



# Architectural Testing For the Record



Informational Bulletin

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## AAMA Updates Field Testing Protocols

This Informational Bulletin provides an important overview and summary of the most recent revision of the AAMA 502 and 503 field testing protocols. **AAMA 502-08**, *"Voluntary Specification for Field Testing of Newly Installed Fenestration Products"* and **AAMA 503-08**, *"Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls and Sloped Glazing Systems"* have recently been released by AAMA as updates to the previous documents.

### Longstanding Documents and Issues

Most likely everyone in the window and door business has had experience with a job, or certainly heard about one, where the AAMA 502 or 503 field specifications were used as the standard for testing. On some occasions, tests were conducted years after the product was installed. Many of the cases cited over the years involved testing that produced water leakage which initially was blamed on the fenestration product, only to find out later that the source of the leakage was not the windows at all. This bulletin is meant to make you aware of the recent changes to address this problem and other issues with these longstanding AAMA documents.

### Clarification of Intent

Both documents, AAMA 502 and 503, are intended for field testing of newly installed fenestration products. The problem is AAMA did not specifically state this intent

in the previous editions of the documents. Additionally, the construction industry has had no reference for field testing of fenestration products that have been installed for more than 6-months, so it is understandable that there might be some misunderstanding and misuse.

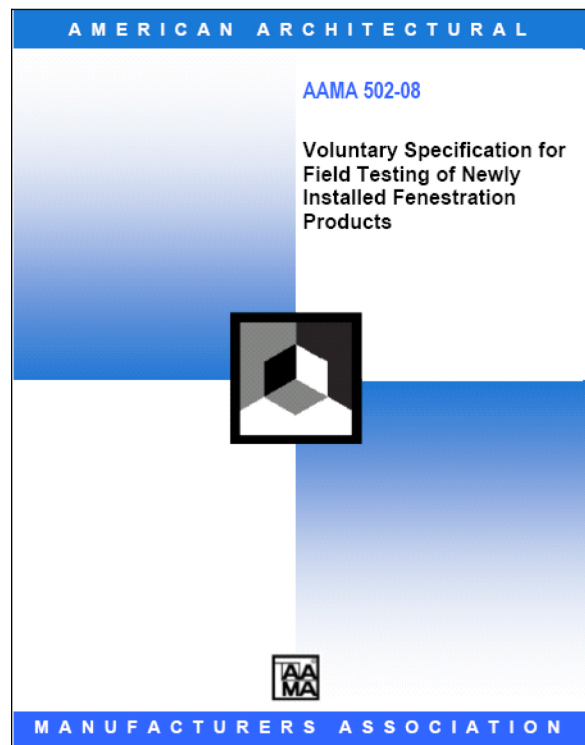


Figure 1: Cover Page of Revised AAMA 502-08

There was also the issue of the options that AAMA 502 allowed. The options centered around two different chamber and test arrangements, "Method A" allowing for the chamber to be sealed to the window/door frame; excluding the perimeter sealant joint

from the test, and "Method B" which allowed for inclusion of the perimeter joints. Since "Method A" omitted the perimeter sealant joints, this test does not identify leaks that would be found using "Method B". These perimeter leaks will most likely show up later sometime during the service life of the product after rain/wind events. Since this perimeter water leakage is often accumulated on or near the fenestration product, it understandable how the casual observer may assume it to be a window leak. Sounds familiar doesn't it? Thus, the new AAMA 502 omits the options and shows one figure for the test chamber arrangement. (See Figure 2.)

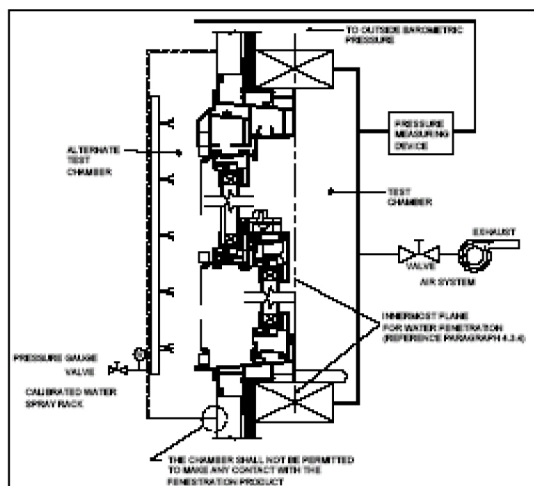


Figure 2: New Figure for Test Chamber Arrangement

### Summary of Changes

AAMA and its members moved forward to rectify these issues. Several drafts were written by the Field Test Task Group with the intent to do a clean sweep of the documents. AAMA 502 was completed first, followed by AAMA 503. Essentially the same changes were made to both documents, however AAMA 503 is written around storefront, curtain walls, and sloped glazing instead of windows.

The following is a summary of the most important changes and some explanation of what the changes represent.

- The document now clearly defines that this specification is for testing during construction, prior to issuance of the building occupancy permit, but no later

than 6 months after installation. (*This was done in order to differentiate field testing (during installation) as opposed to forensic investigation and testing of existing products.*)

- Clarification is made to perform this testing as soon as possible after installation, before the drywall and/or interior finishes are complete. (*The intent here is to allow for visual access in order to find any leakage points or paths prior to the interior finishes being applied.*)
- A reference to AAMA 511-08 has been added. This document is known as the "Voluntary Guideline for Forensic Water Testing of Fenestration Products," (*This new standard; the subject of the next informational article, is meant for products that have been installed after the building occupancy permit has been issued and is to be used along with a proper forensic investigation.*)
- The optional test methods and chamber arrangements have been omitted; although applying a chamber to the interior or exterior is still an option. (*The only chamber arrangement allowed is one that includes the subframe/receptor and/or panning and the perimeter sealant joints. This is intended to identify potential leak paths from within the wall and the window system.*)



Photo 1: AAMA 502 Water Test

- The revised specification clarifies the need for testing more than one unit and at periodic intervals. *(The specification leaves the number of tests up to the specifier, but suggests a default of three tests. Testing is also recommended at 5%, 50% and 90% of installation completion.)*
- The specification now clearly defines the water test pressure to be 2/3rds of the original laboratory tested and rated performance level. *(This was previously a recommendation, but is now the standard default criteria.)*
- The specification states that if the water leakage source cannot be determined, a forensic evaluation using the procedures found in AAMA 511 shall be used. *(This forces the proper determination of water leakage sources, regardless of where it comes from, which in the long run has the potential to help everyone involved in the project. The intent is to pinpoint where the water is coming from and then correct the problem.)*
- The sponsor of the field testing shall notify the fenestration product installer and manufacturer of the test schedule. The advance notice shall be a minimum of one week. *(This is meant to help keep it from being a surprise. How many times have you been informed that, "We tested your windows last week...." or, "We are testing your windows tomorrow"?)* Naturally, we cannot guarantee everyone will follow this, but at least it is in the standard!
- Changes have also been included relative to the water test methodology and the associated pressures. All but the AW rated windows are tested using a "cyclic static water test" based on ASTM E 1105, "Procedure B". AW grade products on the other hand are tested to "Procedure A" which uses a non-cyclic static pressure difference. *(The intent here is to give a better replication of what is tested in the laboratory. AAMA 101 specifies cyclic water tests for all but the AW grade.)*

There are a number of other minor changes and a few deletions, but this bulletin covers the most significant.

It will take some time for these changes to show up in job specifications. With that in mind, it is important to inform your clients about these new documents whenever you get a chance. Please feel free to have them contact Architectural Testing if they have questions or need assistance updating their specifications.

#### **Need More Information?**

The purpose of this ATI Informational Bulletin is to update you on the revised test specifications. The information contained herein is not manufacturer or product specific, and is provided as courtesy advisory information to our customers.

As always, the professional staff at Architectural Testing is available to answer any questions or concerns.

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