FM update

by Mark S. Graham

Already this year, FM Global has made several noteworthy changes affecting roof assemblies. If you are involved with roofing projects where FM Global's guidelines apply, you should become familiar with these changes, which follow.

Free RoofNav

RoofNav is FM Approvals' (a subsidiary of FM Global) online classification calculator and approval listing directory.

When RoofNav was introduced in 2005, it was available on a relatively costly annual subscription basis. However, as of January, RoofNav is free of charge to all users and available by accessing www.roofnav.com. (For additional information about RoofNav, see "FM RoofNav," June 2005 issue, page 20.)

Revised FM 1-29

FM Global again has revised its Property Loss Prevention Data Sheet 1-29, "Roof Deck Securement and Above-Deck Roof Components." This latest revision follows significant revisions to the same data sheet in 2006. The latest edition of FM 1-29 can be downloaded from the RoofNav Web site.

FM 1-29's 2007 revisions include clarification of when it is appropriate to use its historically accepted prescriptive perimeter and corner attachment enhancement option. For buildings in non-hurricane-prone regions where the basic wind speed does not exceed 90 mph (which is most of the continental U.S.) and mean roof height does not exceed 75 feet, this prescriptive enhancement option is appropriate. Its use also is appropriate for any building where the recommended rating in a roof's field does not exceed Class 1-75.

When using the prescriptive enhancement option, FM 1-29 also clarifies the fastener density for perimeter regions of a roof area should be a minimum of 50 percent greater than what a roof system's approval requires for the roof field but at least one fastener per 2 square feet is needed. For the corner regions, one fastener per square foot is needed.

For roof systems where the prescriptive enhancement option is not appropriate (those roof systems exceeding Class 1-75), FM recommends using appropriate RoofNav listings that address roof area perimeter and corner conditions. As an alternative, roof systems with RoofNav listings appropriate for a roof area's highest wind region (corner region) can be used. FM 1-29 also acknowledges that an adhered roof system with an adequate classification for the roof area's field can be used and a different type of roof system installation method (mechanically attached) with an appropriately higher classification can be used for the roof area's perimeter and corner regions.

In addition, FM 1-29 now allows the use of aggregate surfacing in hurricane-prone regions provided the aggregate is applied in a double flood-coat application and any remaining loose aggregate is removed. FM 1-29's 2006 revisions do not recommend using aggregate in hurricane-prone areas.

Wind-uplift load tables for steel roof decks also have been added to FM 1-29. FM 1-29 recommends use of minimum 22-gauge, Grade 80 (F_y = 80,000 ksi), Type B steel roof decks for buildings requiring wind classifications greater than 1-90 or mechanically attached single-ply membrane roof systems with fastener row spacings greater than 6 feet.

FM 1-29 recommends field-uplift testing be conducted according to Property Loss Prevention Data Sheet 1-52, "Field Uplift Tests," as a quality-assurance measure for all new, re-covered or reroofing installations in hurricane-prone regions where the basic wind speed is at least 100 mph.

FM 1-29 also contains additional changes and requirements that are not specifically addressed here.

Stay informed

NRCA is concerned with FM 1-29's recommendations for field-uplift testing. FM 1-52 is known to provide highly variable test results, and its use clearly is not appropriate as a quality-assurance measure. (For additional information, see "Concerns with field uplift testing," September 2006 issue, page 20.)

Also, NRCA cautions roofing professionals that only a limited number of new and few existing steel roof decks likely will comply with FM Global's latest requirements.

If you are involved in the installation of roof systems where FM Global's guidelines apply, I encourage you to be familiar with FM Global's latest changes to its guidelines.

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