

ASK THE INSPECTOR COLUMN FOR AUGUST 17, 2016
HEADLINE: FIX THAT ICE DAMMING NOW!

It seems that we have periods when we inspect a lot of older homes; recently this has been the case. Whether stains along the interior ceilings or discoloration on the wood decking at the eave edge, inside the attic these are sure signs of a condition known as “ice damming.” Over a long period of time, this can be anything from an annoyance to an outright wood structural issue. In every case, the clients asked about the stains and how to correct the issue. Everyone wants the classic charm of an older home and they are usually prepared to fix the problem.

There are a number of methods of controlling or correcting ice damming. The use of heat cables is a quick, partial solution that will solve problems in certain areas. I have seen many installations where the cables are set in a triangular pattern along the roof and then turned on manually. This solution works to a certain degree; however, for heat cables to be effective, they need to line the eavestrough and the downspouts around your home. The cables melt the ice, but, once the water hits the eavestrough, it can and does freeze up again. Heat cables are best used on a home with no eavestrough, but homes with no eavestrough are open to drainage and possible basement water issues. The largest single negative, however, is the cost of the electricity to operate them.

There are two other options to look at. Each one comes with a cost, but if done correctly you stand a good chance of reducing or eliminating the ice dam issue. The first consideration is ventilation - opening up the natural air flow from the soffit up through the attic and out, via the roof venting. It is not uncommon to find limited access to the eave edges. In some older homes, this can be a challenge. For example, in a double/triple brick home, the roof rafters sit on the walls and the space between the rafters has been bricked in; soffit areas are often narrow or fitted with tongue and groove dressed lumber fitted to the rafters, and some have decorative trim. All of these make getting proper soffit venting nearly impossible, but, even so, ventilation is probably the number one improvement. Having said that, conventional “mushroom” style vents have minimal value. There is a vent on the market called a “Max-vent” and it’s probably the best at venting an older attic, especially when coupled with their AT1 or AT2 fresh air intakes that are located just up from the eave edge. Go to www.maximumventilation.com for more information. If you use this vent system, to be effective, you must remove any other roof vents.

Combining good ventilation with the proper level of insulation - a minimum of nine inches would work best here - is a good way to arrive at a cooler attic. Blown cellulose insulation is the most effective insulation in an older home. If it is possible to open up the eave edges and install styrofoam baffles, this is the best method to add airflow through your attic. If you can do this, you must also install enough soffit vents to make it effective.

Another method, if insulation and ventilation is not working, is to install a flat metal flashing along the eave edge of your roof. You will need to arrive at the correct distance up the roof. Note that this flat flashing should be no less than 18 inches past your wall edge, not the edge of the roof. How do you establish this distance? First measure the distance from the wall to the edge of the roof. Take a small torpedo level, a 2-3 three foot long piece of dowel, two large rubber bands, some string and a small weight. Tie a loose slipknot over the dowel and attach the weight on one end. Mark the distance on the dowel. Wrap two of the rubber bands around the dowel and slip the level under the rubber bands. This makes an easy tool to check the distance off the eaves. Holding the dowel with one end resting on the roof, raise the dowel up until the level is level, now slide the string along the dowel until you get the correct distance from the pitch of the roof to the string when it hits the eave edge. Mark the roof shingles at this point and then measure up the roof an additional 18 inches.

Strip the shingles off the roof to the 18" mark and check the wooden decking. If you have had an ice damming issue for some years you may be surprised how much damage you will find. Once you have fixed the roof and removed any nails, you can apply a layer of self-adhesive ice and water shield, and then fit your flat metal flashing over this membrane. The two most important installation considerations here are making sure you fit the membrane or the metal up under the shingles correctly; sealing it properly. Now correctly flash the edge or overhang the metal flashing with a drip edge formed before you installed it. If you are using ice and water shield you can form it over the decking along the fascia edge.

The other solution is to install a metal roof and this is by far the most expensive, but a permanent fix. There are a number of different kinds of metal roof coverings available today, along with the common standing rib. Colours have also increased in popularity. While the cost of installing a metal roof has become more affordable due to the increased cost of architectural shingles, a metal roof is still a substantial investment. Once you have decided upon the type of metal roof you want, it pays to shop around and get three quotes. When you get quotes, include stripping the existing shingles. Leaving this additional weight on a roof is not a good idea in the long run. If you are installing a standing rib metal roof, it should be strapped; do not apply the metal directly onto the wooden decking. If you elect to try one of the newer metal shingles, most manufacturers recommend an underlayment. Since most metal roofing is not recommended for installation on a low slope, if your roof is less than a 3/12 pitch, talk to your roofer about installing a membrane type of roof covering, like EPDM.

Cam Allen L.I.W. NHI ACI can be reached at alltechconsultinggroup@gmail.com for comments and questions.