

RAINSCREENING PUSHES THE ENVELOPE



by Mark Cooper

It's so simple, yet so complicated. It's what architects and builders did - more or less up until a generation ago.

Then, technology finally gave us houses sealed to keep weather almost completely out and warmth almost completely in. And this worked in many climates. On the Wet Coast, not so much... On the North Shore...

Rain will run, splash, blow and squeeze through any exterior crack or hole. Snow can melt from house heat coming through the roof, then freeze into a dam along the exposed roof edge, trapping pools of water large enough to seep through shingles. Water vapour can escape along with warm interior air and get trapped inside walls, condense and create the conditions for mold and rot.

To prevent these "leaky condo" problems, Coastal BC building practices have changed in recent years. First with bigger projects and better builders, then with single family residences and most contractors. Now, building code revisions are putting these changes into law. These new standards have become known by the term "rainscreening."

To put it simply, it's a matter of preventing water and moisture from getting into the walls and – here's the big change – making sure there's a way any water that does get in can find its way out before it does damage. But to do it right, builders have to know the details and materials, and we have to make sure the layers of membranes, flashings and spacings are put in place with precision.

Highly skilled craftsmen can build you a great house, but if they haven't kept up with this technology, either the building inspector is going to require a redo or, in a few years, you'll be wishing he had.

There are two major keys to the modern building envelope (now called an "environmental separator"). First is the addition of a second plane or barrier inside the exterior cladding, to ensure rain can't find its way in. Second is the "cavity" inside the walls - between the cladding and the sheathing - to catch any water or condensed moisture and redirect it along "cross-cavity flashings" back outside the building. That's the rainscreening principle.

The details that fill the new Part 9 of the BC Building Code as of last year also spell out better standards for basement and foundation barriers, for base, cap and counter flashings, and for breather-type house wrap as well as waterproof sheathing membranes. The whole "rainscreening" approach also deals with everything from how your foundation is sited to the amount of roof that should overhang your walls to the amount of moisture in building materials that must be allowed to dry in the process.

Whether you're building a whole new house, or starting a renovation that involves exterior walls or a new roof line, your designer and builder should ensure "rainscreening" requirements are incorporated. The additional costs are not a lot - certainly less than the price of dealing with rot and mold after a few years.

On the North Shore, we have a history of building to meet the challenges of the weather. When you find exceptions to this rule, it's often because of builders who either hadn't had much experience here, or who blindly followed minimum requirements in the older building codes that weren't designed for our climate. Now, with the new codes, I hope we will see fewer and fewer of those problems.

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