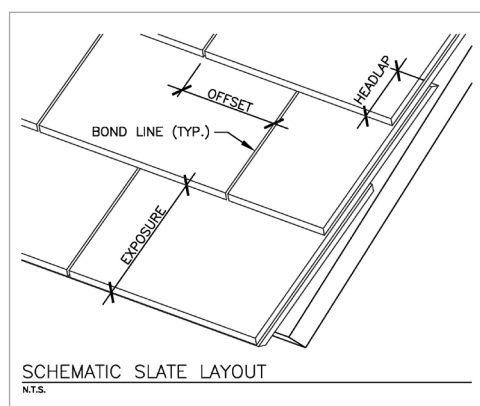


BY **JEFFREY S. LEVINE**
Wiss, Janney, Elstner Associates, Inc.

Critical dimensions for slate headlap and offset.

Up Close: Slate Headlap and Offset

Slate headlap and offset are depicted in the graphic below. Headlap is dependent on roof slope. For roof slopes between 8:12 and 20:12, a three-inch headlap is standard.



After repair work to underlying flashings and gutters, some contractors don't pay attention to these critical dimensions. The result is a slate roof that is more susceptible to water infiltration. Knowing what to look for is critical, as headlap and offset problems can be easy to overlook, especially if observations are made from a distance. Check out the following examples.

The roof below leaked for years after replacement of its built-in gutter liner with a new EPDM (never a good idea) liner. Everybody suspected the EPDM liner. Nobody



bothered to check the slate above, which had been removed, salvaged, and reinstalled to permit the gutter replacement work.

A test opening revealed that slate in the second course had been trimmed—or replaced with shorter, reclaimed replacements—the result of which was no headlap (see photo below)! Rainwater was free to enter the roof system at each and every side joint between slates in the course above.



That's no optical illusion; the exposures of the slates in the fourth course above the copper gusset in the photo below taper from left to right. They should not taper. The result is minimal to no headlap at the far left end.



Location:

WJE Philadelphia
 601 Walnut Street
 Suite 875W
 Philadelphia, PA 19106

Contact:

T: 215.567.0703
 E: jlevine@wje.com

www.wje.com

Slate Headlap and Offset (CONTINUED)

In addition to enlarged exposure, look for butt-line ghost-lines (arrow below) that are too low in reinstalled slate, as these can indicate inadequate headlap.



Photo to right: These slates were reinstalled with a two-inch offset. This places the nail holes in the slates below too close to the bond lines (joint between slate shingles). The nail holes, thus, become susceptible to water infiltration during heavy or wind-blown rains.

