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GET STARTED TODAY!

To inquire further about our air barrier testing and consultation services, contact your local office at the number below, email info@abbae.com, or call our general contact number at 800.704.1859. We look forward to working with you.

**AIR BARRIER TESTING &
CONSULTING SERVICES**

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ABOUT ABB

Allana Buick & Bers, Inc. (ABB) is a leading Architectural Engineering firm specializing in the building envelope, HVAC and plumbing systems. For over 34 years we have collaborated with Owners, Architects, and Contractors to build and repair sustainable, high-performing buildings.

We provide expert investigation, testing, engineering design, construction management, and litigation support services. Our services make buildings perform better by making them longer lasting with lower operating costs.

EXPERTISE

- Building Envelope Systems
- Air Barriers
- Roofing Systems
- Exterior Facade & Cladding Systems
- Glazing & Fenestration Integrations
- Curtain Wall / Window Wall Systems
- Waterproofing Systems
- Podium / Courtyards
- Slab-on-Grade / Below-Grade

WHOLE BUILDING AIR BARRIER TESTING CODES

- 2018 International Energy Conservation Code
- 2015 International Energy Code
- 2015 Washington State Energy Code
- 2015 Seattle Energy Code
- U.S. Army Corps of Engineers Air Leakage Testing Requirements



PRE-TESTING CONSIDERATIONS

Who is verifying the air barrier is complete?

The entire air barrier shall be complete the day of testing.

Who is providing the air barrier preparation services?

The avenues of planned air flow (mechanical systems, louvers with damper, air intake and makeup, fireplaces, microwaves, plumbing, etc.) need to either be filled or masked shut so that they are not influencing the test results. This can occur from the interior, exterior, or both.

Who is confirming that fenestration is shut?

The windows, doors, skylights, garage entry doors, roof hatches, and any other operable fenestration needs to be shut during the test. This is commonly confirmed by the testing agency immediately before the test.

Who is confirming that doors are open throughout the building?

Each door opening should be open fully so as to allow pressurization and or depressurization to occur as evenly and thoroughly as possible.

Who is confirming power availability and access?

The testing equipment can cause many types of electrical breakers to pop during testing. Verifying a workable power source is necessary prior to testing.

Who is monitoring mechanical and electrical equipment?

Some equipment needs to be shut down during testing so as to not be impacted by the preparation measures. For instance, a unit whole house fan that runs without the ability to intake due to plastic.



WHY IS AIR BARRIER TESTING IMPORTANT?

Air barrier requirements are finding their way into many building and energy codes.

ASHRAE, GSA, USACE, and Passive House (along with many sustainability and “net zero” initiatives) require air barriers be tested.

With such widespread code adoption, it is now the design professional's duty to design and specify air barriers such that they can be tested, diagnosed, and repaired to meet the quantitative or qualitative requirements outlined.



WHY CHOOSE ABB?

- Over 10 years of expert testing and consulting services
- Highly trained field staff and involved project management
- State-of-the-art equipment
- Pre-testing coordination
- Testing protocol and scope of work preparation
- Equipment set-up, re-mobilization, and tear down
- Detailed reporting to conform with requirements

Air barrier testing is one of the most effective ways of ensuring optimal system performance and reducing risk of premature system failure.

TESTING STANDARDS

- Mock Up Testing:
ASTM E 283, E 330, E 783, ASTM E 2357
- Work In-Progress Testing:
ASTM D 4541, E 783, E 1186
- Whole Building Testing:
ASTM E 741, E 779, E 1827, E 1186, CAN/CGSB-149.10-M86, USACE Air Leakage Test Protocol for Building Envelopes
- Air Leakage Diagnostics:
E 741, E 1186 via Infrared Thermography, Smoke Tracer/Pencil, Leak Detector Liquid
- U.S. Army Corps of Engineers Air Leakage Testing Requirements

COMMON QUESTIONS

How long does the air barrier testing usually take?

Typically the actual test is completed in under an hour. Planning and preparation can take a full day or more.

What is the most common concern of air barrier preparation services?

The avenues of planned air flow (mechanical systems, louvers with damper, air intake and makeup, fireplaces, microwaves, plumbing, etc.) need to either be filled or masked shut so that they are not influencing the test results. This can occur from the interior, exterior, or both.

Are there any major breaks in regular operations that need to be considered?

Some systems must be shut down during testing, commonly this includes mechanical and electrical equipment.

Who confirms that fenestration is shut and what are the most common fenestration areas of concern?

The testing agency commonly confirms fenestration immediately before the test. Most common fenestration areas include windows, doors, skylights, garage entry doors, and roof hatches.

The majority of energy codes nationally use 2012 or 2015 IECC as a model code, both of which have quantitative air barrier requirements.



INSTANT AIR BARRIER BENEFITS



SAVE ENERGY & SAVE MONEY



REDUCE NOISE



PEST REDUCTION



MOISTURE REDUCTION