PART 1: “THE BASICS”

Weather Barriers, Water-resistive Barriers, Air Barriers, and Vapor Retarders – Are They Not All the Same?
by Laverne Dalgleish & Brian Stroik

Terms and Definitions

• **Weather Barrier**
  Designated set of assemblies designed to resist the loads imposed by all elements of the weather, including solar, wind, air borne debris, heat, flooding, liquid water, and water vapor, commonly referred to as the building enclosure.

• **Water Resistive Barrier**
  Designed material behind an exterior wall covering that is intended to resist liquid water that has penetrated behind the exterior covering from further intruding into the exterior wall assembly.

• **Air Barrier**
  Designated plane of material(s) to reduce airflow between different environments.

• **Heat Barrier (thermal insulation)**
  Material of relatively low heat conductivity used to shield against loss or entrance of heat by radiation, convection, or conduction.

• **Vapor Retarder**
  Material or assembly designated to reduce the water vapor transmission rate through the material or building assembly...

In the Codes, the terms weather barriers, water-resistive barriers, air barriers, vapor retarders (formerly called vapor barriers) are terms used to identify different control layers within the building enclosure. An additional control layer is thermal insulation, but that term is not used in the Code but uses the terms thermal isolation, thermal resistance-R value and thermal transmittance, U-Factor.

Control layers are not materials. Each control layer provides a different function in a building enclosure assembly and are not specific to materials. The Codes has performance requirements for a material to be used to provide that control function.

For a material to be used to provide a control layer function, the material must meet the ...

READ FULL ARTICLE: https://bit.ly/3tjqKTS
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We are pleased that ABAA continues to grow and increase its membership to 688 members (the largest amount ever!), 92 of which are new to the organization. We are also proud of our 2,700 plus certified and registered installers. On the educational front, over 18,000 individuals have taken part in our webinars and face-to-face symposiums. Thank you to all those who attended, and a BIG THANK YOU to our speakers and presenters!

Our committees have also been hard at work and deserve appreciation with the QAP Committee developing an additional program for prefabrications/panelization and new solutions for digital credentialing, the Technical Committee for updating material evaluation requirements and guide specifications for Division 1, as well as drafting 2- and 3-dimensional details for roof-to-wall; the Marketing Committee for revamping the website and creating promotional videos; the Contractor’s Committee for working with the fireproofing industry and hosting contractor-focused educational events; the Education Committee for developing a training program for General Contractors and CABS study resources; the Research Committee with the NIST video tutorial for energy modeling and securing a contract and partnership with University of New Mexico for an air leakage research project. Last but certainly not least, the efforts of our Accredited Standards Development (ASD) Body and Whole Building Airtightness Certification groups have made amazing progress in 2023! ASD continues to work hard toward obtaining ANSI accreditation and creating the related corporate structure, which would help put ABAA in a position to uphold rigorous quality values and produce consensus standards. Regarding Whole Building Airtightness Certification, we launched multi-level certification programming, and we even have our first few certified individuals. ABAA also coordinated with the State of Washington regarding local code provisions and assisted with adopting ABAA Whole Building Airtightness Testing as a requirement!

Again, we reflect with gratitude on the year the ABAA has had, and we know it is due to our active members. So, with great appreciation we cheers to you and we are looking forward to what 2024 has in store for the ABAA!

GREETINGS from the Chairs

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Is Your Organization Getting All the Education Benefits ABAA Has to Offer?

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HOSTED 13 ABAA WEBINARS
With topics ranging from wall systems, mass timber, whole building airtightness, air leakage control, rainscreen systems.

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Including BEC Salt Lake City and CSI Metro NY.

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EVENTS 109
CONTINUING EDUCATION UNITS 18,212

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DOOR
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CERTIFICATION PROGAM

CERTIFICATION BENEFITS

The Blower Door Technician Certification Program certifies individuals to conduct whole-building air tightness tests on commercial and large buildings in compliance with testing standards.

Certification is now required by the state of Washington.

Enhanced Credibility
ISO 17024 certification is an industry standard for blower door technicians with architects, engineers, and building owners, showcasing knowledge, skills, and commitment to quality.

Higher Quality Work
Certification validates proficiency in blower door equipment and air barrier testing principles, improving test results quality, reducing errors, and improving accuracy.

THE PROGRAM CONSISTS OF TWO LEVELS.

Level I
Technicians competent to conduct a blower door test on commercial and larger buildings.

Level II
Proficient blower door technicians that tackle complex and sophisticated buildings.

Meet Rising Demand
Whole-building air tightness testing is the definitive way to verify air barrier systems were installed correctly. Increasingly, jurisdictions require such testing, and many design professionals and building owners now demand it to validate proper installation.

Certification Scope
The Blower Door Technician oversees and implements all activities associated with developing and executing a test plan, covering a wide range of responsibilities within their domain.

www.airbarrier.org/abaa-blower-door-certification
Look for Us at These Live Events
Enjoy our presentations and visit the ABAA booth.

- CSI Tech Talk – QAP Program
- Webinar – The Building Science Advisor
- IIBEC Chicago – Ground Hog Day: Recurring Field Installation Issues, The Big Disconnect
- Mid-TN BEC Chapter
- AIA E. KY & AIA Central KY Air Barrier Rodeo – Failure is NOT an Option, Building Enclosure Architectural Details, The Big Disconnect
- Ron Blank & Assoc; CE Academy – How to Specify an Air Barrier
- CSI Denver – Air Barrier Retreat
- CSI/BEC MN – Half Day Symposium
- BEC/AIA Salt Lake City – Half Day Symposium
- CSI Chicago – Half Day Symposium
- IIBEC Atlanta – Material Testing & Evaluations, Why Does My Roof Leak When It’s Not Raining
- BEC Iowa – Half Day Symposium

Upcoming ABAA Education

09-Jan • 03-Mar • 18-Mar • 07-May • 30-Oct
09-Jan • 11-Jan • 17-Jan • 18-Jan • 23-Jan
28-Feb • 12-Mar • 12-Mar • 13-Mar • Oct-23
08-Nov

09-Feb • Master Specifier’s Retreat - San Juan, PR
03-Mar • SPFA Conference - Las Vegas, NV
08-Mar • IIBEC Convention & Tradeshow - Phoenix, AZ
18-Mar • BEST6 Conference- Austin, TX
07-May • ABAA Building Enclosure Conference - Reston, VA

Upcoming ABAA Certification Training

<table>
<thead>
<tr>
<th>Self-Adhered &amp; Fluid Applied</th>
<th>Whole Building Airtightness</th>
<th>Sprayed Polyurethane Foam Installer</th>
<th>Field Auditor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 16-18 - Virtual</td>
<td>Mar 25-29 - WA</td>
<td>Mar 3-4 - NV</td>
<td>May 7-9 - VA</td>
</tr>
<tr>
<td>May 7-9 - VA</td>
<td></td>
<td>May 7-9 - VA</td>
<td></td>
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<tr>
<td>May 21-23 - OR</td>
<td></td>
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Certify yourself or your team! Register Now!
Wilde Lake Middle School

This is the first Net Zero School in Maryland. We had to perform a whole building air leakage test to confirm the building’s airtightness levels. When the testing was completed, the expected air leakage was less than half what the expected result was. The agency that performed the testing indicated that the testing results achieved was the best that they have ever observed.

Architect: TCA Architects
General Contractor: Oak Contracting/Wayne Temple
Accredited Contractor: Bel Air Foam & Roofing Inc.
Location: Columbia, MD Type: New Middle School
Building (sq. ft.): 110,000 Air Barrier (sq. ft.): 39,670

Quickly Calculate Cost
We have a simple QAP calculator, try it out! airbarrier.org/qap/qap-calculator

Showcase Your Project
Your QAP project could be featured here! Contact Louise at: Lhardman@airbarrier.org

ABAA QAP [Quality Assurance Program]
Learn how to make QAP part of your success story in 2024. We have outlined what it takes, the many benefits, and how much it costs to mitigate risk for a variety of building type and sizes.

Brochure Landing Page
A No-Cost, Web-Based Tool

The tool leverages expert knowledge and a database of thousands of pre-simulated hygrothermal models to provide rapid feedback and expert guidance on wall assembly design, tailored for the user’s location. BSA is designed for builders, architects, engineers, and students of building science.

Have an Article Idea?

Do you have an article or idea in mind? Publishing an article can be a great way to advance your career and create new opportunities.

We pair ABAA Members with ABAA Mentors that will advise you on your article, and verify technical details.

You have skills and knowledge others are trying to obtain. We are looking to assist with articles on a wide range of air/moisture barrier topics, from absolute beginner to highly technical. Contact us to get started!

Contact Louise at: lhardman@airbarrier.org