Informal Interpretation Report
Number 8676

Date August 15, 2022

Edition 2021

Section 501.3

Question:

501.3 states that exhaust discharge air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Also, that air shall not be exhausted into an attic. Where a building has ridge vents and a ventilated soffit (a ventilating system), do exhaust discharges from bathrooms or dryers terminated in the same plane as the perforated soffit panels drawing air into an attic meet the intent of 501.3?

Answer

No. Air removed by every mechanical exhaust system shall be discharged outdoors not less than the distances specified in Section 501.3.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system.
Exhaust ducts must pass through the building envelope to the outside atmosphere. The flow of air through an opening for attic ventilation is dependent on attic temperature, wind direction, wind speed and opening configuration and location, making attic air movement unpredictable and often in a direction not intended.
FBC, Residential confirms the intent of the code. M1501.1 Outdoor discharge. The air removed by every mechanical exhaust system shall be discharged to the outdoors in accordance with Section M1506.3. Air shall not be exhausted into an attic, soffit, ridge vent

Commentary:

Further support for this is found in the IMC Commentary to Section 501.3, which states in part: "...Attics and crawl spaces are not considered to be outdoors. Exhaust ducts cannot terminate in these spaces. Exhaust ducts must connect directly to terminals that pass through the building envelope to the outside atmosphere. Pointing, aiming or similarly directing an exhaust pipe or duct at an opening in the envelope of the building (that is, attic louver, grille, ridge vent, eave vent or soffit vent) in no way ensures that all or any of the exhaust will reach the outdoors. In fact, it is likely that the majority, if not all, of the exhaust vapors and gases will discharge to the attic space rather than to the outdoors. In the case of a duct that terminates in a ventilated soffit, the exhaust can rise into the attic as opposed to falling through the perforated soffit. The flow of air through an opening for attic ventilation is dependent on attic temperature, wind direction, wind speed and opening configuration and location, making attic air movement unpredictable and often in a direction not intended. Additionally, grilles and louvers offer resistance and interfere with the exhaust flow directed at them. This may cause deflection of exhaust back into the attic."

Notice:
The Building Officials Association of Florida, in cooperation with the Florida Building Commission, the Florida Department of Business & Professional Regulation, ICC, and industry and professional experts offer this interpretation of the Florida Building Code in the interest of consistency in their application statewide. This interpretation is informal, non-binding and subject to acceptance and approval by the local building official.