



MIKE CAUSEY, INSURANCE COMMISSIONER & STATE FIRE MARSHAL
BRIAN TAYLOR, CHIEF STATE FIRE MARSHAL

June 4, 2020

Dan Tingen
Tingen Construction Company, Inc.
8411-121 Garvey Dr.
Raleigh, NC 27616

**RE: 2018 NC Residential Code, Sections M1501.1 and M1506.3
Exhaust Vent Termination Adjacent to Soffit Attic Vents**

Mr. Tingen:

This letter is in response to your request for formal interpretation dated May 29, 2020 that was received at NC DOI by email on that date. Your question in my words is:

Are vented attic soffit openings considered “inoperable openings” as that term relates to NC Residential Code (NCRC), Sections M1501.1 and M1506.3 for mechanical exhaust systems?

Remarks:

All code section references are from the 2018 NCRC unless noted otherwise in this letter.

Code Analysis:

According to the International Code Council (ICC) 2015 International Mechanical Code (IMC), Section 501.3.1. item #3, which is equivalent to M1506.3, the requirement is addressing “Environmental air” as the term is defined in the NC Residential Code. According to the definition “environmental air” includes bathroom, kitchen hood, and clothes dryer exhaust. The intent of the requirement in M1506.3 then appears to be addressing air exhausted from within the dwelling and restricting the re-entry of such air into the occupiable spaces of the dwelling. Openings in attic vents are not openings into occupiable space. Once the exhausted air of a bathroom or kitchen hood is discharged to the exterior of a dwelling the code no longer considers it a hazard to the occupants of that dwelling. The intent of M1506.3 is to address windows, doors and mechanical system air intakes.

Conclusion:

Contrary to my previous conclusion in the attached email (see Attachment A), the exhaust vents addressed in M1506.3 are not required to be located 3’ away from soffit attic vents of the same dwelling from which the exhaust vents originate. Soffit attic vent openings are not considered “inoperable openings” as that term relates to M1501.1 because they do not open into the occupiable space of the dwelling.

As a matter of reference, a copy of your letter of request for formal interpretation and attachments (Attachment A below) are included with this letter.

Please call if you have comments or questions.

Sincerely,



Carl Martin, RA
Chief Code Consultant

cc: File
Robbie Davis, Chairman – BCC
Keith Rogers, Chairman Mechanical Code Standing Committee – BCC
David Smith, Chairman Residential Code Standing Committee – BCC
Cliff Isaac, Deputy Commissioner – NC DOI
David Rittlinger, Chief Fire Code Consultant – NCDOI

ATTACHEMNT A



**APPENDIX E
APPEALS
NORTH CAROLINA
BUILDING CODE COUNCIL**

325 North Salisbury Street, Room 5_44
Raleigh, North Carolina 27603
(919) 647-0009

APPEAL TO NCDOI/NCBCC Hearing Date _____/_____/_____

GS 153A-374, GS 160A-434
Formal Interpretation by NCDOI _____
Appeal of Local Decision to NCDOI _____

GS 143-140, GS 143-141
Appeal of Local Decision to NCBCC _____
Appeal of NCDOI Decision to NCBCC _____

APPELLANT: Dan Tingen PHONE: (919)422-2576
REPRESENTING: Tingen Construction Company, Inc
ADDRESS: 8411-121 Garvey Dr
CITY: Raleigh STATE: NC ZIP: 27616
E-MAIL: dan@tingen.com FAX: () -

North Carolina State Building Code, Volume Residential - Section M1501.1 and Section M1506.3

REQUEST ONE: Formal Interpretation by NCDOI Appeal of Local Decision to NCBCC
 Appeal of Local Decision to NCDOI Appeal of NCDOI Decision to NCBCC

Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.

Please see attached email chain.

REASON:

I do not concur with the interpretation by David Rittlinger contained in the attached email chain which finds that a non-operable opening is a soffit vent, eave vent or roof vent and are therefore subject Section M1501.1 and Section M1506.3 of the 2018 NC Residential Code.

Signature: *War Fugate* Date: 5/29/2020 APPEAL TO NCDOI/NCBCC FORM 3/14/17

Dan Tingen

From: Martin, Carl <Carl.Martin@ncdoi.gov>
Sent: Friday, May 29, 2020 1:52 PM
To: Dan Tingen
Cc: Rittlinger, David B
Subject: RE: soffit vents
Attachments: Appendix E 2018 - Template.doc

Dan,

A request for formal interpretation would be on signed and dated letterhead and accompanied by an Appendix E – Appeals North Carolina Building Code Council which is also signed and dated and check the box for “Formal Interpretation by NCDOL” under the “REQUEST ONE” section. Also include any supporting information regarding your position as well as a copy of this email string.

You can submit all of the above to me by email, if you wish, or by standard mail.

Take care of yourself,

Carl Martin
Chief Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0009

“Consistency” as defined by Miriam Webster – “harmony of conduct or practice with profession”

From: Dan Tingen <dan@tingen.com>
Sent: Friday, May 29, 2020 1:37 PM
To: Martin, Carl <Carl.Martin@ncdoi.gov>
Cc: Rittlinger, David B <david.rittlinger@ncdoi.gov>
Subject: [External] RE: soffit vents

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Carl,

Likewise, I hope all is good with you and your family and I really appreciate you taking a look at this for me.

I would like to request a “Formal Letter of Interpretation” concerning this issue and, once issued, that it be posted on the website. I understand your point of view with regards to the accumulation of grease but, as I said earlier, I do not share your concern in a residential application.

Please let me know if this request is sufficient for a Formal Letter, if not I’ll be happy to request in a different form.

My best,

Dan



Dan Tingen, President
Tingen Construction Company, Inc.
8411-121 Garvey Dr.
Raleigh, NC 27616
C: 919-422-2576
Email: dan@tingen.com

From: Martin, Carl <Carl.Martin@ncdoi.gov>
Sent: Friday, May 29, 2020 12:06 PM
To: Dan Tingen <dan@tingen.com>
Cc: Rittlinger, David B <david.rittlinger@ncdoi.gov>
Subject: RE: soffit vents

Dan,

I didn't say it in my previous email, but it is good to hear from you. Hope you are staying safe and well during this difficult time.

Every residential kitchen hood vents grease. Over time the grease accumulates. It will, therefore, accumulate in the soffit adjacent to the exhaust discharge and the attic. A grease fire on the stove then transfers to the exhaust duct, to the exhaust discharge, to the soffit, and then to the attic. Also you have the issue of odor which is produced by grease which will permeate the dwelling once it enters the attic.

Carl Martin
Chief Code Consultant



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919.647.0009

"Consistency" as defined by Miriam Webster – "harmony of conduct or practice with profession"

From: Dan Tingen <dan@tingen.com>
Sent: Friday, May 29, 2020 11:49 AM
To: Martin, Carl <Carl.Martin@ncdoi.gov>
Cc: Rittlinger, David B <david.rittlinger@ncdoi.gov>
Subject: [External] RE: soffit vents

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Carl,

Thank you for the prompt reply to my email. I agree with most the points you make and appreciate your thoughtful approach to this issue; however, I question the potential problem of kitchen grease. If this were a commercial kitchen I would certainly acknowledge the concern but not for residential construction.

Your thoughts?

Kindest regards,

Dan



Dan Tingen, President
Tingen Construction Company, Inc.
8411-121 Garvey Dr.
Raleigh, NC 27616
C: 919-422-2576
Email: dan@tingen.com

From: Martin, Carl <Carl.Martin@ncdoi.gov>
Sent: Friday, May 29, 2020 11:28 AM
To: Dan Tingen <dan@tingen.com>
Cc: Rittlinger, David B <david.rittlinger@ncdoi.gov>
Subject: RE: soffit vents

Dan,

Based on the way Section M1506.3 is written I can see where David drew the conclusion that he did as vented soffits are "openings into the building." The part that is missing is the purpose of the requirement. It appears that the requirement is to prevent vents from discharging back into the rooms of the dwelling, but it also prevents things like kitchen hoods from discharging where the grease vapors can be returned into any part of the structure. Water vapor from bathroom vents should, for the most part, be dispersed by exterior air currents. That would leave very little moisture and odor to be pulled back into the adjacent soffit vents. Also, bathroom vents are discharging a limited amount of time (only when the bathroom is use). Between the limited time that bathroom exhausts run and air current dispersal, amounts of moisture that might be introduced into an attic by soffit vents should be minimal and not be detrimental to the structure or insulation in the attic or to the occupants.

Conclusion:

DT

Although M1506.3 provides no exception for vents discharging below soffit vents, it seems reasonable to allow bathroom vents to discharge under soffit vents without requiring the 3' clearance of M1506.3. However, kitchen hood vents are required to meet the 3' clearance requirement of M1506.3 because of grease vapors.

FYI: Where the 3' clearance is required it would be possible to install flashing material under the soffit material to meet the requirement. That would make it possible to use matching soffit material at that location making the job much more aesthetically pleasing, but kitchen grease will eventually show up on the soffit material.

Carl Martin
Chief Code Consultant



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“Consistency” as defined by Miriam Webster – “harmony of conduct or practice with profession”

From: Dan Tingen <dan@tingen.com>
Sent: Thursday, May 28, 2020 4:44 PM
To: Martin, Carl <Carl.Martin@ncdoi.gov>
Subject: [External] FW: soffit vents

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Carl,

I would like to ask that you review the email below which between David Rittlinger and Chad Evans with the Franklin County Inspection. Based on David's email interpretation Franklin County is requiring solid soffits 3' on either side of a bath fan or dryer vent termination.

The real issue is his determination that *“A non-operable opening is a soffit vent, eave vent or roof vent.”* I have never seen an interpretation like that nor have I ever been part of a conversation to that affect. I would like to ask that you review this interpretation and let me know if you agree.

Kindest regards,

Dan



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BT

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DT