



Decayed Deck Just a Symptom

by John Leeke

When the owners of a dignified Italian-style residence got a bid of \$30,000 to replace a deteriorating porch deck, they thought twice about doing the repairs. They had already made extensive repairs to the decayed and buckling deck boards each year for the past several years. They called on me to help them determine if complete replacement at such a high cost would actually solve the problem.

When I looked the situation over, I found the problems with the deck were only a symptom of amore serious drainage problem. It turns out that 20 or 30 years ago the built-in gutters of the main house and porch roof had been covered over during reroofing. Without gutters, all the water collected by the roof dripped on the deck boards below. This water, which sometimes came down in a heavy flow, also eroded the terrace at the edge of the porch (see Figure 1). When water built up on the terrace, it flowed under the porch and washed dirt into the cellar through the stone foundation. Since the porch wraps around three sides of the house, 75 percent of the foundation was affected.

With excessive moisture above and below the deck, it was no surprise the deck boards were rotted and buckled. Nonetheless, it was a real blow to the owners to learn the rotted decking was only a part of their problem: The terrace and foundation needed work as well.

The terrace is an embankment with a level top surface and stabilizing side slopes, and it is an important landscape feature often used with 19th-century Italian and Queen Anne-style architecture. A terrace helps emphasize the vertical aspect of these building styles because it sets the building up on its own little hill (see Figure 2). Figure 3 shows what will happen when roof water is not properly drained. Here roof water has washed out a deep gully in the terrace near the porch.

The granite and fieldstone foundation of this house was in generally good condition, but in several places, the water washed out holes 1 or 2 feet deep in the grade just outside the foundation wall as it drained into the cellar. At these places the foundation stones had begun to shift (see Figure 3).

The owner had addressed this problem by installing an interior French-drain system and concrete floor to keep the basement dry. It was a major expense that did the job, but water still flowed from the roof, under the porch and into the drainage system. Silt would appear in the sump of the drainage system, and this indicated that water was still eroding the foundation wall.

If the real drainage problem were not corrected, serious foundation problems would result, so I recommended that the owners solve the drainage problem before doing any work on the deck.



Figure 1. When built-in gutters were roofed over years ago, water flowed from the roof's edge, eroding the terrace.

The drainage work included restoring the original built-in gutters (or use attached half-round metal gutters) and regrading under the porch to eliminate the reverse grade. This improved air circulation, which would keep the deck boards dry (see Figure 3). Restoring the terrace to its original profile was the part of the work that was most visible.

When terraces like the one on this house were originally built, they were quite straight and level with flat plane surfaces and sharp, crisp edges. Over the years the sharp edges became rounded. But no matter how rounded the edges or eroded the embankment, you can always tell a terrace by the way the ridges follow the plan outline of the building (see Figures 1 and 2). Rebuilding the eroded terrace



Figure 2. Typical of 19th-century Italian and Queen Anne-style architecture, the terrace sets the building up on its own little hill and emphasizes the vertical aspect of these style buildings.

involved grading off a ridge of deposits caused by water dripping from the porch roof above. Then a clayish loam was packed into the eroded gullies. Finally matching sod from another section of the lawn was cut and fit to hold the bare sections of the steep slope in place.

Now, I'm sure the roofer who covered over the built-in gutters thirty years ago was full of good intentions. Without doubt, it cost less to cover them over than to make repairs, and the owner wouldn't be bothered with cleaning them out. But it's not difficult to look back and see that the costs for cellar drainage, deck replacement, and the terrace restoration was more than the cost of repairing the gutters 30 years ago and maintaining them since then.

Of course, the owners participated in the decision to cover the gutters. They might have asked the roofer to do it, or maybe they couldn't afford the necessary repairs and the roofer had no choice.

As tradespeople and contractors, we have a responsibility to educate our customers about what effect our work will have in the future. This is especially true on earlier buildings that have elements such as built-in gutters, terraces, and cellars that are interrelated in ways not readily apparent. ■

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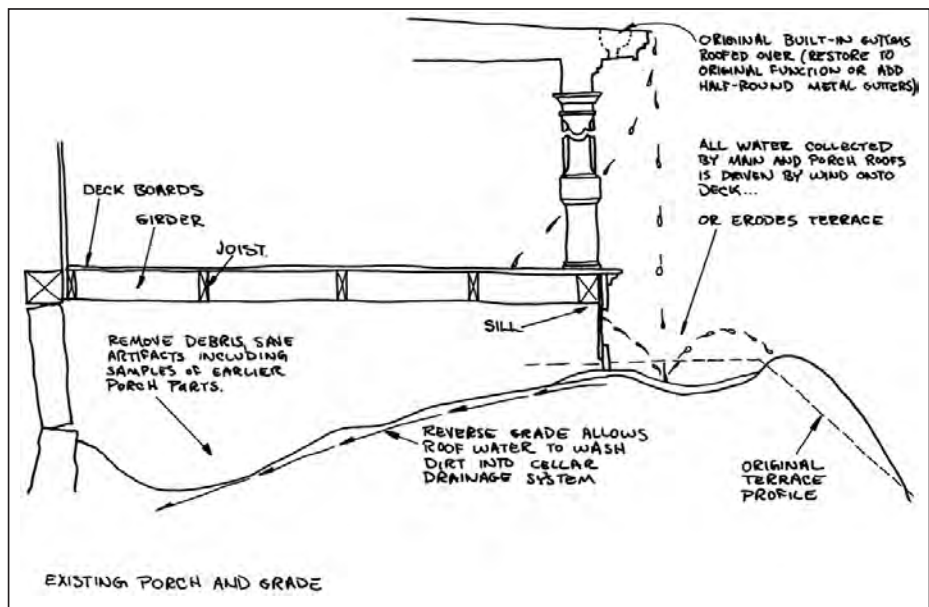


Figure 3. Unchecked water flowed into the basement, causing the foundation stones to shift. Excess moisture also caused the above deck boards to buckle and rot.