



## MIAMI COUNTY DEPARTMENT OF DEVELOPMENT

Serving Darke, Mercer Shelby & Auglaize Counties

Richard Osgood  
Director

12/28/2020 (Updated)

BBS MEMO #404 – ENERGY EFFICIENCY

All:

Per BBS memo #404 issued May 15, 2020 Air leakage (blower door) and Duct tightness (duct blaster) testing requirements have changed. There is no longer an option for the visual test. The blower door and duct blaster tests are now **Mandatory** throughout the state.

Within the jurisdictions of the Miami County Department of Development we will give contractors time to develop a plan to be able to comply with these new regulations. We understand that builders must find sub-contractors to do the testing as well as figure out price lines, time lines, etc. Knowing this, we will begin to enforce the new requirements January 1<sup>st</sup>, 2021.

Basically, the process will be as follows beginning 2021.

- Plans submitted with a statement that the plans comply with section 1105.3 of the 2019 Residential Code of Ohio (RCO)
- An approved Res-check or other compliant software will be submitted showing compliance.
- Before a final inspection can be performed we will need a certificate stating the blower door and duct blaster tests have passed and who performed test. (Must show the score / tested air leakage).  
Certificate must be emailed to building department and uploaded into system before final inspection can be performed. **Please plan accordingly.**

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- At the final inspection a permanent certificate must be posted on the electrical panel and state the following information:

(R-values in walls, ceilings/roof, foundation (slab, basement wall, crawlspace wall and/or floor, and ducts outside conditioned spaces).

Without the Certificate on panel, a final cannot be issued. **Please plan accordingly.**

Specific information can be found in chapter 11 of the 2019 Residential Code of Ohio (RCO) as well as the 2018 International Energy Conservation Code (IECC).

Please feel free to contact me with any questions.

Rob England  
Chief Building Official  
Miami County Ohio  
937-440-8121

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# BBS MEMO #404

Ohio Board of Building Standards

May 15, 2020

6606 Tussing Road, P.O. Box 4009, Reynoldsburg, Ohio 43068-9009

## ENERGY EFFICIENCY – AIR LEAKAGE TESTING – 2019 RESIDENTIAL CODE OF OHIO (RCO)

With the adoption of the 2019 RCO, the energy efficiency requirements for air leakage (blower door) and duct tightness (duct blaster) testing have changed. Air leakage testing is addressed here. Duct tightness testing is addressed in BBS Memo Energy Efficiency – Duct Tightness (#405).

Except for additions, alterations or repairs to existing dwellings, air leakage testing is a mandatory requirement under all compliance paths available to the owner (or the owner's representative) to demonstrate energy efficiency in new construction. RCO Chapter 11, Section 1101.2 states the following:

1101.2.1 Compliance paths. Compliance shall be demonstrated by meeting the requirements of one of the following options:

1. Sections 1101.14 through 1104 of this chapter, or
2. Section 1105 (the Simulated Performance approach) and the provisions of Sections 1101.14 through 1104 indicated as "Mandatory," or
3. Section 1106 (the Energy Rating Index (ERI) approach) and the provisions of Sections 1101.14 through 1104 indicated as "Mandatory," and Section 1103.5.3, or
4. Section 1112 ("The Ohio Home Builder's Association (OHBA) Alternative Energy Code Option"), or
5. The "International Energy Conservation Code."

**The owner, not the building department, decides which compliance path to use and must communicate this choice to the building department.**

Before reviewing the air leakage testing requirements, users of the RCO must recognize that the OHBA Alternative Energy Code Option (RCO Section 1112) can only be selected for new home construction and was not designed or developed to be able to handle additions or alterations. Section 1112.1.1 Scope, states that "This section provides an alternative set of requirements for regulating the energy efficiency for the design and construction of new buildings regulated by this code." Existing dwellings must comply with applicable provisions of RCO Section 1107 through 1111 or the International Energy Conservation Code (IECC) Chapter 5[RE].

Within each of the above compliance options, a complete set of energy efficiency requirements are indicated. Compliance paths #4 and #5 each have additional options or choices that need to be made and identified. The code offers these many options to allow the owner (or the owner's representative) maximum flexibility in the design and building of a new home. An air leakage test is confirmation that the required air barrier is sufficiently sealing the building's thermal barrier. The following table summarizes when air leakage testing is required and at what rate:

AIR LEAKAGE (BLOWER DOOR) TESTING REQUIREMENTS				
#	Compliance path chosen (RCO 1101.2.1)	Air Leakage Testing	Allowable tested air leakage	Code reference
1	RCO Sections 1101-1104 Prescriptive	Mandatory	Less than or equal to 5ACH@50Pa	2019 RCO Section 1102.4.1.2
2	RCO Sections 1105 Simulated Performance	Mandatory	Less than or equal to 5ACH@50Pa	2019 RCO Section 1105.2 and 1102.4.1.2
3	RCO Sections 1106 Energy Rating Index (ERI)	Mandatory	Less than or equal to 5ACH@50Pa	2019 RCO Section 1106.2 and 1102.4.1.2
4	RCO Section 1112 OHBA - Compliance path #1 or #2	Mandatory	Less than or equal to 5ACH@50Pa	2019 RCO Section 1112.2.4.2.1
5	2018 IECC (Any path per IECC 401.2 Compliance.)	Mandatory	Less than or equal to 3ACH@50Pa	2018 IECC Section 402.4.1.2
E	RCO Sections 1107 through 1111 Existing Building	Not Required	Testing is not required; however, air barrier requirements must be met to the extent of the addition/alteration.	2019 RCO Section 1102.4.1.2 Exception: Existing Buildings complying with 1107

For those who conduct the air leakage test, RCO Section 1102.4.1.2 requires the test be performed in accordance with RESNET/ICC 380, ASTM E779 or ASTM E1827 and that a written report of the results be signed by the party conducting the test and provided to the building official. The RCO does not require certification of the person or the company performing the test nor that the test be performed by a third party. Air leakage testing may be performed by insulation contractors, HVAC contractors, builders, or any other person who knows how to use the equipment. The RCO Section 108.8 does not require that the inspector witness the test; but, does require that the inspector be given the option to witness the test. If the inspector is not able to witness the test, the inspector may accept the written air leakage testing report.

The process is as follows:

1. New home plans are submitted with a statement from the builder that they comply with section 1105.3 of the 2019 Residential Code of Ohio (RCO). Must be submitted before plan review can begin.
2. A copy of an approved Res-Check or other compliant software showing a passing compliance must also be submitted before plan review can begin.
3. Before final inspection can be scheduled a certificate stating blower door and duct blaster tests have been completed and past and must show who performed them and the allowable air leakage values.
4. During final inspection a permanent certificate (sticker?) must be affixed to the electrical panel showing R-values in Walls, ceiling, basement walls, and ducts outside of conditioned spaces. Also furnace and AC energy data as well as window values.

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