RESNET
RESIDENTIAL ENERGY SERVICES NETWORK

Setting the **Standards** for
Home Energy Efficiency

Interpretation Mechanical Ventilation Flow Rates Measurement

Designation: **No:** 301-2014-16

Approved: June 5, 2018 by SDC 300, Testing, Calculation and Labeling for Home Energy Ratings

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Proponent: Ricky Sandlin on behalf of the Texas RATER Alliance

Applies to: ANSI/RESNET/ICC 301-2014 Addendum D-2017, Sections 4.3.3.2 & 4.4.2(1)

Issue:

In an effort to provide quality and consistency for our builder clients we have met to try and work toward a solution for whole-home mechanical ventilation flow rate testing. What we found were inconsistencies in the standards when it comes to this item which has created confusion among Raters, HVAC Contractors and Builders.

ANSI/RESNET 301 indicates that the flow rate is to be used in the “rated home”, however, whole-home mechanical ventilation flow rate is not listed as one of the minimum rated features in Table 4.4.2(1) of the RESNET standards. Additionally, the RESNET QA File-Field Checklist indicates flow rate data is to be collected and “indication of how the Rater measured the ventilation rate” is on the checklist.

Interpretation:

Since ANSI/ICC/RESNET 301 does NOT include mechanical ventilation flow rates as a minimum rated feature, are Raters required to measure flow rates or can they use the design flow rates?

___X__ Yes

_____ No

Raters are required to measure mechanical ventilation flow rates and use measured flow rates, not design flow rates, in the Confirmed Rating of the Rated Home. While not listed in Table 4.4.2(1) for the Minimum Rated Features, it is stated in the Air Exchange Rate row of

Table 4.2.2(1) of ANSI/RESNET/ICC 301-2014 Addendum D, that it must be "tested in accordance with requirements of Standard ANSI/RESNET/ICC 380-2016". As the Air Exchange Rate encompasses both infiltration and ventilation and 380 has test procedures for both, the requirement is that both are tested. In the 2019 updates to ANSI/RESNET/ICC 301-2014, the ventilation testing requirement will be added to Table 4.4.2(1) for greater clarity, and will be noted as well in a new Appendix B, that addresses the inspections of minimum rated features.

Rationale:

The following sections of Standard ANSI/RESNET/ICC 301-2014 are inconsistent causing confusion and differing interpretations by Raters.

ANSI/RESNET/ICC 301-2014 Addendum D-2017

4.3.3.2. Rated Home:

4.3.3.2.4. Where a Whole-House Mechanical Ventilation System(s) is provided, the Whole-House Mechanical Ventilation flow rate shall be included. Flow rates for bathroom, kitchen and other local exhaust that does not serve as a component of a Whole-House Mechanical Ventilation System shall not be considered for sizing purposes.

Table 4.4.2(1) Minimum Rated Features

23. Whole-House Mechanical Ventilation System(s)

Equipment type, daily run hours, and wattage (a source is the Certified Home Ventilating Products Directory available from the Heating and Ventilation Institute (HVI)).

RESNET QA File-Field Review Checklist

Does the measured ventilation rate in the simulation file match the site data collected?

Is there an indication of how the Rater measured the ventilation rate?

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See RESNET Consensus Standards webpage heading INTERPRETATIONS for examples of interpretations at: http://www.resnet.us/blog/resnet-consensus-standards/