



Standard Practice for the Specification and Evaluation of Pre-Construction Laboratory Mockups of Exterior Wall Systems¹

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1. Scope

1.1 This standard practice describes procedures and documentation to assist in the specification and evaluation of pre-construction laboratory mockups of exterior wall systems.

1.2 This standard practice addresses design and construction of the mockup; observation during mockup construction and testing; evaluation of the mockup test results; and documentation of the mockup and testing process. Coordination is required between the parties involved in the design, construction and testing of the mockup to facilitate this process. Documentation should convey the results of pre-construction mockups from one party to others at appropriate stages in the process.

1.3 This standard practice recommends the selection and order of individual tests performed on the mockup in the absence of a specific test order.

1.4 This standard practice recommends a protocol for exchange of information between participants in the pre-construction mockup process.

1.5 Responsibility for specific activities is recommended by this standard. This practice is intended to provide a default structure in the absence of the assignment of specific responsibilities by the specifying authority.

2. Referenced Documents

2.1 ASTM Standards:

E 283 Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen²

E 330 Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference²

E 331 Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference²

E 547 Test Method for Water Penetration of Exterior Win-

dows, Curtain Walls and Doors by Cyclic Static Air Pressure Difference²

E 631 Terminology of Building Constructions²

E 1233 Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential²

2.2 AAMA Standards:

AAMA 501, Methods of Test for Exterior Walls³

AAMA 501.1, Standard Test Method for Exterior Windows, Curtain Walls and Doors for Water Penetration using Dynamic Pressure³

AAMA 501.4, Recommended Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts³

AAMA 501.5, Test Method for Thermal Cycling of Exterior Walls³

AAMA CW-DG-1, Testing of Aluminum Curtain Walls, *Curtain Wall Design Guide Manual*³

3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology E 631, unless otherwise indicated.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *pre-construction mockup*—a full-size representation of the proposed exterior wall system built before the exterior wall design is completed in order to study proposed construction details, test for performance and possibly judge appearance of the exterior wall system.

3.2.2 *specifier*—the architect or professional design party responsible for the design of the exterior wall system.

3.2.3 *builder*—the builder of the mockup and the exterior wall system.

3.2.4 *test agency*—the selected agency to conduct the required tests.

4. Significance and Use

4.1 Exterior wall systems require time to design, fabricate, construct and test. Mockups are a fullsize representative portion of the proposed exterior wall system built to study proposed construction details, test for performance and may be

¹ This test method is under the jurisdiction of ASTM Committee E-06 on Building Constructions and is the direct responsibility of Subcommittee E06.55 on Exterior Building Wall Systems.

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² *Annual Book of ASTM Standards*, Vol 04.11.

³ Available from American Architectural Manufacturers Association, Schaumburg, IL.