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## **A New Edition of the *Water Management Guide***

The Energy and Environmental Building Association (EEBA) has come out with a revised edition of Joe Lstiburek's *Water Management Guide*, first released two and a half years ago (see *EDU*, December 2002).

Although the book is now twice as long as before, with 84 instead of 42 pages, its price remains unchanged, making it a better value. Among the new features:

- A map of North America showing average annual rainfall;
- More details on back dams for rough window sills;
- Recommendations on choosing draining water-resistant barriers (WRBs) for use under stucco;
- Information on how solar radiation can cause inward vapor drive through walls;
- Details on ventilated cavities behind brick veneer;
- A greatly expanded window installation section, including details for installing windows in concrete-block walls; and
- A list of risk factors to help builders decide when to consider window installation methods that are usually considered risky.

The book's window installation details are among the most useful available from any source (see Figure 8). Much of the credit for the book's success belongs to its illustrator, Stephanie Finegan of Building Science Corporation. The clarity of Finegan's illustrations are exemplary, rivaling those of Tim Healey, the illustrator for the *Journal of Light Construction*.

The *Water Management Guide*'s 58 pages of window installation illustrations provide more information, with better clarity, than the 89 pages of dense specifications in the ASTM E2112 window installation standard. Moreover, the recommended details are better: for example, the *Water Management Guide*, unlike ASTM E2112, advises that in most cases, no caulk should be installed under a window's bottom fin.

### **No More Martini Glass**

Some of the *Water Management Guide*'s recommendations have changed since the publication of the first edition: for example, the recommended shape of the housewrap cut at a window rough opening now has two slits at the top corners, to create a housewrap flap to lift over the window's top fin. By contrast, the housewrap cut shown in the first edition was a simple "upside-down martini glass" cut, without any top-flap slits. The book provides several alternate methods of window installation, depending, for example, on whether the WRB is installed before or after the window, or whether the builder has chosen a "barrier assembly" approach or a "drained opening" approach. Almost all of the recommended window installation methods follow the "drained opening" approach -- that is, they recommend the installation of some type of drained flashing on the rough sill. For this approach to work, the installer must leave the window's bottom fin uncaulked.

### **Should a Window Ever Be Face-Sealed?**

In regards to the fundamental choice between a barrier assembly and drained openings, the *Water Management Guide* unfortunately provides inconsistent advice. At times, as on page 18, the guide is unequivocal: “Window and door openings should be designed and constructed to shed or drain water to the exterior.” However, on the very next page, the message is decidedly mixed: “The choice of strategy is determined by many factors. Drained openings are better than barrier openings.”

Moreover, beginning on page 52, under the heading “Face-Seal Window to OSB or Plywood,” the book provides six pages of illustrations demonstrating a risky window installation method that omits flashing on the rough sill, and instead recommends installing caulk behind all four window fins. A careful reader of the book will realize that the method should only be considered in dry climates, and probably only for windows with little exposure. However, the book fails to flag the installation method with a warning about the risk of face-sealed installations. Such a warning is warranted.

The EEBA *Water Management Guide* is available for \$18 (\$15 for EEBA members) from the Energy and Environmental Building Association, 10740 Lyndale Avenue South #10W, Bloomington, MN 55420. Tel: (952) 881-1098; Web site: [www.eeba.org](http://www.eeba.org).

Figure 8. Most of the window installation methods included in the latest version of the EEBA *Water Management Guide* require the installation of drainable flashing on the rough sill. [Illustration by Stephanie Finegan from the EEBA *Water Management Guide*.]

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### **Great Detail Illustrations**

Builders in search of clear details for flashing and water management can choose between two recently published resources. The \$18 *EEBA Water Management Guide* is a slim, 42-page booklet written by Joseph Lstiburek, a principal at the Building Science Corporation in Westford, Massachusetts. It includes ten pages of text (“Water Management Principles”), in which Lstiburek emphasizes the importance of properly draining a home’s site, footings, roof, wall assemblies, and window and door openings.

The rest of the book consists of 28 pages of clear illustrations showing details for flashing and draining window openings, roof-to-wall intersections, brick veneer walls, deck-to-wall intersections, and garage slabs (see Figure 9).

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