Following instructions

Manufacturers' installation instructions present applicator challenges

by Mark S. Graham

Roofing manufacturers often provide product information and roof system installation instructions to instruct applicators of the specific manufacturers' intended installation methods. Also, installation according to manufacturers' instructions is a specific requirement for compliance with most building codes.

In 2016, NRCA established its Installation Instructions Review Task Force to review manufacturers' installation instructions and provide manufacturers with input and suggestions for improvement. A specific objective of the task force is to make manufacturers' installation instructions more useful to field personnel.

Code requirements

Chapter 15 of the *International Building Code,® 2018 Edition* (IBC® 2018) states: "... Roof coverings shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of roof coverings shall comply with the applicable provisions of Section 1507."

The *International Residential Code,® 2018 Edition* (IRC® 2018)

contains similar provisions, as well as previous editions of IBC and IRC.

Building codes are written for a broad audience of users (regulators and code officials; building owners; designers; material, product and system manufacturers; and contractors) to define the minimum legal requirements for building construction. Building codes generally are not written as how-to instructions for field personnel to achieve building code compliance.

The building codes' requirements for roofing product and roof system applications to be installed according to manufacturers' installation instructions are intended, in part, to bridge the gap between the building code and specific how-to instructions for field personnel. For example, instructions should include manufacturer-specific installation methods required by any code-required testing or certifications, such as fire resistance or wind-uplift resistance.

NRCA's review

Since its formation, NRCA's Installation Instructions Review Task Force has reviewed a limited number of manufacturers' installation instructions for seam-fastened, mechanically attached TPO membrane roof systems; adhered EPDM membrane roof systems; and specific cover boards. Following are some of the task force's general observations:

- Accessibility of installation instructions varies greatly among manufacturers. Some manufacturers make their installation instructions readily accessible online while others' installation instructions are more difficult to obtain. Some manufacturers print installation manuals to better facilitate field usage, which appears to be useful. One downside of printed installation instruction documents is users are not aware whether a printed document has been superseded with updated information.

> "NRCA's review of installation instructions is intended to be an ongoing undertaking"

- The formats for presenting installation instructions also vary. Some manufacturers use CSI's three-part format while others use outline, step-by-step, narrative or illustrative formats. Some consistency among manufacturers would be helpful to field personnel.
- Most installation instructions are presented in English only, and few manufacturers have installation instructions available in non-English languages. Given a noteworthy percentage of the U.S. roofing industry's field personnel speak a language other than English as their primary language, the need for installation instructions in Spanish and other non-English languages seems obvious.
- The overall lengths of instructions vary greatly among manufacturers. For example, one manufacturer's installation instructions are 156 pages while a competitive manufacturer's instructions for the same roof system type are only 11 pages. Another manufacturer markets a similar roof system to big-box retailers for the do-it-yourself market and offers a 46-page, illustrated, pocket-sized installation booklet.
- The content included in installation instructions varies. Installation instructions should be intended for field personnel and contain installation-specific, how-to information. However, many installation instructions also contain roof system design and product selection instructions. Product selection and system decisions are usually outside of the responsibility of roofing contractors' field personnel. Manufacturers' product selection and system design instructions are best addressed in documents separate from installation instructions.

NRCA's task force has met with a number of manufacturers to discuss its observations. Individual meetings with Carlisle Construction Materials, Carlisle, Pa., and Firestone Building Products Co. LLC, Nashville, Tenn., have been particularly constructive. Additional manufacturer meetings will take place during NRCA's Fall Committee Meetings Nov. 13-16 in Chicago.

NRCA's review of manufacturers' installation instructions is intended to be an ongoing, long-term undertaking addressing all common roofing products and systems. NRCA looks forward to working with manufacturers in this effort.

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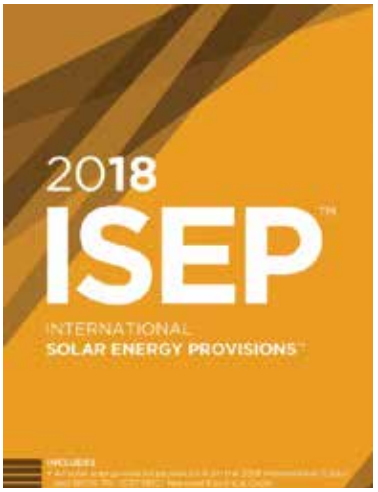
ICC-SRCC and NFPA release solar energy provisions publication



The International Code Council and the Solar Rating and Certification Corporation (ICC-SRCC) have released the 2018 International Solar Energy Provisions™ (ISEP) in collaboration with the National Fire Protection Association (NFPA).

The 2018 ISEP compiles the solar energy provisions of the 2018 International Codes (I-Codes) and the 2017 National Electrical Code, as well as related ICC-SRCC standards, to create a comprehensive document regarding the design, installation and administration of solar thermal and photovoltaic systems. The publication has a similar format to the I-Codes, a collection of modern building safety codes, and can be adopted as a solar energy code by local, state and national jurisdictions.

The 2018 ISEP contains separate provisions for commercial and residential buildings, and two solar standards: ICC 900/SRCC 300-2015, "Solar Thermal System Standard," and ICC 901/SRCC 100-2015, "Solar Thermal Collector Standard." Resources such as the Checklist and Submittal Requirements for Expedited Permitting of Solar Photovoltaic Systems and the U.S. Department of Energy Solar Site Access also are included.

"We are excited to present this tool, the best and most comprehensive publication of its kind on solar thermal and photovoltaic systems," says Shawn Martin, ICC-SRCC's vice president of technical services. "As the leading provider of ratings, certifications, codes and standards for renewable energy, we are proud to partner with NFPA to help the solar industry, designers, contractors and administrators better implement safe and resilient solar energy projects."

The 2018 ISEP is available at shop.iccsafe.org.


Dregger

ASTM International committee presents award

ASTM International's Committee D08 on Roofing and Waterproofing has presented its William C. Cullen Award to Philip Dregger, president of Technical Roof Services Inc., Concord, Calif.

ASTM International's Committee D08 established the William C. Cullen Award to recognize members who demonstrate outstanding contributions and personal commitment to the field. An ASTM International member since 1991, Dregger was honored for his dedication and leadership within the industry, particularly for his numerous publications and presentations about condensation, wind damage and roof drainage problems. He also has served on the boards of directors of the Cool Roof Ratings Council, Roof Consultants Inc. and the Roofing Industry Committee on Weather Issues Inc.

Power Tool Institute launches battery safety campaign

The Power Tool Institute, an organization of power tool manufacturers that provides power tool safety resources and education, has launched an online "Take Charge of Your Battery" campaign, www.takechargeofyourbattery.com, to educate lithium-ion battery users about the proper selection, transport, storage and disposal of batteries.

The campaign describes ways to reduce the dangers of lithium-ion battery misuse. Users are encouraged to choose batteries from the original power tool manufacturer because those batteries are designed to share the same circuitry and operate best with matching power tools. The dangers of aftermarket and counterfeit lithium-ion batteries, which may not undergo proper safety testing, also are explained. In addition, the campaign highlights proper battery storage, transport and disposal, and how to recognize indicators that a battery no longer is operating properly.

"Lithium-ion batteries are quickly becoming more common in power tools and are revolutionary for their increased efficiency, energy storage capacity and durability," says Susan Orenga, a member of the Power Tool Institute. "But what many don't realize is that these batteries also come with some serious risks when used improperly. We hope to reach as many consumers, contractors and educators as possible with this campaign to significantly reduce the risks associated with improper use of lithium-ion batteries."