture entry points. All wall claddings are designed to resist moisture. It’s how they’re installed and maintained that makes the difference.

About the Author
Stephan E. Klamke is executive director of the EIFS Industry Members Association, a Georgia-based trade association that represents manufacturers, distributors, contractors, suppliers and others associated with the EIFS industry.