

**ADVISORY COMMITTEE COMMENT FORM**  
**FOR PROPOSED CODE CHANGES**  
(This form must be submitted electronically)

**IRC-58, MR 1309.0806 (REV 2-17-2012)**

*Author/requestor:*     **1309 Committee (2-14-2012 meeting)**

*Email address:*

*Telephone number:*

*Firm/Association affiliation, if any:*

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**Proposed Code Change - Language**

~~**1309.0806 SECTION R806, ROOF VENTILATION.**~~

~~**IRC Section R806.4 is deleted in its entirety.**~~

**Proposed Code Change – Need and Reason**

The text proposed for deletion has been rewritten and renumbered in the 2012 IRC. The IRC text is provided for reference. Additionally, the reason for deletion of unvented attic spaces is addressed in the attached staff opinion from DOLI. Therefore unvented attic assemblies are not proposed to be deleted.

**R806.4 Installation and weather protection.** Ventilators shall be installed in accordance with manufacturer’s installation instructions. Installation of ventilators in roof systems shall be in accordance with the requirements of Section R903. Installation of ventilators in wall systems shall be in accordance with the requirements of Section R703.1.

**R806.5 Unvented attic and unvented enclosed rafter assemblies.** Unvented *attic* assemblies (spaces between the ceiling joists of the top *story* and the roof rafters) and unvented enclosed rafter assemblies (spaces between ceilings that are applied directly to the underside of roof framing members/rafters and the structural roof sheathing at the top of the roof framing members/rafters) shall be permitted if all the following conditions are met:

1. The unvented *attic* space is completely contained within the *building thermal envelope*.
2. No interior Class I vapor retarders are installed on the ceiling side (*attic* floor) of the unvented *attic* assembly or on the ceiling side of the unvented enclosed rafter assembly.
3. Where wood shingles or shakes are used, a minimum 1/4-inch (6 mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In Climate Zones 5, 6, 7 and 8, any *air-impermeable insulation* shall be a Class II vapor retarder, or shall have a Class III vapor retarder coating or covering in direct contact with the underside of the insulation.
5. Either Items 5.1, 5.2 or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.
  - 5.1. *Air-impermeable insulation* only. Insulation shall be applied in direct contact with the underside of the structural roof sheathing.

5.2. Air-permeable insulation only. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing as specified in Table R806.5 for condensation control.

5.3. Air-impermeable and air-permeable insulation. The *air-impermeable insulation* shall be applied in direct contact with the underside of the structural roof sheathing as specified in Table R806.5 for condensation control. The air-permeable insulation shall be installed directly under the *air-impermeable insulation*.

5.4. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.



Date: February 8, 2011

To: State Building Officials

From: Donald J Sivigny  
Sr. Bldg. Code Representative/Energy Specialist

Subject: Staff opinion on the use of the 2009 International Residential Code (IRC) Section R806.4 "Unvented Attic Assemblies" as an alternate method in accordance with MN Rules Chapter 1300 Section 1300.0110 Subp. 13 "Alternate materials, design and methods of construction and equipment".

The 2006 IRC Section 806.4 "Unvented Attic Assemblies" was deleted by a Minnesota amendment from the IRC due to lack of clarity and the improper use of an ASTM Standard that only defined "air impermeable" as requirements for fenestration products and not for roof or wall assemblies.

Recent inquiries have brought to our attention the changes to section R806.4, "Unvented Attic Assemblies", in the 2009 IRC and how this change addresses those situations typically known as a "Hot Roof" applications for buildings built in Minnesota.

The Building Official has the authority to allow a conditioned attic assembly such as an "Unvented Attic Assembly" as an alternate method in accordance with MN Rules Chapter 1300 Section 1300.0110 Subp. 13 "Alternate materials, design and methods of construction and equipment".

In the most current version (2009) of the IRC, section R806.4 has been dramatically changed. These changes to the code now incorporate additional building science research on for unvented attic assemblies. This research expands the details of air-impermeable and air-permeable insulation systems and how they are used to create assemblies that will perform in Minnesota climatic conditions.

These changes have been reviewed and scrutinized in the 2012 national code adoption process and the 2012 IRC is consistent with the language in the 2009 IRC.

It is the opinion of this Construction Codes and Licensing Division (CCLD) Staff, that this could be considered by the Building Official in determining compliance with MN Rules Chapter 1300 Section 1300.0110 Subp. 13 "Alternate materials, design and methods of construction and equipment". However it is important to note that this opinion does not address any other code requirements for specific products, nor does it address any of the additional requirements set forth by the manufacturers of roofing or other materials, thermal barrier requirements or warranties of products installed in this type of assembly, or any other applicable code requirement.

This information can be provided to you in alternative formats (Braille, large print or audio).  
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### **Proposed Code Change – Cost/Benefit Analysis**

This proposal will reduce the cost of construction.

## Other Factors to Consider Related to Proposed Code Change

1. Is this proposed code change meant to:

change language contained in a published code book? If so, list section(s).

change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

**1309.0806 SECTION R806, ROOF VENTILATION.**

delete language contained in a published code book? If so, list section(s).  
2012 IRC section R323

delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

neither; this language will be new language, not found in the code book or in Minnesota Rule.

2. Is this proposed code change required by a Minnesota Statute or new legislation? If so, please provide the citation to the Statute or legislation.

No

3. Will this proposed code change impact other sections of a published code book or of an amendment in Minnesota Rule? If so, please list the affected sections or rule parts.

No

4. Will this proposed code change impact other parts of the Minnesota State Building Code? If so, please list the affected parts of the Minnesota State Building Code.

No

5. Who are the parties affected or segments of industry affected by this proposed code change?

Code officials, building designers, contractors, building owners

6. Can you think of other means or methods to achieve the purpose of the proposed code change? If so, please explain what they are and why your proposed change is the preferred method or means to achieve the desired result.

No

7. Are you aware of any federal requirement or regulation related to this proposed code change? If so, please list the regulation or requirement.

No