

**APPENDIX C
CODE CHANGE PROPOSAL
NORTH CAROLINA
BUILDING CODE COUNCIL**

325 North Salisbury Street, Room 5_44
Raleigh, North Carolina 27603
(919) 647-0009
carl.martin@ncdoi.gov

Item Number _____
 Granted by BCC _____ Adopted by BCC _____ Approved by RRC _____
 Denied by BCC _____ Disapproved by BCC _____ Objection by RRC _____

PROPONENT: Jamieson Stapleton PHONE: (919)710-4474
 REPRESENTING: Southern Energy Management
 ADDRESS: 5908 Triangle Dr.
 CITY: Raleigh STATE: NC ZIP: 27617
 E-MAIL: jstapleton@southern-energy.com FAX: () -

North Carolina State Building Code, Volume 2018 - Section R405

CHECK ONE: Revise section to read as follows: Delete section and substitute the following:
 Add new section to read as follows: Delete section without substitution:

LINE THROUGH MATERIAL TO BE DELETED UNDERLINE MATERIAL TO BE ADDED

Please type. Continue proposal or reason on plain paper attached to this form. See reverse side for instructions.
 Change Footnote h of Table 405.5.2 in the North Carolina Energy Conservation Code as follows:

^h For residences with conditioned basements, R-2 and R-4 residences and townhouses, ~~the following formula shall be used to determine glazing area:~~ the revised reference design total glazing area shall be the lesser of:

- (1) Proposed glazing area
- (2) The revised reference design total glazing area calculated using the following formula: AF = As x FA x F

where:

AF = ~~Total glazing area~~ Revised reference design total glazing area
 As = Standard reference design total glazing area = 0.15 x Conditioned Floor Area
 FA = (Above-grade thermal boundary gross wall area)/(above-grade boundary wall area + 0.5 x below-grade boundary wall area).
 F = (Above-grade thermal boundary wall area)/(above-grade thermal boundary wall area + common wall area) or 0.56, whichever is greater.

and where:

Thermal boundary wall is any wall that separates conditioned space from unconditioned space or ambient conditions. Above-grade thermal boundary wall is any thermal boundary wall component not in contact with soil. Below-grade boundary wall is any thermal boundary wall in soil contact. Common wall area is the area of walls shared with an adjoining dwelling unit. ~~AF, As and CFA~~ AF, As and CFA are in the same units.

Will this proposal change the cost of construction? Decrease Increase No
 Will this proposal increase to the cost of a dwelling by \$80 or more? Yes No
 Will this proposal affect the Local or State funds? Local State No

Will this proposal cause a substantial economic impact (\geq \$1,000,000)? Yes [] No [x]

- Non-Substantial – Provide an economic analysis including benefit/cost estimates.
- Substantial – The economic analysis must also include 2-alternatives, time value of money and risk analysis.
- Pursuant to §143-138(a1)(2) a cost-benefit analysis is required for all proposed amendments to the NC Energy Conservation Code. The Building Code Council shall also require same for the NC Residential Code, Chapter 11.

REASON:

The footnote has the unintended consequence to *always* set the reference case glazing area to be less than the proposed design glazing area, even when the proposed area is quite small. The reason for this is that in the formula, A_s (as described in Table 405.5.2) is always less than or equal to the proposed glazing area, and for homes using footnote h, FA and F are always less than or equal to 1. This code change proposal matches what was most likely the *intent* of footnote h.

In communication with V. Robert Salcido of the Pacific Northwest National Lab, he stated: “that it needs to be changed.” He said that a proposal will be submitted by a software developer to correct the footnote in the 2024 International Energy Conservation Code.

The information about problems with the footnote has been communicated to NC DOI staff, who have also agreed that the footnote needs to be changed. Rather than issuing a correction/ clarification, they felt that the Building Codes Council needed to be informed to provide full transparency.


BCC CODE CHANGES

Signature: _____ Date: 10/26/2021 FORM 11/26/19

 Recoverable Signature

X Jamieson Stapleton

Jamieson Stapleton
Project Manager, Southern Energy Manageme...
Signed by: b275e8af-0aea-4a14-a63e-ff3295304b01

 Recoverable Signature

X 

Matt Dovenbarger
Field Manager, Southern Energy Management
Signed by: b275e8af-0aea-4a14-a63e-ff3295304b01

 Recoverable Signature

X Taylor Fearington

Taylor Fearington
Business Development Manager, Southern En...
Signed by: b275e8af-0aea-4a14-a63e-ff3295304b01

X 

Cy Kilbourn
VP of Engineering, Ekotrope

INSTRUCTIONS

Each proposed Code change request shall comply with the following policies:

Rule 1: The Original and twenty-two (22) copies of the proposed Petition for Rule-Making along with supporting documentation shall be filed with the Building Code Council Secretary. Submit one (1) electronic copy via email.

Rule 2: The filing shall be received by the first day of the month prior to the quarterly scheduled meeting date. Example: A December meeting date will require filing by November 1 prior to the meeting.

Rule 3: Each request shall be typewritten on this form and shall contain the following:

- (1) The proposed rule change must be set forth in full and contain explicit reference to the affected section or sections of the Code.
- (2) The request shall state the reasons for the proposed rule change with supporting documentation.
- (3) The proposed rule change shall comply with the standards set forth in GS 143-138(c) and reference to the particular standards shall be set forth in the request for the amendment.
- (4) The proposed rule change shall contain an economic impact analysis as required by GS 143-138(a).
- (5) A proposed rule change to the NC Energy Conservation Code shall have an accompanying cost-benefit analysis as required by GS 143-138(a1)(2).

Rule 4: When a request is improperly filed or not in accordance with all the rules listed above, the BCC Secretary shall reject the submittal and notify the applicant of the proper procedure to follow.

Rule 5: Upon the proper filing of a request, the BCC Secretary shall forward one copy of said request to each council member prior to the scheduled meeting date. Persons filing proposed petitions are hereby notified of the place and time of the scheduled hearings. The BCC Secretary shall cause to be published the notice of public hearing as specified in GS 143-138(a).

Rule 6: The Council shall either Grant or Deny the proposed Petition for Rulemaking at the meeting following receipt of the proposed rule change. The Council will take no further action on items that are Denied. Granted items may be referred to Committee for review.

Rule 7: The Council will hold a public hearing on Granted items at the next quarterly scheduled meeting. The Council will take final action on Granted items at the next quarterly scheduled meeting after the public hearing.

Timeline Example

Petition received:	February 1
Petition Granted:	March BCC meeting
Notice of Hearing published:	April NC Register
Committee review:	May - June
Hearing held:	June BCC meeting
Final Adoption:	September BCC meeting
Rules Review Meeting:	November RRC meeting
Approved:	December 1