

Options vary for creating sumps at roof drains

by Terrance R. Simmons, RRC

Q: We are installing thermal insulation directly over a concrete deck. The designer is requiring the base layer of insulation to butt up to the roof drain's flange. The base layer of insulation is 3 inches (75 mm) thick and has tapered insulation plus a cover board above it. The roof drains are cast into the roof deck and are set flush with the deck's top surface. Do you have any suggestions on how to create an acceptable sump for this condition?

A: One option is to request that the base layer of insulation stop at the beginning of the sump for the drain. Then, to transition from the base layer down to the drain, a tapered piece of insulation can be cut from flat stock or a precut tapered piece can be ordered from the insulation manufacturer. This tapered piece would provide a gradual slope from the thermal insulation's thickness down to zero thickness (see Figure 1). This allows the membrane to run down into the sump and under the

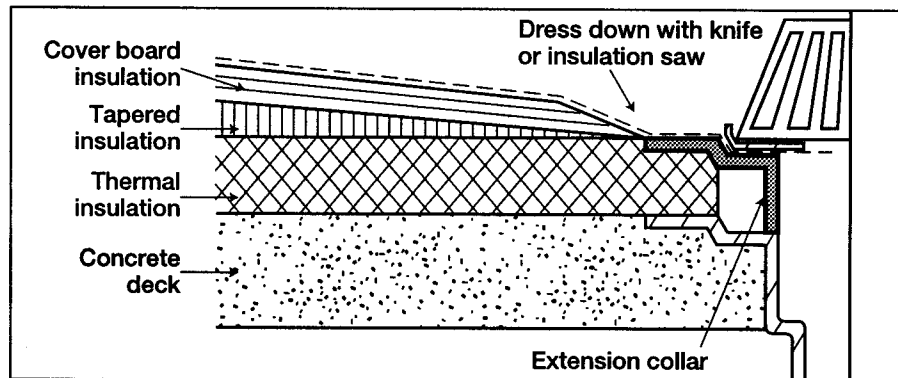


Figure 2

clamping ring without making any extreme changes in direction, which could overstress the membrane.

An alternative would be to install a fixed extension collar above the drain flange to match the thermal insulation's height (see Figure 2). This allows the thermal insulation to abut the drain, elevating the drain flange to the insulation's level. This construction method is depicted in NRCA Detail W-2 (*The NRCA Construction Details*), though it is not labeled as such (see Figure 3). In addition to the fixed extension collar, some drain manufacturers offer adjustable collars that can be raised or lowered to accommodate the insulation's thickness. Because these designs are proprietary, the existing assembly may need to be replaced so that this type of assembly can be used in this situation.

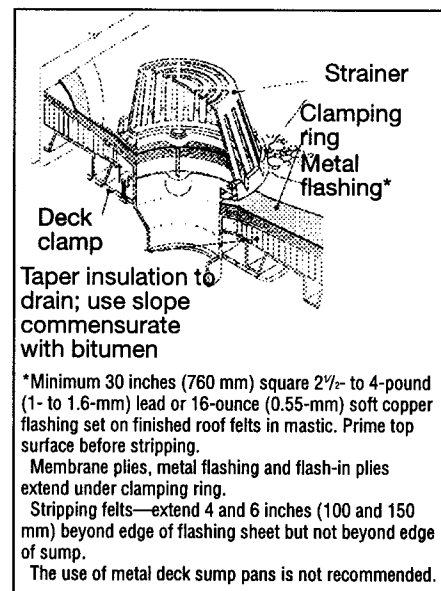


Figure 3: NRCA Detail W-2

Another way to elevate the drain flange is to use an insert drain. Wood blocking can be used at the existing drain assembly to raise the insert drain's flange above the deck and to provide a location to attach the insert drain. (For more information see "Tech Transfer," April 1994, page 50.) **PR**

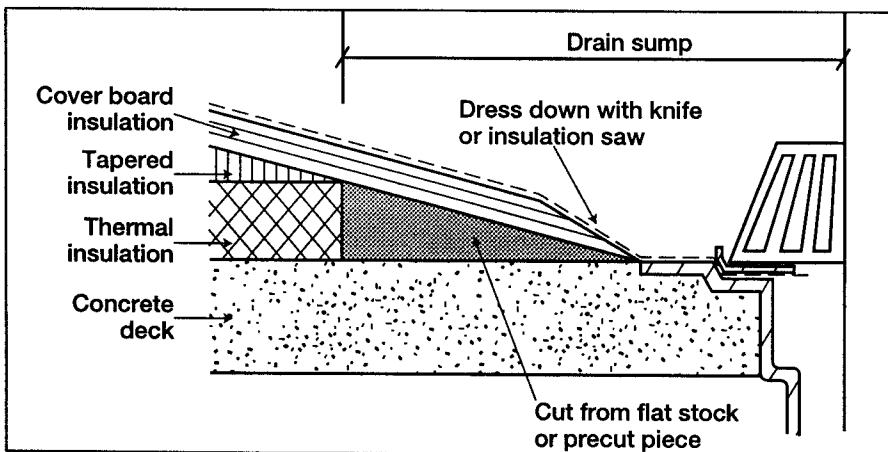


Figure 1

Each month in this column, one of NRCA's deputy directors of technology and research will answer readers' technical questions. If you have a specific question that you would like answered in this column, send it to Professional Roofing, 10255 W. Higgins Road, Suite 600, Rosemont, Ill. 60018-5607; or fax (708) 299-1183.