

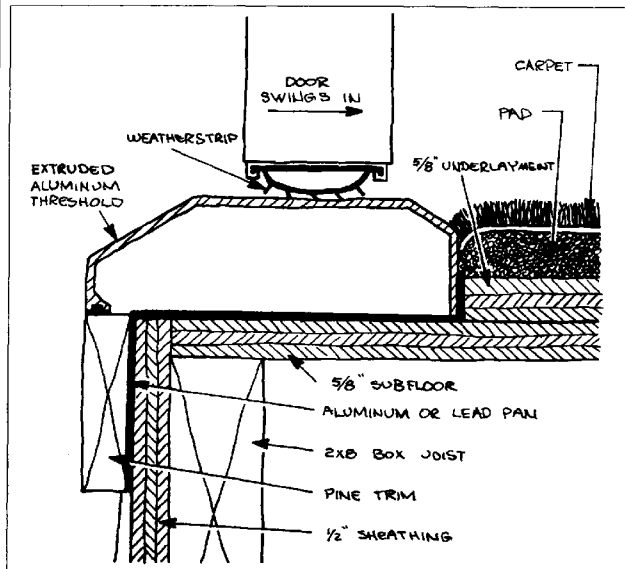
Exterior Door Dilemma

by Hank Spies

Q. How should I install an exterior door when carpeting is being installed with an extra-thick pad? I generally use $\frac{1}{8}$ -inch underlayment and a lead pan under the door sill (see illustration below). If I shim above the pan to raise the threshold, I am concerned that water will spill over the top of the pan and soak into the carpet.

A. I would suggest raising the

threshold on a piece of pressure-treated wood that has had saw cuts across it on the bottom to allow any water in the pan to flow out from under the door threshold. An alternative would be an adjustable aluminum unit with a high vinyl bulb weatherstripping. That might give enough clearance. In either case, the door would have to be cut off, of course—I hope it is not a metal door.



Hot Tub Ventilation

Q. How do you keep a hot tub or spa from rotting out a house? The trick seems to be to contain the moisture and ventilate the space. How do you contain a roomful of steam, particularly if the customer wants cedar or redwood on the walls and ceilings, recessed lights, and other hard-to-seal details?

A. A 6-mil polyethylene vapor retarder should be installed under the interior finish on all surfaces. The surrounding walls should be insulated, even inside walls, so there are no cold spots on the poly to cause condensation. A humidistat-controlled ventilation system should be used to exhaust the moisture. I would suggest surface-mounted track lighting rather than recessed lights. If the customer insists on details that will not work, let some other builder have the job and the headaches—the customer can get unhappy with you only once for not doing it, but he will be reminded of his unhappiness with the builder every time he walks into the room if it goes wrong.

Stable Trusses

Q. Are some truss designs better than others at resisting truss uplift? Is a king-post design better than a W-truss, for example? Are some types of wood better than others?

A. Truss rise, or ceiling-partition

separation, is caused by the geometry of the truss and the properties of the wood used. The triangular shape of the truss, not the configuration of the webs, is the culprit. The properties of the wood used have been the major factors. Most of the problems have occurred with Southern yellow pine. Few problems have been noted with Douglas fir or hem-fir. The cellular structure of yellow pine permits it to absorb and release moisture more readily than most woods. Douglas fir has less tendency to absorb moisture once it has been dried. The location of the bottom chord members within the log also makes a big difference. The juvenile wood, formed during the early years of the growth of the tree, moves more with changes in moisture content than does mature wood. A bottom chord made from the center of a yellow pine log usually means trouble. A bottom chord of quarter-sawn Douglas fir almost never causes problems. *Research Report 82-2, Ceiling-Floor Partition Separation in Light Frame Construction*, available from the Small Homes Council for \$5.00, provides information on the problem and suggested details for coping with it. ■

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