INTERPRETATION IC 62.2-2010-5 OF
ANSI/ASHRAE STANDARD 62.2-2010
Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

Approved November 8, 2011

Request from: Chris Martin (chris.martin@iveygroup.com), 7013 Evans Town Center Blvd, Suite 401, Evans, GA 30809.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 62.2-2010, Section 4.1.3, regarding the infiltration credit.

Background: The default credit for natural ventilation in the referenced standard seems unrealistically low for the average Low-Rise Residential Building. For example, assuming 8' ceilings, the default rate of 2 CFM per 100 SF of occupiable floor space translates to 120 CFH per 800 CF of occupiable floor space, or 0.15 ACH. Comparing this to the ACH allowances provided by the Manual J based on Construction Tightness descriptions would place such a home in the "Tight" category. While "Tight" construction is a worthy goal, it is unlikely many builders in the country (even those building ENERGY STAR-compliant homes) are actually achieving this standard. Also, given the fact that the referenced standard is intended to address acceptable indoor air quality and not cost-effectiveness or energy consumption (see attached), it seems illogical that mechanical ventilation requirements would be substantially based (even tangentially) on achieving such a thermodynamically-tight level of construction.

Recommendation(s): Optimally, I would recommend eliminating the default credit and re-structuring the wording, equations and tables in Section 4.1 to identify total (natural and mechanical) ventilation requirements, consistent with the unique goal of this particular standard. On the other hand, should you wish to maintain the energy efficiencies predicated by the default ventilation credit, recommend you 1) increase the credit to 3 CFM per 100 SF (consistent with "Semi-Tight" construction, a more realistic standard), or 2) allow the 50% excess infiltration credit outlined in latter half of Section 4.1.3 to be taken for new construction as well as homes built prior to the application of ANSI/ASHRAE 62.2-2010. In the interim (or alternatively), allow the interpretation of Section 4.1.2, Alternative Ventilation, to provide licensed design professionals with the ability to certify homes as ASHRAE 62.2 compliant when the designed/measured natural (i.e. infiltration) and mechanical ventilation of the home meets or exceeds the sum of the Infiltration Credit (Section 4.1.3) and Ventilation Rate (Section 4.1) of the same home.

Interpretation: Per Section 4.1.2, Licensed Design Professionals may certify homes as ASHRAE 62.2 compliant when the sum of the designed/measured natural (i.e. infiltration) and mechanical ventilation of the home meets or exceeds the sum of the Infiltration Credit (Section 4.1.3) and Ventilation Rate (Section 4.1) of the same home; excess infiltration over and above the default rate being an acceptable method for meeting the required whole-house ventilation rates.

Question: Is this interpretation correct?

Answer: Yes, for whole-building ventilation.

Comments: Other requirements of the standard must still be met, such as local exhaust.