



PUBLIC CODE CHANGE PROPOSAL FORM FOR PUBLIC PROPOSALS IN THE INTERNATIONAL CODES

2006/2007 CODE DEVELOPMENT CYCLE

CLOSING DATE: All Proposals Must Be Received by March 24, 2006

The 2006/2007 Code Development Hearings are scheduled for
September 20 to 30, 2006 in Orlando, FL

1) **Name:** Ronald Majette **Date:** 3/23/2006
Jurisdiction/Company: United States Department of Energy
Submitted on Behalf of: United States Department of Energy
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2) ***Signature:** _____
** I hereby grant and assign to ICC all rights in copyright I may have in any authorship contributions I make to ICC in connection with this proposal. I understand that I will have no rights in any ICC publications that use such contributions in the form submitted by me or another similar form and certify that such contributions are not protected by the copyright of any other person or entity.*

Signature for electronic submittal: When submitting proposals electronically, to complete the submittal process, print a copy of the ICC Electronic [Copyright Release](http://www.iccsafe.org) form found at www.iccsafe.org, fill in the requested information, send to ICC. One completed form is required. This must be done for each code change cycle and can be used for code changes and public comments.

3) Indicate appropriate International Code(s) associated with this Public Proposal – Please use Acronym: IECC, IRC
 If you have also submitted a separate coordination change to another I-Code, please indicate the code: _____
 (See section below for list of names and acronyms for the International Codes).

4) **Be sure to format your proposal and include all information as indicated on Page 2 of this form.**

5) Proposals should be sent to the following offices via regular mail or email. An e-mail submittal is preferred, including an electronic version, in either Wordperfect or Word. The only formatting that is needed is **BOLDING**, ~~STRIKEOUT~~ AND UNDERLINING. Please do not provide additional formatting such as tabs, columns, etc., as this will be done by ICC

Please use a separate form for each proposal submitted. Note: All code changes received will receive an acknowledgment.

Please check here if separate graphic file provided.

Graphic materials (Graphs, maps, drawings, charts, photographs, etc.) must be submitted as separate electronic files in .CDR,.IA,.TIF or .JPG format (300 DPI Minimum resolution; 600 DPI or more preferred) even though they may also be embedded in your Word or Wordperfect submittal.

Code	Send to:	Acronym	ICC Code Name
IBC	International Code Council	IBC	International Building Code
ICC EC	Chicago District Office	ICC EC	ICC Electrical Code–Administrative Provisions
IEBC	Attn: Diane Schoonover	IECC	International Energy Conservation Code
IFC	4051 West Flossmoor Road	IEBC	International Existing Building Code
IFGC	Country Club Hills, IL 60478-5795	IFC	International Fire Code
IPC	Fax: 708/799-0320	IFGC	International Fuel Gas Code
IPSDC	codechanges@iccsafe.org	IMC	International Mechanical Code
IPMC		ICC PC	ICC Performance Code
IWUIC		IPC	International Plumbing Code
IZC		IPSDC	International Private Sewage Disposal Code
IECC	International Code Council	IPMC	International Property Maintenance Code
ICC PC	Birmingham District Office	IRC	International Residential Code
IMC	Attn: Annette Sundberg	IWUIC	International Wildland-Urban Interface Code
IRC	900 Montclair Road	IZC	International Zoning Code
	Birmingham, AL 35213-1206		
	Fax: 205/592-7001		
	codechangesbhm@iccsafe.org		

CODE CHANGE PROPOSAL

Please provide all of the following items in your code change proposal. Your proposal may be entered on the following form, or you may attach a separate file. However, please read the instructions provided for each part of the code change proposal. The sections identified in parentheses are the applicable sections from CP #28 Code Development. The full procedures can be downloaded from www.iccsafe.org.

Code Sections/Tables/Figures Proposed for Revision (3.3.2): IECC Section 403.2.2, IRC Section N1103.2.2

Name/Company/Representing (3.3.1): Ronald Majette, United States Department of Energy

Proposal:

Add new text as follows:

IECC

403.2.2 Sealing. All ducts, air handlers, filter boxes, or building cavities used as ducts shall be sealed. Joints and seams shall comply with Section M1601.3.1 of the International Residential Code. Air handlers not located within the conditioned space shall be factory sealed to achieve a 2 percent or less leakage rate at 1-inch water gauge (250 Pascals) when all air inlets, air outlets and condensate drain port(s), when present, are sealed at an air pressure of 1-inch water gauge with no greater than 2-percent design cubic foot per minute discharge.

IRC

N1103.2.2 Sealing. All ducts, air handlers, filter boxes, or building cavities used as ducts shall be sealed. Joints and seams shall comply with Section M1601.3.1. Air handlers not located within the conditioned space shall be factory sealed to achieve a 2 percent or less leakage rate at 1-inch water gauge (250 Pascals) when all air inlets, air outlets and condensate drain port(s), when present, are sealed at an air pressure of 1-inch water gauge with no greater than 2-percent design cubic foot per minute discharge.

Supporting Information (3.3.4 & 3.4):

The purpose of this proposal is to provide specific requirements for the sealing of air handlers. The code already requires air handlers to be sealed—this proposal simply quantifies how proper sealing is to be determined. The text for this requirement is adapted from the 2004 Florida Building Code, Section 13-610.

Air handlers are often a major source of leakage that can result in significant energy loss. The Florida Solar Energy Center conducted leak testing on 69 air handlers in new Florida houses. The following information is taken from the report on that study. Leakage in the air handler cabinet averaged 20.4 Q₂₅ in 69 air conditioning systems. Leakage at the return and supply plenum connections averaged 3.9 and 1.6 Q₂₅, respectively. Using the operating pressures in the air handler and at the plenum connections, these Q₂₅ results convert to actual air leakage of 58.8 cfm on the return side (negative pressure side) and 9.3 cfm on the supply side (positive pressure side). The combined return and supply air leakage in the air handler and adjacent connections represents 5.3% of the system air flow (4.6% on the return side and 0.7% on the supply side). This is a concern, when one considers that a 4.6% return leak from a hot attic (peak conditions; 120°F and 30% RH) can produce a 16% reduction in cooling output and 20% increase in cooling energy use and this only from the air handler and adjacent connections. (source: <http://www.fsec.ucf.edu/bldg/pubs/cr1357/index.htm>)

Referenced Standards (3.4 & 3.6): N/A

Cost Impact (3.3.4.6): The code change proposal will not increase the cost of construction.