



STATE OF WASHINGTON  
**STATE BUILDING CODE COUNCIL**  
Washington State Energy Code Development  
**Standard Energy Code Proposal Form**

Jan 2022

Log No. 24-RE-008 Vers. 2  
06/26/25

Code being amended: ☐ Commercial Provisions ☒ Residential Provisions

Code Section # R402.1.2 Testing (air barrier testing requirements)

Brief Description:

This proposal is including the requirement of third party testing for the air leakage test of the air barriers in dwelling units.

Proposed code change text: (Copy the existing text from the Integrated Draft, linked above, and then use underline for new text and ~~strikeout~~ for text to be deleted.)

**R402.45.1.2 Testing.** The building or dwelling unit shall be tested for air leakage. Testing shall be conducted in accordance with RESNET/ICC 380, ASTM E779, or ASTM E1827. Test pressure and leakage rate shall comply with Section R402.1.3.

A report of the test results from the testing equipment manufactures software shall include: the -location and time stamp of the date of the test and , The the tested CFM at each tested and pressure for each data point shall be reported that was used to establish the test results, and. Tests shall be conduct-conducted and the report shall be signed by an certified 3rd third party approved testing agent and provided to the building owner and code official. The third party approved testing agent shall have a certificate from be certified by the manufacturer of the equipment or from an accredited certificate from a trainer provider in building science testing.

~~A written report of the test results, including verified location and time stamp of the date of the test, shall be signed by the testing agency and provided to the building owner and code official.~~

**Exception:** Rural counties as defined here, are not required to utilize third party testing at the approval of the AHJ code official based on available services. The air barrier test shall still be required per the R402.4.1.2 requirements.

"Rural County - a county with a population density less than 100 persons per square mile, or a county smaller than two hundred twenty-five square miles."

Testing shall be performed at any time after creation of all required penetrations of the building thermal envelope have been made. Once visual inspection has confirmed that air sealing has been conducted in accordance with Table R402.4.1.1, any operable windows and doors manufactured by *small business* are permitted to be sealed off at the frame prior to the test.

**R402.5.1.2.1 Independence.** The testing agent shall be objective, competent and independent from the contractor primarily responsible for performing the sealing of the air barrier.

**Commented [SN1]:** Adding approved puts more weight towards assuring that the testing agent is competent and independent from the air sealing

**Commented [DJ2]:** Not sure what kind of accreditation this would be

**Commented [SN3]:** By adding this provision, I think it can apply uniformly across the state as it creates a general rule for independence, but has flexibility so a subcontractor that does not do the majority of the air sealing could still do the test. It also give the code official some wiggle room in areas where there may be limited testing agents.

June 26, 2025

~~Exception: Rural Where approved, buildings constructed in the rural counties as defined listed here, are not required to utilize third party testing at the approval of the AHJ code official based on available services. The air barrier test shall still be required per the R402.4.1.2 requirements. Rural counties include the following: Asotin, Skamania...~~

~~"Rural County—a county with a population density less than 100 persons per square mile, or a county smaller than two hundred twenty five square miles."~~

Testing of single-family dwellings and townhouses shall be conducted in accordance with RESNET/ICC 380. Test pressure and leakage rate shall comply with Section R402.1.3.1.

For Group R-2 occupancies, testing shall be conducted in accordance with ASTM E779, ASTM E1827, or ASTM E3158. Test pressure and leakage rate shall comply with Section R402.1.3.2. The individual performing the air leakage test shall be trained and certified by an certification body that is, at the time of permit application, an ISO 17024 accredited certification body including, but not limited to, the Air Barrier Association of America.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weather stripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open, access hatches to conditioned crawl spaces and conditioned attics shall be open.
4. Exterior or interior terminations for continuous ventilation systems and heat recovery ventilators shall be sealed. 2021 Washington State Energy Code RE-27
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

Exception: Additions less than 500 square feet of conditioned floor area.

R402.5.1.2.1 Independence. The testing agent shall be an independent agent of the contractor primarily responsible for performing the sealing of the air barrier.

Purpose of code change:

Your amendment must meet one of the following criteria. Select at least one:

- |                                                                                                                                        |                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> Addresses a critical life/safety need.                                                                        | <input type="checkbox"/> Consistency with state or federal regulations. |
| <input checked="" type="checkbox"/> The amendment clarifies the intent or application of the code.                                     | <input type="checkbox"/> Addresses a unique character of the state.     |
| <input checked="" type="checkbox"/> Addresses a specific state policy or statute.<br>(Note that energy conservation is a state policy) | <input type="checkbox"/> Corrects errors and omissions.                 |

Check the building types that would be impacted by your code change:

- |                                                                   |                                                   |                                        |
|-------------------------------------------------------------------|---------------------------------------------------|----------------------------------------|
| <input checked="" type="checkbox"/> Single family/duplex/townhome | <input type="checkbox"/> Multi-family 4 + stories | <input type="checkbox"/> Institutional |
| <input checked="" type="checkbox"/> Multi-family 1 – 3 stories    | <input type="checkbox"/> Commercial / Retail      | <input type="checkbox"/> Industrial    |

**Commented [DJ4]:** Way better to list them here, alphabetically, because few people know the population density of their county,.

**Commented [SN5R4]:** I'm proposing deletion entirely and rather an alternative to meeting the intent of the proposal such as the new section I'm suggesting above. I do not think it's appropriate for a code (law) to apply to some, but not others.

Your name	Jonathan P Jones	Email address	energycode@energy.wsu.edu
Your organization	Washington State University	Phone number	360-956-2042
Other contact name	Jonathan P Jones		

## **Economic Impact Data Sheet**

**Is there an economic impact:** ☐ Yes ☐ No

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants, and businesses. If you answered "No" above, explain your reasoning.

[Third party testing and the enforcement of air barrier testing across the state is often a hot topic on the tech support calls. There are many voiced concerns on enforcement of this particular section of the code. The code change proposal strengthens the necessity to perform these test. HVAC calculations and energy model are based on a projected result. Without this result being achieved the equipment could be undersize causing occupant comfort issues something that we also receive many calls about. If the HVAC targeted 4 ACH @ 50 PA and the unit tests at 1.25 ACH @ 50 PA, the equipment could be short cycling. Equipment is not designed to run at maximum capacities for extended periods of time and this could lessen the life span of HVAC equipment. Short cycling results in less energy savings. Ventilation requirements added on top of a leaky dwellings over ventilates the unit which causes larger electric bills and again comfort issues.](#)

[The electronic testing requirement should not add any additional cost as all of the testing equipment is able to be operated by the software provided by the manufacture of the equipment. The digital testing would also provide the last time the testing device was calibrated as the manufactures require a scheduled reoccurring recalibration test unique to each manufacture.](#)

Provide your best estimate of the **construction cost** (or cost savings) of your code change proposal? (See OFM Life Cycle Cost [Analysis tool](#) and [Instructions](#); use these [Inputs](#). [Webinars on the tool can be found Here](#) and [Here](#))

\$0.00/square foot (For residential projects, also provide \$0.00/ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

[See description, not applicable.](#)

Provide your best estimate of the **annual energy savings** (or additional energy use) for your code change proposal?

[Not applicable](#) KWH/ square foot (or) [Not applicable](#) KBTU/ square foot ([See below](#))

(For residential projects, also provide [Not applicable](#) KWH/KBTU / dwelling unit) ([See below](#))

Show calculations here, and list sources for energy savings estimates, or attach backup data pages ([See below](#))

List any **code enforcement** time for additional plan review or inspections that your proposal will require, in hours per permit application:

[There are various points of view on the matter about avaialblity of third party testers in rural areas. There would be no known added cost to require third part testers to perform the services in the more urban and suburban areas. As testing is already a long standing requirement of WSEC-R. There are enough testers in the urban areas making it cost neutral for these communities. However, it is a concern for travel time and other similar expenses often associated with these more rural areas. As such an attempt to compensate and not drive up the cost of housing was made via an exception that was made for rural dwellings. I would prefer the code without the rural area exception as I suspect there are enough testers from various industries in Washington State due to advanced programs, federal and utility based.](#)

**Instructions:** Send this form as an email attachment, along with any other documentation available, to: [sbcc@des.wa.gov](mailto:sbcc@des.wa.gov). For further information, call the State Building Code Council at 360-407-9255.

**All questions must be answered to be considered complete. Incomplete proposals will not be accepted.**

[I would also like to remind folks drive time should not be the only deciding factor for rural area exception inclusion in the code as many testers spend hours in traffic on I-5 and never leave the city.](#)

**Small Business Impact.** Describe economic impacts to small businesses:

**Housing Affordability.** Describe economic impacts on housing affordability:

**Other.** Describe other qualitative cost and benefits to owners, to occupants, to the public, to the environment, and to other stakeholders that have not yet been discussed:

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