FM Research approves NRCA details

by **Mark S. Graham**

Factory Mutual (FM) Research, a not-for-profit scientific research and testing organization managed by FM Global, has given NRCA an approval listing for specific contractor-fabricated edge metal flashing details. The approved edge metal flashings are based on construction details contained in *The NRCA Roofing and Waterproofing Manual, Fifth Edition*. NRCA's approval listing provides substantiated data about the wind resistance performances of contractor-fabricated edge metal flashings.

Configuration	Designation	Metal	FM Research approval class
Coping (8 inches [200 mm] wide)	BUR-1, BUR-P-1, MB-1, MB-P-1, TP-1, TP-P-1, TS-1, TS-P-1 and SPF-1	24 gauge (0.70 mm) galvanized steel	1-210
		0.040-inch (1.02 mm) aluminum	1-300
Raised perimeter edge fascia (8-inch [200-mm] face)	BUR-2, MB-2, TP-2 and TS-2	24-gauge (0.70-mm) galvanized steel	1-150
		0.040 inch (1.02-mm) aluminum	1-150
Gravel stop (8-inch- [200-mm-] wide face)	BUR-3, MB-3, TP-3, TS-3, SPF-2, SPF-3 and SPF-2(FB)	24-gauge (0.70-mm) galvanized steel	1-165
		0.040-inch (1.02-mm) aluminum	1-180

Note: *Detail designations are based on* The NRCA Roofing and Waterproofing Manual, Fifth Edition.

NRCA's tested edge metal flashings and resulting approval classes.

FM approval

NRCA submitted specimens of coping, raised perimeter-edge fascia and gravel stop to FM Research for evaluation. FM Research analyzed the specimens according to FM Research Approval Classification Standard No. 4435 (FM 4435), "Roof Flashing." This standard provides the technical basis for FM Research's approval listing for edge metal flashings. Descriptions of the edge metal flashings evaluated by FM Research and resulting approval classes are provided in the figure.

NRCA's FM Research approval listing complements NRCA's existing approval listing for contractor-fabricated edge metal flashings from Intertek Testing Services/Warnock Hersey (ITS), Middleton, Wis. The ITS approval listing is based on ANSI/SPRI ES-1, "Wind Design Standard for Edge Metal Systems Used with Low Slope Roof Systems." (Additional information is provided in "NRCA receives an approval listing," February 2001 issue, page 100.)

Why?

There are several reasons NRCA has been seeking approval listings for contractor-fabricated edge metal flashings.

For example, the roofing industry widely acknowledges wind-related problems associated with roof assemblies usually originate at roof perimeters where wind loads typically are highest. Providing wind-resistant edge metal flashings should improve roof assemblies' wind resistances.

In addition, roofing contractors have reported to NRCA that edge metal flashings fabricated in their sheet-metal shops sometimes are excluded on projects that specify proprietary edge metal flashings. NRCA's FM Research approval listing provides recognized, quantitative data for evaluating contractor-fabricated edge metal flashings and comparing them with proprietary edge metal flashings.

Finally, the model building codes are beginning to incorporate specific wind resistance requirements for edge metal flashings. For example, the *International Building Code, 2003 Edition*, will require that edge metal flashings comply with ANSI/SPRI ES-1. Similarly, the current draft of *NFPA 5000*, a new model building code drafted by the National Fire Protection Association, requires that edge metal flashings comply with ANSI/SPRI ES-1 or FM 4435. NRCA's FM Research approval listing provides a basis for model building code compliance.

Closing thoughts

NRCA's FM Research approval listing for contractor-fabricated edge metal flashing details provides quantitative data to substantiate using edge metal flashings. In fact, in most instances, the performance values of contractor-fabricated edge metal flashings from NRCA's approval listings meet or exceed the performance values of similar proprietary edge metal flashings.



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