

This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

# TAC: Mechanical

Total Mods for Mechanical in Approved as Submitted: 6

Total Mods for report: 42

# Sub Code: Mechanical

M5756				Page 3 of 155
Date Submitted	7/30/2012	Section 307.2.5	Proponent	Cheryl Harris
Chapter	3	Affects HVHZ No	Attachments	No
TAC Recommend Commission Acti	••		·	
<u>Comments</u>				
General Commen	its No	Alternate Language	No	
Related Modifica	ations			
Residential	Building - Mechanical	- M1141.5 minimum piping insulation		
Summary of Mo	dification			
Maintain F	lorida specific code rel	lated to insulation of primary condensate drain	lines	
to mold in Fiscal Impact St Impact to	materials surrounding tatement local entity relative to			
•	• • • •	owners relative to cost of compliance with c m mold with very low cost	ode	
•	industry relative to the impact	e cost of compliance with code		
Requirements				
<b>Has a reas</b> Yes	sonable and substanti	al connection with the health, safety, and we	fare of the general put	blic
•	ns or improves the co ngthens code	de, and provides equivalent or better produc	ts, methods, or system	is of construction
	<b>discriminate against n</b> s not discriminate	naterials, products, methods, or systems of c	onstruction of demons	strated capabilities
	degrade the effectiven is not degrade the effe			
Is the proposed co YES	ode modification part of a	a prior code version?		
The provisions con	ntained in the proposed	amendment are addressed in the applicable intern	ational code?	

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

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e	rnate Lang	uage								
s	t Comme	nt Period History	08/0	9/2012 - 09/23/2012		Page 4 of 155				
	Proponent	Oscar Calleja	Submitted	9/23/2012	Attachments	Yes				
	Rationale									
		ted Residential Building Code imum insulation to be consist								
-	Fiscal Impact	Statement								
Ļ	Impact to lo	cal entity relative to enforce	ment of code							
	Pipe insu	Pipe insulation would still have to be inspected for proper R value.								
N-00 /0	•	<b>ilding and property owners</b> roperty from mold at very low	•	liance with code						
	Impact to induced to induced to the line of the line o	ustry relative to the cost of c act	compliance with code							
	Requirements									
	Has a reaso Yes	nable and substantial conne	ction with the health, sa	ifety, and welfare of the	general public					
	•	or improves the code, and presence of the code of the	•	• •	s, or systems of constru	uction				
	Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate.									
		grade the effectiveness of the degrade the effectiveness of								
	Is the propose YES	ed code modification part of	a prior code version?							
	The provision NO	ons contained in the prop	osed amendment are	addressed in the app	blicable international	code?				

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

1st	Commen	t Period History		08/09/2012	2 - 09/23/2012	
	Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No
	Commont					

Comment:

M5756-G1

This was submitted to the IMC change # M30-12 and prevent condensation on the drains. BOAF supports this change

307.2.5 Pipe insulation. All horizontal primary condensate drains within unconditioned areas shall be insulated to prevent condensation from forming on the exterior of the drain pipe.

Change related Residential Building Code, Mechanical M1411.5 to delete reference to R-4 minimum insulation and replace with R-3 minimum insulation to be consistent with Energy Conservation Code 403.3 ad ASHRAE 90.1 Table 6.83 and table 503.2.8.

# **307.2.5 Pipe insulation.** All horizontal primary condensate drains within unconditioned areas shall be insulated to prevent condensation from forming on the exterior of the drain pipe.

**M1411.5 Insulation of refrigerant piping.** Piping and fittings for refrigerant vapor (suction) lines shall be insulated with insulation having a thermal resistivity of at least  $\underline{R-3}$   $\underline{R-4}$  and having external surface permeance not exceeding 0.05 perm [22.87 ng/(s . m2. Pa)] when tested in accordance with ASTM E96.

Page: 1

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M5776		- <u>.</u>		Page 7 o <del>f</del> 155
Date Submitted 7/30	/2012	Section 603.1.3	Proponent	Cheryl Harris
Chapter 6		Affects HVHZ No	Attachments	No
TAC Recommendation	Approved as Sub	mitted		
Commission Action	Pending Review			
<u>Comments</u>				
General Comments	No	Alternate Language	No	
Related Modifications				
Summary of Modification	on			
To maintain Florid	la specific code relate	ed to the provision of sufficient space adja	cent to mechanical sy	stems.
Rationale				
To provide a defir	iition for "suffici	ent space" for mechanical systems to	o allow for adequate a	access to equipment
Fiscal Impact Statemer	nt			
Impact to local en Neutral	ntity relative to enfor	cement of code		
Impact to buildin More cost e	• • • •	ers relative to cost of compliance with co	de	
Impact to industr More cost e	•	of compliance with code		
Requirements				
Has a reasonable Yes	and substantial cor	nection with the health, safety, and welfa	are of the general put	blic
Strengthens or in Improves th	•	nd provides equivalent or better products	, methods, or system	is of construction
Does not discrim Does not di	•	als, products, methods, or systems of co	nstruction of demons	strated capabilities
•	e the effectiveness o			
Is the proposed code mod	ification part of a prior	code version?		

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

#### **1st Comment Period History**

<u>08/09/2012 - 09/23/2012</u>

Proponent	BOAF CDC	Submitted	9/23/2012

#### Page 8 of 15

No

Attachments

#### Comment:

76-G1

**M57** 

No data or justification was provided.

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

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Page: 1

603.1.3 Space provided. Sufficient space shall be provided adjacent to all mechanical components located in or forming a part of the air distribution system to assure adequate access for (1) construction and sealing in accordance with the requirements of Section 603.1 of this code; (2) inspection; and (3) cleaning and maintenance. A minimum of 4 inches (102 mm) is considered sufficient space around air handling units.

Exception: Retrofit or replacement units not part of a renovation are exempt from the minimum clearance requirement.

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M	58	68

112000				Page 11 o	i <sup>9</sup> 155
Date Submitted	7/31/2012	Section 302.5.2	Proponent	Cheryl Harris	
Chapter	3	Affects HVHZ No	Attachments	No	
TAC Recommenda Commission Actio		tted			
<u>Comments</u>					
General Comment	is No	Alternate Language	No		
Related Modifica	tions				
Summary of Mod	lification				
To maintain	1 Florida Specific Code relate	d to duct requirements in garages			
Rationale					
To provide	clarification on types of duct a	allowed in garages for Florida Buildings			
Fiscal Impact Sta					
Impact to lo Neutr	ocal entity relative to enforce ral	ement of code			
•	ouilding and property owners cost effective	relative to cost of compliance with co	de		
•	ndustry relative to the cost o cost effective	f compliance with code			
Requirements					
Has a reaso	onable and substantial conn	ection with the health, safety, and welf	are of the general pub	lic	

- Yes
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves code
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate
- Does not degrade the effectiveness of the code Does not degrade the effectiveness of the code
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

R302.5.2 Duct penetration.

M5868 Text Modification

Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel, <u>1 inch minimum rigid nonmetallic Class 0 or Class 1 duct board</u>, or other approved material and shall have no openings into the garage.

M5618				
1112010				Page 13 of 155
Date Submitted	7/24/2012	Section M1602.4 Balanced Return A	r. Proponent	amador barzaga
Chapter	16	Affects HVHZ Yes	Attachments	Yes
TAC Recommenda	ation Approved as Sub	mitted		
Commission Actio	on Pending Review			
<u>Comments</u>				
General Comment	is No	Alternate Language	No	
Related Modificat	tions			
Summary of Mod	lification			
Add Florida	Specific design and perfor	rmance requirement from the 2010 Florida B	Building Code	
Rationale				
Balance air	return has been part of the	e Florida Building Code for the past three co	de cycles. Maintaini	ing this Section is consistent with
the Florida	Statutes requirements for E	Energy Conservation, equipment performance	ce and inclusion in th	ne code is necessary to avoid
diminishing	the expected level of perfo	ormance standards		
Fiscal Impact Sta	itement			
Impact to lo	ocal entity relative to enfor	rcement of code		
None	. Proposed language is in t	the 2010 Florida Building Code.		
Impact to b	ouilding and property owne	ers relative to cost of compliance with cod	e	
None	Proposed language is in t	the 2010 Florida Building Code.		
Impact to ir	ndustry relative to the cost	t of compliance with code		
•	•	the 2010 Florida Building Code.		
Dent		-		
Requirements	anable and substantial ass	an a stimu with the basis and walter		- U
		nnection with the health, safety, and welfar direction and proposed language is in the 20		
Strengthen	s or improves the code, ar	nd provides equivalent or better products,	methods, or systen	ns of construction
-	-	lirection and proposed language is in the 20	· •	
Does not d	iscriminate against materia	als, products, methods, or systems of con	struction of demon	strated capabilities
No, th	his modification provides dir	rection and proposed language is in the 201	0 Florida Building C	ode.
Does not de	egrade the effectiveness o	of the code		

No, this modification provides direction and proposed language is in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version? No

#### M1602.4 Balanced Return Air.

Restricted return air occurs in buildings when returns are located in central zones and closed interior doors impede air flow to the return grill or when ceiling spaces are used as return plenums and fire walls restrict air movement from one portion of the return plenum to another. Provisions shall be made in both residential and commercial buildings to avoid unbalanced air flows and pressure differentials caused by restricted return air. Pressure differentials across closed doors where returns are centrally located shall be limited to 0.01 inch WC (2.5 pascals) or less. Pressure differentials across fire walls in ceiling space plenums shall be limited to 0.01 inch WC (2.5 pascals) by providing air duct pathways or air transfer pathways from the high pressure zone to the low zone.

#### Exceptions:

1. Transfer ducts may achieve this by increasing the return transfer 11/2 times the cross sectional area (square inches) of the supply duct entering the room or space it is serving and the door having at least an unrestricted 1 inch undercut to achieve proper return air balance.

2. Transfer grilles shall use 50 square inches (of grille area) to 100 cfm (of supply air) for sizing through-the-wall transfer grilles and using an unrestricted 1 inch undercutting of doors to achieve proper return air balance.

3. Habitable rooms only shall be required to meet these requirements for proper balanced return air excluding bathrooms, closets, storage rooms and laundry rooms, except that all supply air into the master suite shall be included.

The proposed language was in the 2010 Florida Building Code and is in accordance with the Florida Statutes for the purpose of maintaining Florida efficiencies.

M4981 Page 16 op 155 **Date Submitted** 7/6/2012 Section 2301.2.7 Proponent Michael Goolsby Affects HVHZ Chapter 23 No Attachments No Approved as Submitted **TAC Recommendation Commission Action** Pending Review **Comments** General Comments No Alternate Language No **Related Modifications Summary of Modification** Section formatting Rationale While this entire Chapter is applicable for the HVHZ it makes reference and provides direction to sections which are not applicable. The purpose of this proposed modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions. **Fiscal Impact Statement** Impact to local entity relative to enforcement of code Removes confusion by providing accurate direction regarding application of applicable code sections. Impact to building and property owners relative to cost of compliance with code Removes confusion by providing accurate direction regarding application of applicable code sections. Impact to industry relative to the cost of compliance with code Removes confusion by providing accurate direction regarding application of applicable code sections. Requirements Has a reasonable and substantial connection with the health, safety, and welfare of the general public It does so by ensuring direction to applicable sections of the code are provided. Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction It does so by ensuring direction to applicable sections of the code are provided. Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials. Does not degrade the effectiveness of the code This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials. Is the proposed code modification part of a prior code version? No

1st Commer	nt Period His	tory	08/09/20	<u>)12 - 09/23/2012</u>		
Proponent	Jack Glenn	Submitted	9/23/2012	Attachments	No	

#### Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

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M2301.2.7 Roof and wall penetrations. Roof and wall penetrations shall be flashed and sealed in accordance with Chapter 9 the HVHZ shall comply with Chapter 44) of this code to prevent entry of water, rodents and insects

M4983 **Date Submitted** 7/6/2012 Section 2302.2.2 Proponent Michael Goolsby Affects HVHZ Chapter 23 No Attachments No Approved as Submitted **TAC Recommendation Commission Action** Pending Review **Comments** General Comments No Alternate Language No **Related Modifications** Summary of Modification Section formatting Rationale While this entire Chapter is applicable for the HVHZ it makes reference and provides direction to sections which are not applicable. The purpose of this proposed modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions. **Fiscal Impact Statement** Impact to local entity relative to enforcement of code Removes confusion by providing accurate direction regarding application of applicable code sections. Impact to building and property owners relative to cost of compliance with code Removes confusion by providing accurate direction regarding application of applicable code sections. Impact to industry relative to the cost of compliance with code Removes confusion by providing accurate direction regarding application of applicable code sections. Requirements Has a reasonable and substantial connection with the health, safety, and welfare of the general public It does so by ensuring direction to applicable sections of the code are provided. Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction It does so by ensuring direction to applicable sections of the code are provided. Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials. Does not degrade the effectiveness of the code This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials. Is the proposed code modification part of a prior code version? No

<u>1st Co</u>	ommen	t Period History		08/09/20	<u> 12 - 09/23/2012</u>	
Pro	oponent	Jack Glenn	Submitted	9/23/2012	Attachments	No

#### Comment:

4983 This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone. Water intrusion protection for the installation should be the same statewide. This is not a

High Velocity Hurricane Zone. Water intrusion protection for the installation should be the same statewide. This is not a high-wind issue.

M2302.2.2 Roof and wall penetrations. Roof and wall penetrations shall be flashed and sealed in accordance with Chapter 9 the HVHZ shall comply with Chapter 44) to prevent entry of water, rodents, and insects.

Total Mods for Mechanical in No Affirmative Recommendation with a Second: 15

Total Mods for report: 42

## Sub Code: Mechanical

NЛ		~	2
Μ	52	2	2

			·····	Page 21 of 1	155
Date Submitted 7/	17/2012	Section 301.15	Proponent	Ann Stanton	
Chapter 3		Affects HVHZ No	Attachments	No	
TAC Recommendation	n No Affirmative Rec	ommendation with a Seco	nd		
Commission Action	Pending Review				
<u>Comments</u>					
General Comments	No	Alternate	Language No		
Related Modification	IS				
Summary of Modifica	ation				
Repropose Flor	rida-specific wind resista	nce equipment criteria.			
Rationale					
	uage is currently in the 2 s designed to meet those	v	It is needed to ensure that HVAC e	equipment that is exposed to wind	d
Fiscal Impact Statem	nent				
Impact to local	entity relative to enforce	ement of code			
None. Pr	oposed language is curre	ently in the 2010 Florida B	uilding Code.		

Impact to building and property owners relative to cost of compliance with code None. Proposed language is currently in the 2010 Florida Building Code.

Impact to industry relative to the cost of compliance with code

None. Proposed language is currently in the 2010 Florida Building Code.

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes. Proposed language is currently in the 2010 Florida Building Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Yes. Proposed language is currently in the 2010 Florida Building Code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities No. Proposed language is currently in the 2010 Florida Building Code.

#### Does not degrade the effectiveness of the code

No. Proposed language is currently in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

#### Explanation of Choice

Proposed language is currently in the 2010 Florida Building Code. Florida is often exposed to tropical storms and equipment on buildings should be prepared for them.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

<u>1st</u>	Comment	Period History		08/09/2012 - 09/	<u>23/2012</u>		Page 22 of 155
	Proponent	Ken Cureton	Submitted	9/21/2012	Attachments	No	Fage 22 01 155
M5222-G1	Comment: The proposal pr DCA07-DEC-18	rovides for clarification with 33.	h regard to win	d resistance for mechani	cal equipment as	per DCA07-DEC-182 a	and
<u>1st</u>	Comment	Period History		08/09/2012 - 09/	<u>23/2012</u>		
	Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	
	Comment:						

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the M5222-G2

2013 Triennial

applicable international code. Per FS 553.73 (7) (g) The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

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#### Section 301.15 Wind resistance. Change to read as shown.

**301.15 Wind resistance.** Mechanical equipment, appliances and supports that are exposed to wind shall be designed and installed to resist the wind pressures <u>on the equipment and the supports as</u> determined in accordance with the <u>Florida Building Code</u>, <u>Building</u>. <u>Roof-mounted mechanical units and supports shall be secured to the structure. The use of wood "sleepers" shall not be permitted.</u>

A5747				Page 24 o <sup>8</sup> 155
Date Submitted	7/30/2012	Section 304.1	Proponent	Cheryl Harris
Chapter	3	Affects HVHZ No	Attachments	No
AC Recommend		ve Recommendation with a Second		
Commission Acti	ion Pending Re	view		
Comments				
General Commer	nts No	Alternate Language	No	
Related Modific	ations			
Summary of Mo	dification			
-		tion. Exception:On changeouts or new installa	ations of existing building	as where equipment is replaced
		ved under a previous code.	<b>j</b>	
Rationale				
	e outs of previously inst dates to the current coo	alled equipment or new installation in existing	g buildings, it would be n	ot be economicaly feasible to
Fiscal Impact St		JC.		
•	local entity relative to	enforcement of code		
Non	e			
•	• • • •	owners relative to cost of compliance with exception was not added.	code	
		e cost of compliance with code		
Neu	•			
Requirements				
•	sonable and substantia	al connection with the health, safety, and we	elfare of the general put	blic
		should be no adverse impact	0 1	
-		de, and provides equivalent or better produce	cts, methods, or system	is of construction
•	, ,	a reasonable exception.		
	discriminate against m	aterials, products, methods, or systems of	construction of demons	strated capabilities
Does not	degrade the effectiven	ess of the code		
Doe	es not degrade the effect	tiveness of the code		
is the proposed co	ode modification part of a	prior code version?		
YES				
The provisions co	ntained in the proposed a	amendment are addressed in the applicable inter	national code?	
NO				

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### **1st Comment Period History**

<u>08/09/2012 - 09/23/2012</u>

					Page 25 01 155
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments N	0

#### Comment:

This was submitted to the IMC change # M13-12 and would provide relief for existing conditions.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

M5747-G1

**304.10** Clearances from grade. Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending not less than 3 inches

(76 mm) above adjoining grade or shall be suspended not less than 6 inches (152 mm) above adjoining grade.Such support shall be in accordance with the manufacturer's installation instructions.

Exception: On changeouts or new installations of existing buildings where equipment is replaced that has a support platform approved under a previous code.

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M5751				Page 27 o <sup>P</sup> 155
Date Submitted	7/30/2012	Section 306.3.2	Proponent	Cheryl Harris
Chapter	3	Affects HVHZ No	Attachments	No
TAC Recommend Commission Acti		ommendation with a Second		
Comments				
General Commen	nts No	Alternate La	nguage No	
Related Modifica	ations			
Summary of Mo	dification			
To maintai	in a Florida Specific Code tha	t allowed installation of air har	ndling units in attics.	
Rationale				
It is comm	on practice for existing and n	ew Florida homes to have AH	Js in the attic.	
Fiscal Impact St	tatement			
Impact to Non	local entity relative to enforce	ement of code		
•	building and property owner e economical.	s relative to cost of compliar	ce with code	
•	industry relative to the cost ws for common Florida design	•		
Requirements				
		nection with the health, safet	γ, and welfare of the general pu	blic
•	ns or improves the code, an roves code	d provides equivalent or bett	er products, methods, or syster	ns of construction
	discriminate against materia s not discriminate	ls, products, methods, or sys	tems of construction of demon	strated capabilities
	degrade the effectiveness of s not degrade the effectivene			
Is the proposed co	ode modification part of a prior of	ode version?		

YES

The provisions contained in the proposed amendment are addressed in the applicable international cod	e?
NO	

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

#### **1st Comment Period History**

08/09/2012 - 09/23/2012	

						Fage 20 01 100
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	-

#### Comment:

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M57

This was submitted to the IMC change # M19-12 except

"1. The service panel of the equipment is located within six (6) feet [1829 mm] of an attic access." Was not part of the submittal.

2. A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly. Is no longer needed as it is covered in 307.2.3 of the 2012 IMC

3. The attic access opening is of sufficient size to replace the air handler. Is no longer needed as it is covered in 306.3 of the 2012 IMC

4. The notice is the only part needed to be added to the 2013 FMC.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

306.3.2 Air Handling Units. Air handling units shall be allowed in attics if the following conditions are met:

1. The service panel of the equipment is located within six (6) feet [1829 mm] of an attic access.

2. A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly.

3. The attic access opening is of sufficient size to replace the air handler.

4. A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. Said notice shall be in all capitals, in 16 point type, with the title and first paragraph in bold:

## NOTICE TO HOMEOWNER

<u>A PART OF YOUR AIR CONDITIONING SYSTEM, THE AIR HANDLER, IS LOCATED IN THE</u> <u>ATTIC. FOR PROPER, EFFICIENT, AND ECONOMIC OPERATION OF THE AIR CONDITIONING</u> <u>SYSTEM, YOU MUST ENSURE THAT REGULAR MAINTENANCE IS PERFORMED.</u>

YOUR AIR CONDITIONING SYSTEM IS EQUIPPED WITH ONE OR BOTH OF THE FOLLOWING: 1) <u>A DEVICE THAT WILL ALERT YOU WHEN THE CONDENSATION DRAIN IS NOT WORKING</u> <u>PROPERLY OR 2) A DEVICE THAT WILL SHUT THE SYSTEM DOWN WHEN THE</u> <u>CONDENSATION DRAIN IS NOT WORKING. TO LIMIT POTENTIAL DAMAGE TO YOUR HOME,</u> <u>AND TO AVOID DISRUPTION OF SERVICE, IT IS RECOMMENDED THAT YOU ENSURE PROPER</u> <u>WORKING ORDER OF THESE DEVICES BEFORE EACH SEASON OF PEAK OPERATION.</u>

M5641				Page 30 3P15	55
Date Submitted 7/	25/2012	Section 407 Return Air Intake	Proponent	amador barzaga	
Chapter 4		Affects HVHZ Yes	Attachments	Yes	
TAC Recommendatio Commission Action	n No Affirmative Re Pending Review	ecommendation with a Second			
General Comments	No	Alternate Language	No		
Related Modification	s				
Summary of Modific	ation				
Maintaining ret	urn air intakes depicting	g prohibited locations			

#### Rationale

Section 407 Return Air Intake has been part of the FBC (M) since 2004. Inclusion of this prohibition in the code is necessary in order to maintain the same level of life safety for the citizens of the State of Florida.

#### **Fiscal Impact Statement**

#### Impact to local entity relative to enforcement of code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

#### Impact to building and property owners relative to cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

#### Impact to industry relative to the cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

#### Requirements

#### Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes, this modification maintains minimum life safety requirements regarding return air intake and the proposed language for this Modification is currently included in the 2010 Florida Building Code.

#### Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Yes, this modification is consistent with the statute's requirement that any modification must maintain the same life safety protection of the FBC and the proposed language for this Modification is currently included in the 2010 Florida Building Code.

#### Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities No, this modification allows the use of materials, products and systems of construction already deemed acceptable by the FBC or any alternate acceptable to the code official plus the proposed language for this Modification is currently included in the 2010 Florida Building Code.

#### Does not degrade the effectiveness of the code

No, this modification maintains the same safety regulations required by the current code and in effect since 2004 and the proposed language for this Modification is currently included in the 2010 Florida Building Code.

#### Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

#### **1st Comment Period History**

<u>08/09/2012 - 09/23/2012</u>

						i uge et et too
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	-

#### Comment:

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5641

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The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

## <u>407.1 General.</u>

It shall be prohibited to place a return air intake in the following locations: public bathrooms, and nondedicated kitchen HVAC systems.

Yes, the proposed code change is submitted in order to maintain the current level of safety for Florida citizens.

				Page 34 df <sup>1</sup> 155
Date Submitted 7/30	/2012	Section 602.2.1	Proponent	Cheryl Harris
Chapter 6		Affects HVHZ No	Attachments	No
TAC Recommendation Commission Action	No Affirmative Reco Pending Review	mmendation with a Second	·	
<u>Comments</u>				
General Comments	No	Alternate Language	e No	
<b>Related Modifications</b>				
0				
Summary of Modificatio		t to exceptions for exposed materia	le in plonume	
Rationale				
	ions that are commonly	/ found in Florida buildings and do r	ot pose a fire hazard orea	ter than the other listed
exceptions.				
Fiscal Impact Statemen	ſt			
Impact to local er Neutral	ntity relative to enforce	ment of code		
Impact to building More cost e		relative to cost of compliance with	n code	
Impact to industr More cost e	-	f compliance with code		
Requirements				
•	and substantial conne	ection with the health, safety, and v	welfare of the general put	blic
Strengthens or in Improves th	•	provides equivalent or better prod	ucts, methods, or system	ns of construction
Does not discrim Does not dis	•	, products, methods, or systems o	of construction of demon	strated capabilities
	a	ha aada		
Does not degrade Does not de	egrade the effectiveness			
•	egrade the effectivenes	s of the code		

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

#### **1st Comment Period History**

<u>08/09/2012 - 09/23/2012</u>

Proponent BOAF CDC Submitted 9/23/2012 Attachments No

#### Comment:

74-G1

**M57** 

This submittal does not match the current language in the 2012 IMC 602.2.1

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

Page: `

#### 602.2.1 Materials within plenums. .

Exceptions:

**602.2.1 Materials exposed within plenums.** Except as required by Sections 602.2.1.1 through 602.2.1.5, materials within plenums shall be noncombustible or shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E 84.

Exceptions:

1. Rigid and flexible ducts and connectors shall conform to Section 603.

2. Duet coverings, linings, tape and connectors shall conform to Sections 603 and 604.

3. This section shall not apply to materials exposed within plenums in one and two family dwellings.

4. This section shall not apply to smoke detectors.

5. Combustible materials fully enclosed within continuous noncombustible raceways or enclosures, approved gypsum board assemblies or within materials listed and labeled for such application.

6. 7. Condensate Pump Units with a total volume not exceeding 2 cubic feet.

7.8 Loudspeakers, loudspeaker assemblies, and their accessories exposed within a plenum shall have a peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a peak heat release rate not greater than 100 kW when tested in accordance with UL 2043.

# M5777

				Page 37 d	<del>f</del> 155
Date Submitted 7/30/	/2012	Section 603.1.4	Proponent	Cheryl Harris	
Chapter 6		Affects HVHZ No	Attachments	No	
TAC Recommendation Commission Action	No Affirmative Recor Pending Review	nmendation with a Second			
<u>Comments</u>					
General Comments	No	Alternate Language	No		
<b>Related Modifications</b>					
Summary of Modification					
	a Specific code related	to the application of closure product	S		
Rationale To provide clarifica	ation on the accepted a	oplication methods for closure produ	icts.		
Fiscal Impact Statemen	t				
Impact to local en Improves en	ntity relative to enforcent nforcement	nent of code			
Impact to building	and property owners	relative to cost of compliance with	code		

40

nuetral

Impact to industry relative to the cost of compliance with code

neutral

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate
- Does not degrade the effectiveness of the code Does not degrade the effectiveness of the code
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

# **1st Comment Period History**

### <u>08/09/2012 - 09/23/2012</u>

Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	-

#### Comment:

6

5

No data or justification was provided. Manufacturers installation has to be followed, code does not have to spell this out for every item.

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

<u>603.1.4 Product application.</u> Closure products shall be applied to the air barriers of air distribution system components being joined in order to form a continuous barrier or they may be applied in accordance with the manufacturer's instructions or appropriate industry installation standard where more restrictive.

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M5653				<u>.</u>	Page 40 07155	
Date Submitted	7/25/2012	Section 603		Proponent	Ann Stanton	
Chapter	6	Affects HVHZ	No	Attachments	No	
TAC Recommend	ation No Affirmativ	ve Recommendation with a	a Second	-		
Commission Acti	on Pending Re	view				
<u>Comments</u>						
General Commen	ts No	Alte	ernate Language	No		
Related Modifica	ations					
Summony of Mo	dification					
Summary of Mo		achment requirements wit	h Florida-specific requ	irements as containe	d in the FBC-Energy	
•	ion to avoid conflict in c	•				
Rationale						
	-	t requirements in the Mec	hanical code agree w	ith those in the Energy	y code and to maintain Florida	
Fiscal Impact St	s per Florida law. atement					
-	local entity relative to	enforcement of code				
•	•	s currently in the 2010 Flo	rida Building Code.			
Impact to	building and property	owners relative to cost of	compliance with co	de		
None	e. Proposed language i	s currently in the 2010 Flo	rida Building Code.			
•	•	cost of compliance with				
None	e. Proposed language i	s currently in the 2010 Flo	rida Building Code.			
Requirements						
		al connection with the hea		are of the general pub	blic	
		currently in the 2010 Florid te, and provides equivale	-	mothode or system	as of construction	
-	•	currently in the 2010 Flori	•	, methous, or system		
		aterials, products, metho	•	nstruction of demons	strated capabilities	
No. I	Proposed language is o	currently in the 2010 Florid	a Building Code.			
	legrade the effectiven					
		currently in the 2010 Florid	a Building Code.			
	de modification part of a	prior code version?				
YES						
OTHER	ntained in the proposed a	imendment are addressed in	the applicable internat	ional code?		
Explanation of C	hoice					
-		minimal in the IMC compa	ared to Florida-specifi	c criteria.		
•		or data that the geographica			nathen	
	-	egional variation addressed l	-		inguien	
amendment applie	s to the state?					

OTHER

**Explanation of Choice** 

Proposed language was in the 2010 FBC. It was processed in accordance with an approved plan from the Florida Building Commission for the purpose of maintaining Florida efficiencies.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

# **1st Comment Period History**

#### <u>08/09/2012 - 09/23/2012</u>

Proponent	BOAF CDC	Submitted	9/23/2012	Attachments No	-

#### Comment:

M5653-G1

The manufacturers' installation requirements cover what the IMC base code does not, this is unnecessary language for the code.

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

We do not need to repeat the SMACNA Manual in the code.

## SECTION 603

# DUCT CONSTRUCTION AND INSTALLATION

**603.1 General.** An air distribution system shall be designed and installed to supply the required distribution of air. The installation of an air distribution system shall not affect the fire protection requirements specified in the *International Building Code*. Ducts shall be constructed, braced, reinforced and installed to provide structural strength and durability. All transverse joints, longitudinal seams and fitting connections shall be securely fastened and sealed in accordance with the applicable standards of this section.

<u>All enclosures which form the primary air containment passageways for air distribution systems shall be</u> <u>considered ducts or plenum chambers and shall be constructed and sealed in accordance with the applicable</u> <u>criteria of this section.</u>

**603.1.1 Mechanical fastening.** All joints between sections of air ducts and plenums, between intermediate and terminal fittings and other components of air distribution systems, and between subsections of these components shall be mechanically fastened to secure the sections independently of the closure system(s).

603.1.2 Sealing. Air distribution system components shall be sealed with approved closure systems.

**603.1.3 Space provided.** Sufficient space shall be provided adjacent to all mechanical components located in or forming a part of the air distribution system to assure adequate access for (1) construction and sealing in accordance with the requirements of Section 603.1 of this code; (2) inspection; and (3) cleaning and maintenance. A minimum of 4 inches (102 mm) is considered sufficient space around air handling units.

**Exception:** Retrofit or replacement units not part of a renovation are exempt from the minimum clearance requirement.

**603.1.4 Product application.** Closure products shall be applied to the air barriers of air distribution system components being joined in order to form a continuous barrier or they may be applied in accordance with the manufacturer's instructions or appropriate industry installation standard where more restrictive.

**603.1.5 Surface preparation.** The surfaces upon which closure products are to be applied shall be clean and dry in accordance with the manufacturer's installation instructions.

603.1.6 Approved mechanical attachments. Approved mechanical attachments for air distribution system components include screws, rivets, welds, interlocking joints crimped and rolled, staples, twist in (screw attachment), and compression systems created by bend tabs or screw tabs and flanges or by clinching straps. Mechanical attachments shall be selected to be appropriate to the duct system.

603.1.7 Approved closure systems. Closure system materials, including adhesives when used, shall have a flame spread rating not over 25 without evidence of continued progressive combustion and a smoke-developed rating not over 50 when tested in accordance with the ASTM E 84. The following closure systems and materials are approved for air distribution construction and sealing for the applications and pressure classes prescribed in Sections 603.2 through 603.10:

1. Metal Closures.

a. Welds applied continuously along metal seams or joints through which air could leak.

2. Gasketing, which achieves a 25/50 flame spread, smoke density development rating under ASTM E 84 or UL 723, provided that it is used only between mated surfaces which are mechanically fastened with sufficient force to compress the gasket and to fill all voids and cracks through which air leakage would otherwise occur.

<u>3. Mastic Closures. Mastic shall be placed over the entire joint between mated surfaces. Mastics shall not be diluted. Approved mastics include the following:</u>

well as all other rolled mechanical seams. All seams shall be rolled or crimped.

a. Mastic or mastic plus embedded fabric systems applied to fibrous glass ductboard that are listed and labeled in accordance with the UL 181A, Part III.

b. Mastic or mastic plus embedded fabric systems applied to nonmetal flexible duct that are listed and labeled in accordance with the UL 181B, Part II.

c. Mastic ribbons, which achieve a 25/50 flame spread, smoke density development rating under ASTM E 84 or UL 723, provided that they may be used only in flange-joints and lap-joints, such that the mastic resides between two parallel surfaces of the air barrier and that those surfaces are mechanically fastened.

<u>4. Tapes. Tapes shall be applied such that they extend not less than 1 inch (25 mm) onto each of the mated surfaces and shall totally cover the joint. When used on rectangular ducts, tapes shall be used only on joints between parallel rigid surfaces and on right angle joints. Approved tapes include the following:</u>

a. Pressure-sensitive tapes.

1) Pressure-sensitive tapes applied to fibrous glass ductboard that are listed and labeled in accordance with the UL 181A, Part I.

2) Pressure-sensitive tapes applied to nonmetal flexible duct that are listed and labeled in accordance with the UL 181B, Part I.

<u>b.</u> Heat-activated tapes applied to fibrous glass ductboard that are listed and labeled in accordance with the UL 181A, Part II.

5. Aerosol Sealant. Such sealants shall be installed by manufacturer-certified installers following manufacturer instructions and shall achieve 25/50 flame spread/smoke density development ratings under ASTM E 84 or UL 723.

6. Foams. Spray polyurethane foam shall be permitted to be applied without additional joint seals.

603.1.8 Cavities of the Building Structure. Cavities in framed spaces, such as dropped soffits and walls, shall not be used to deliver air from or return air to the conditioning system unless they contain an air duct insert insulated according to Section C403.2.7.1 of the Florida Building Code, Energy Conservation, and constructed and sealed in accordance with the requirements of Table 603 appropriate for the duct materials used.

Exception: Return air plenums.

**603.2 Duct sizing.** Ducts installed within a single dwelling unit shall be sized in accordance with ACCA Manual D or other approved methods. Ducts installed within all other buildings shall be sized in accordance with the ASHRAE Handbook of Fundamentals or other equivalent computation procedure <u>based on the following:</u>

2. Duct size shall be determined by the supply air requirements of each room, the available static pressure and the total equivalent length of the various duct runs.

3. Friction loss data shall correspond to the type of material used in duct construction.

**603.4 Metallic ducts.** All metallic ducts shall be constructed as specified in the SMACNA HVAC Duct Construction Standards—Metal and Flexible and shall be mechanically attached and sealed using approved closure systems for the pressure class as specified in Table 603.

Exception: Ducts installed within single dwelling units shall have a minimum thickness as specified in Table 603.4.

603.4.1 Minimum fasteners. <u>Reserved</u>. Round metallic ducts shall be mechanically fastened by means of at least three sheet metal screws or rivets spaced equally around the joint.

**Exception:** Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion so as to prevent a hinge effect.

603.5 Nonmetallic ducts. 603.5 Nonmetallic ducts. Nonmetallic ducts shall be constructed with Class 0 or Class 1 duct material and shall comply with UL 181 <u>and shall meet criteria in Table 603 appropriate to the type of duct installed</u>. Fibrous duct construction shall conform to the SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standards. The air temperature within nonmetallic ducts shall not exceed 250°F (121°C).

603.5.1 Gypsum ducts. [No change.]

603.5.2 Building cavities designed for air transport. Cavities designed to deliver air from or return air to the conditioning system such as plenums, mechanical closets, enclosed support platforms, cases, air shafts, etc. shall be lined with an air barrier and sealed in accordance with applicable criteria in Table 603, and shall be insulated in accordance with Section R403.2.1 or Section C403.2.7.1 of the Florida Building Code, Energy Conservation, as appropriate.

603.9 Joints, seams and connections. <u>All air distribution system joints, seams and connections shall be constructed, sealed and attached as described in Table 603 by duct type.</u> <u>All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA HVAC Duct Construction Standards</u>. <u>Metal and Flexible and NAIMA Fibrous Glass Duct Construction Standards</u>. <u>All joints, longitudinal and transverse seams and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic plus embedded fabric systems, liquid scalants or tapes. Closure systems used to seal ductwork listed and labeled in accordance with UL 181A shall be marked "181A P" for pressure sensitive tape, "181 A M" for mastic or "181 A H" for heat sensitive tape. Closure systems used to seal flexible air ducts and flexible air ducts and flexible air ducts and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall be installed in accordance with the manufacturer's installation instructions. Unlisted duct tape is not permitted as a sealant on any duct.</u>

Exception: Continuously welded and locking type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.

# TABLE 603

# DUCT SYSTEM CONSTRUCTION AND SEALING

DUCT TYPE/	SEALING REQUIREMENTS	MECHANICAL ATTACHMENT	TEST
<b>CONNECTION</b>			STANDARD
CONNECTION Metal duct, rigid and flexible Pressures less than 1-inch water gauge	Closure systems as described in Section 603.1.7: 1. Continuous welds. 2. Snaplock seams, and grooved, standing, double-corner, single- corner and Pittsburgh-lock seams and all other rolled mechanical seams. 3. Mastic, mastic-plus-	Mechanical attachments approved: 1. Continuous welds. 2. Snaplock seams, and grooved, standing, double-corner, single- corner and Pittsburgh-lock seams and all other rolled mechanical seams. Crimp joints for round metal ducts shall have a contact lap of at least	STANDARD
	embedded fabric, or mastic ribbons. ` 4. Gaskets. 5. Pressure-sensitive tape. 6. Aerosol sealant	<u>1½ inches (38 mm).</u>	<u>SMACNA</u> <u>HVAC Air</u> <u>Duct</u> <u>Leakage Test</u> <u>Manual</u>
Pressures 1-inch water gauge or greater	Closure systems as described in Section 603.1.7: 1. Continuous welds. 2. Mastic or mastic-plus- embedded fabric systems. 3. Gaskets.	Mechanical attachments approved: <u>1. Continuous welds</u> <u>Round metal ducts shall be</u> <u>mechanically fastened by means of</u> <u>at least three sheet-metal screws or</u> <u>rivets equally spaced around the</u> <u>joint.<sup>1</sup></u>	

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	<u>The tested duct leakage class, at</u> a test pressure equal to the		
Uigh program du st	design duct pressure class rating, shall be equal to or less than Leakage Class 6. Leakage		
<u>High pressure duct</u> systems designed to	testing may be limited to		
operate at pressures	representative sections of the		
greater than 3-inch	duct system but in no case shall		
water gauge (4-inch	such tested sections include less		
<u>water gauge pressure</u> class)	than 25 percent of the total installed duct area for the		
<u>1855)</u>	designated pressure class.		
Plastic duct	See Section 603.8.3.	Joints between plastic ducts and	ASTM D
		<u>plastic fittings shall be made in</u> <u>accordance with the manufacturer's</u> installation instructions.	2412
Fibrous glass duct,	All joints, seams and duct wall	Mechanically fastened per	NAIMA
rigid.	penetrations between sections of		Fibrous Gla
	duct and between duct and other	independent of the closure system(s).	Duct
	distribution system components		Constructio
	shall be sealed with		<u>Standards.</u>
	closure systems as described in	Attachments of ductwork to air-	
	Section 603.1.7:	handling equipment shall be by mechanical fasteners in accordance	UL 181
	1. Heat-activated tapes.	with Section 603.1.1. Where access	01.101
	1. Heat abuvated tapes.	is limited, two fasteners on one side	UL 181A
	2. Pressure-sensitive tapes.	shall be acceptable.	
	3. Mastics or mastic-plus- embedded fabric systems.		
Flexible duct	All duct collar fittings shall have	Flexible nonmetal ducts shall be	<u>UL 181</u>
systems, nonmetal.	a minimum 5/8 inch (16 mm)	joined to all other air distribution	
	integral flange for sealing to	system components by either	<u>UL 181B</u>
	other components and a minimum 3-inch (76 mm) shaft	terminal or intermediate fittings.	
	for insertion into the inner duct		
	core.		ADC FDPI
		Mechanical fasteners for use with	
		flexible nonmetallic air ducts shall	
		comply with UL 181B and shall be	
	Flexible ducts having porous	marked 181B-C.	
	inner cores shall not be used.		
	Exception: Ducts having a		
	nonporous liner between the		
	porous inner core and the outer		
	jacket. Fastening and sealing		
	requirements shall be applied to		

			Page	47 of 155
	such intermediate liners.		- ago	
	The reinforced lining shall be			
	sealed to the duct fitting using			
	one of the following sealing			
	materials which conforms to the approved closure and			
	mechanical attachment			
	requirements of Section 603.1.7:	The reinforced core shall be		
		mechanically attached to the duct		
	1. Gasketing.	fitting by a drawband installed		
		directly over the wire-reinforced core		
	2. Mastic, mastic-plus-	and the duct fitting. The duct fitting		
	embedded fabric, or mastic	shall extend a minimum of 2 inches		
Duct core to duct	<u>ribbons.</u>	(51 mm) into each section of duct		
fitting	2	core. When the flexible duct is larger		
	3. Pressure-sensitive tape.	than 12 inches (303 mm) in diameter		
	4. Aerosol sealants, provided	or the design pressure exceeds 1-inch water gauge, the drawband shall be		
	that their use is consistent with	secured by a raised bead or indented		
	UL 181.	groove on the fitting.		
	The outer jacket of a flexible			
	duct section shall be secured at			
	the juncture of the air			
	distribution system component and intermediate or terminal			
	fitting in such a way as to			
	prevent excess condensation.			
	The outer jacket of a flexible			
	duct section shall not be			
	interposed between the flange of			
	the duct fitting and the flexible			
	duct, rigid fibrous glass duct			
	board, or sheet metal to which it			
	<u>is mated.</u>			
	The duct collar fitting's integral			
	flange shall be sealed to the			
	rigid duct board or sheet metal			
	using one of the following			
<u>Duct outer jacket</u>	closure systems/materials which			
to duct collar	conforms to the approved			
fitting	closure and mechanical			
	attachment standards of Section			
	<u>603.1.7:</u>			

	1		Page 48
	<ol> <li>Gasketing.</li> <li>Mastic or mastic-plus- embedded fabric systems.</li> <li>Mastic ribbons when used to attach a duct collar to sheet metal.</li> <li>Pressure-sensitive tape.</li> <li>Aerosol sealants, provided that their use is consistent with UL 181.</li> </ol>	<u>The duct collar fitting shall be</u> mechanically attached to the rigid duct board or sheet metal by appropriate mechanical fasteners, either screws, spin-in flanges, or dovetail flanges.	
Duct collar fitting to rigid duct Terminal and intermediate fittings. Fittings and joints between dissimilar duct types	Approved closure systems shall		
	be as designated by air distribution system component material type in Section 603.1.7. Exception: When the components of a joint are fibrous glass duct board and metal duct, including collar fittings and metal equipment housings, the closure systems approved for fibrous glass duct shall be used.		
<u>Terminal fittings</u> <u>and air ducts to</u> building envelope	Terminal fittings and air ducts which penetrate the building envelope shall be mechanically attached to the structure and sealed to the envelope component penetrated and shall use one of the following closure		

**M5653 Text Modification** 

			Page
<u>components</u>	systems/materials which conform to the approved closure and mechanical application requirements of Section 603.1.7:		
	1. Mastics or mastic-plus- embedded fabrics.		
	2. Gaskets used in terminal fitting/grille assemblies which		
	compress the gasket material between the fitting and the wall, ceiling or floor sheathing.		
<u>Air-handling units.</u>	Air-handling units located outside the conditioned space shall be sealed using approved	All air-handling units shall be mechanically attached to other air distribution system components.	
	closure systems described in Section 603.1.7 for metallic ducts.		

<u>Return plenums.</u>	Building cavities which will be	
	used as return air plenums shall	
	meet Section 603.1.8 and shall	
	be lined with a continuous air	
	barrier made of durable	
	nonporous materials. All	
	penetrations to the air barrier	
	shall be sealed with a suitable	
	long-life mastic material.	
	Exception: Surfaces between	
	the plenum and conditioned	
	spaces from which the	
	return/mixed air is drawn.	
	Roof decks above building	
	cavities used as a return air	
	plenum shall be insulated to at	
	least R-19.	
Aechanical closets.	All joints between the air	
	barriers of walls, ceiling, floor	
	and door framing and all pene-	
	trations of the air barrier shall be	
	sealed to the air barrier with	
	approved closure systems.	
	Through-wall, through-floor and	
	through-ceiling air passageways	
	into the closet shall be framed	
	and sealed to form an air-tight	

		Page 50 of 15
	passageway.	
	Example Air passa genuana	
	Exception: Air passageways into the closet from conditioned	
	space that are specifically	
	designed for return air flow.	
	The following air barriers are	
	approved for use in mechanical	
	<u>closets:</u>	
	1. One-half-inch-thick (12.7	
	mm) or greater gypsum	
	wallboard, sealed with joint	
	compound over taped joints	
	between gypsum wallboard	
	panels.	
	2. Other panelized materials	
	having inward facing surfaces	
	with an air porosity no greater	
	than that of a duct product	
	meeting Section 22 of UL 181	
	which are sealed on all interior surfaces to create a continuous	
	air barrier by one of the	
	following:	
	a. Sealants complying with the	
	product and application standards of this table for	
	fibrous glass ductboard or	
	b. A suitable long-life caulk or	
	mastic for all applications.	
Enclosed support	Enclosed support platforms	
<u>platforms in</u>	located between the return air	
<u>unconditioned</u> spaces.	inlet(s) from conditioned space and the inlet of the air-handling	
spaces.	unit or furnace, shall contain a	
	duct section constructed entirely	
	of rigid metal, rigid fibrous glass	
	duct board, or flexible duct	
	which is constructed and sealed	
	according to the applicable requirements of this table and	
	insulated according to the	
	requirements of Section	
	503.2.7.1 of the Florida	
	Building Code, Energy	
	Conservation.	
	1. No portion of the building	

**M5653 Text Modification** 

			Page 51 of 1
	e, including adjoining		
	loors and ceilings, shall		
	ontact with the return air		
	or function as a		
compo	nent of this duct section.		
2 The	duct section shall not be		
	ted by a refrigerant line,		
	efrigerant line, wiring,		
	any object other than a		
	nent of the air distribution		
system			
<u>system</u>	-		
3. Thro	ugh-wall, through-floor		
	ough ceiling penetrations		
	duct system shall		
	a branch duct fabricated		
	fibrous glass duct board		
	metal and shall extend		
	be sealed by both the duct		
	and the grille side wall		
surface	<u>.</u>		
	-		
		The branch duct shall be fabricated	
		and attached to the duct insert in	
		accordance with requirements for the	
		duct type used.	

<sup>1</sup> Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.

Page 52 of 155 603.10 Supports. Ducts shall be supported with approved hangers at intervals not exceeding 10 feet (3048 mm) in accordance with requirements of Sections 603.10.1 – 603.10.3, or by other approved duct support systems designed in accordance with the Florida Building Code, Building International Building Code. Flexible and other factorymade ducts shall be supported in accordance with the manufacturer's installation instructions.

603.10.1 Metal ducts. Metal ducts shall be supported by <sup>1</sup>/<sub>2</sub>-inch (13 mm) wide 1-gage metal straps or 12-gage galvanized wire at intervals not exceeding 10 feet (3048 mm) or other approved means.

603.10.2 Rigid nonmetal ducts. Rigid nonmetallic ducts shall be supported in accordance with the manufacturer's installation instructions.

603.10.3 Flexible ducts. Flexible ducts shall be configured and supported so as to prevent the use of excess duct material, prevent duct dislocation or damage, and prevent constriction of the duct below the rated duct diameter in accordance with the following requirements:

1. Ducts shall be installed fully extended. The total extended length of duct material shall not exceed 5 percent of the minimum required length for that run.

2. Bends shall maintain a center line radius of not less than one duct diameter.

3. Terminal devices shall be supported independently of the flexible duct.

4. Horizontal duct shall be supported at intervals not greater than 5 feet (1524 mm). Duct sag between supports shall not exceed ½ inch (12.7 mm) per foot of length. Supports shall be provided within 1½ feet (38 mm) of intermediate fittings and between intermediate fittings and bends. Ceiling joists and rigid duct or equipment may be considered to be supports.

5. Vertical duct shall be stabilized with support straps at intervals not greater than 6 feet (1829 mm).

6. Hangers, saddles and other supports shall meet the duct manufacturer's recommendations and shall be of sufficient width to prevent restriction of the internal duct diameter. In no case shall the material supporting flexible duct that is in direct contact with it be less than 1½ inches (38 mm) wide.

# Mr800

Date Submitted     7/31/2012     Section     Table 603       Chapter     6     Affects HVHZ     No	Proponent Attachments	Cheryl Harris No	
	Attachments	No	
TAO Decourse define No Affirmative Decommendation with a Casend			
TAC Recommendation         No Affirmative Recommendation with a Second           Commission Action         Pending Review			
Comments			
General Comments No Alternate Language	No		
Related Modifications			
Summary of Modification			
To maintain the Florida Specific Duct System Construction and Sealing			
Rationale			
To provide clarification on duct system construction and sealing for Florida buildings.			
Fiscal Impact Statement			
Impact to local entity relative to enforcement of code Improves			
Impact to building and property owners relative to cost of compliance with code Neutral			
Impact to industry relative to the cost of compliance with code Neutral			
Requirements			
Has a reasonable and substantial connection with the health, safety, and welfare on Yes	of the general pub	lic	

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate
- Does not degrade the effectiveness of the code Does not degrade the effectiveness of the code.
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

# **1st Comment Period History**

#### <u>08/09/2012 - 09/23/2012</u>

Proponent BOAF CDC Submitted 9/23/2012 Attachments No

#### Comment:

M5800-G1

The manufacturers' installation requirements cover what the IMC base code does not, this is unnecessary language for the code.

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

# TABLE 603

# DUCT SYSTEM CONSTRUCTION AND SEALING

DUCT TYPE/	SEALING REQUIREMENTS	MECHANICAL ATTACHMENT	TEST
CONNECTION			STANDARI
Metal duct, rigid	·		
and flexible			
Pressures less than			
-inch water gauge	Closure systems as described in	Mechanical attachments approved:	
	Section 603.1.7:	**	
		1. Continuous welds.	
	1. Continuous welds.		
	2. Special second and measured	2. Snaplock seams, and grooved,	
	2. Snaplock seams, and grooved, standing, double-corner, single-	corner and Pittsburgh-lock seams	
	corner and Pittsburgh-lock	and all other rolled mechanical	
	seams and all other rolled	seams.	
	mechanical seams.		
		Crimp joints for round metal ducts	
	3. Mastic, mastic-plus-	shall have a contact lap of at least	
	embedded fabric, or mastic	<u>1 <sup>1</sup>/2 inches (38 mm).</u>	
	<u>ribbons.`</u>		
	4. Contrata	Round metal ducts shall be mechan-	<u>SMACNA</u>
	4. Gaskets.	ically fastened by means of at least three sheet-metal screws or rivets	HVAC Air Duct
	5. Pressure-sensitive tape.	equally spaced around the joint. <sup>1</sup>	Leakage Tes
	5. Tressure sensitive tape.	billion and and form.	Manual
	6. Aerosol sealant		Turour
		Mechanical attachments approved:	
	Closure systems as described in	1. Continuous welds	
	Section 603.1.7:		
		Round metal ducts shall be	
	1. Continuous welds.	mechanically fastened by means of	
		at least three sheet-metal screws or	
ressures 1-inch	2. Mastic or mastic-plus-	rivets equally spaced around the	
vater gauge or reater	embedded fabric systems.	joint. <sup>1</sup>	
	3. Gaskets.		
	The tested duct leakage class, at		
	<u>a test pressure equal to the</u> <u>design duct pressure class</u>		
	uesign duct pressure class		

			Page
<u>High pressure duct</u> systems designed to operate at pressures greater than 3-inch water gauge (4-inch water gauge pressure	rating, shall be equal to or less than Leakage Class 6. Leakage testing may be limited to representative sections of the duct system but in no case shall such tested sections include less than 25 percent of the total installed duct area for the		
<u>class)</u>	designated pressure class.		
<u>Plastic duct</u>	See Section 603.8.3.	Joints between plastic ducts and plastic fittings shall be made in accordance with the manufacturer's installation instructions.	<u>ASTM D</u> 2412
Fibrous glass duct,	All joints, seams and duct wall	Mechanically fastened per	NAIMA
rigid.	penetrations between sections of duct and between duct and other distribution system components shall be sealed with	standard to secure the sections independent of the closure system(s).	Fibrous Glass Duct Construction Standards.
	closure systems as described in Section 603.1.7:	Attachments of ductwork to air- handling equipment shall be by mechanical fasteners in accordance	<u>UL 181</u>
	<ol> <li>Heat-activated tapes.</li> <li>Pressure-sensitive tapes.</li> </ol>	with Section 603.1.1. Where access is limited, two fasteners on one side shall be acceptable.	<u>UL 181A</u>
	3. Mastics or mastic-plus- embedded fabric systems.		
<u>Flexible duct</u> systems, nonmetal.	All duct collar fittings shall have a minimum 5/8 inch (16 mm) integral flange for sealing to other components and a minimum 3-inch (76 mm) shaft for insertion into the inner duct	Flexible nonmetal ducts shall be joined to all other air distribution system components by either terminal or intermediate fittings.	<u>UL 181</u> <u>UL 181B</u>
	<u>core.</u> Flexible ducts having porous	<u>Mechanical fasteners for use with</u> flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C.	<u>ADC FDPIS</u>
	inner cores shall not be used. Exception: Ducts having a nonporous liner between the porous inner core and the outer		
	jacket. Fastening and sealing requirements shall be applied to such intermediate liners.		
	The reinforced lining shall be		

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		[]	Page 57 of 155
	sealed to the duct fitting using one of the following sealing materials which conforms to the approved closure and mechanical attachment		
<u>Duct core to duct</u> fitting	2. Mastic, mastic-plus- embedded fabric, or mastic	The reinforced core shall be mechanically attached to the duct fitting by a drawband installed directly over the wire-reinforced core and the duct fitting. The duct fitting shall extend a minimum of 2 inches (51 mm) into each section of duct core. When the flexible duct is larger than 12 inches (303 mm) in diameter or the design pressure exceeds 1-inch water gauge, the drawband shall be	
	UL 181. The outer jacket of a flexible duct section shall be secured at the juncture of the air distribution system component and intermediate or terminal fitting in such a way as to prevent excess condensation. The outer jacket of a flexible duct section shall not be interposed between the flange of	secured by a raised bead or indented groove on the fitting.	
	the duct fitting and the flexible duct, rigid fibrous glass duct board, or sheet metal to which it is mated. The duct collar fitting's integral flange shall be sealed to the rigid duct board or sheet metal using one of the following closure systems/materials which		
<u>Duct outer jacket</u> <u>to duct collar</u> <u>fitting</u>	conforms to the approved closure and mechanical attachment standards of Section 603.1.7: 1. Gasketing. 2. Mastic or mastic-plus- embedded fabric systems.		

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			Page 58 of
	3. Mastic ribbons when used to attach a duct collar to sheet metal.		
	4. Pressure-sensitive tape.	The duct collar fitting shall be mechanically attached to the rigid	
	5. Aerosol sealants, provided that their use is consistent with UL 181.	duct board or sheet metal by appropriate mechanical fasteners, either screws, spin-in flanges, or dovetail flanges.	
		dovetan nanges.	
Duct collow fitting			
<u>Duct collar fitting</u> <u>to rigid duct</u>			
<u>Ferminal and</u> ntermediate ittings.			
Pittings and joints Detween dissimilar			
<u>luct types</u>	Approved closure systems shall be as designated by air distribution system component material type in Section 603.1.7.		
	Exception: When the components of a joint are		
	fibrous glass duct board and metal duct, including collar fittings and metal equipment		
	housings, the closure systems approved for fibrous glass duct shall be used.		
	Terminal fittings and air ducts		
	which penetrate the building envelope shall be mechanically attached to the structure and		
<u>Ferminal fittings</u> and air ducts to puilding envelope	sealed to the envelope component penetrated and shall use one of the following closure		
components	systems/materials which conform to the approved closure and mechanical application		

			Page 5
	requirements of Section 603.1.7:		
	1. Mastics or mastic-plus- embedded fabrics.		
	2. Gaskets used in terminal		
	fitting/grille assemblies which		
	compress the gasket material		
	between the fitting and the wall,		
	ceiling or floor sheathing.		
Air-handling units.	Air-handling units located	All air-handling units shall be	
	outside the conditioned space	mechanically attached to other air	
	shall be sealed using approved	distribution system components.	
	closure systems described in		
	Section 603.1.7 for metallic		
	ducts.		

Return plenums.	Building cavities which will be
	used as return air plenums shall
	meet Section 603.1.8 and shall
	be lined with a continuous air
	barrier made of durable
	nonporous materials. All
	penetrations to the air barrier
	shall be sealed with a suitable long-life mastic material.
	Exception: Surfaces between
	the plenum and conditioned
	spaces from which the
	return/mixed air is drawn.
	Roof decks above building
	cavities used as a return air
	plenum shall be insulated to at
	least R-19.
Mechanical closets	All joints between the air barriers of walls, ceiling, floor and
	door framing and all pene-trations of the air barrier shall be
	sealed to the air barrier with approved closure systems. Through-wall, through-floor and through-ceiling air
	passage ways into the closet shall be framed and sealed to form
	an air-tight passageway.
	Exception: Air passageways into the closet from conditioned
	space that are specifically designed for return air flow.
	The following air barriers are approved for use in mechanical
	closets:
	1. One-half-inch-thick (12.7 mm) or greater gypsum wallboar

platforms in between the return air inlet(s) from	gypsum wallboard2. Other panelized an air porosity no g Section 22 of UL 1 to create a continuea. Sealants comply standards of this ta b. A suitable long-Enclosed support platforms in unconditioned spaces.Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of th air-handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed and sealed according to the applicable requirements of Section 503.2.7.1 o the Florida Building Code, Energy Conservation.1. No portion of the building structure, including adjoining walls, floors and ceilings, shall be in conta	ith joint compound over taped joints between
expsum wallboard panels.         2. Other panelized materials having inward facing surfaces with an air porosity no greater than that of a duct product meeting Section 22 of UL 181 which are sealed on all interior surfaces to create a continuous air barrier by one of the following:         a. Sealants complying with the product and application standards of this table for fibrous glass ductboard or         b. A suitable long-life caulk or mastic for all applications.         Enclosed support platforms located between the return air inlet(s) from unconditioned spaces.         glass duct board, or flexible duct which is constructed entirely of rigid metal, rigid fibrous glass ductboard or requirements of this table and insulted according to the applicable requirements of Section 503.2.1 of the Elorida Building Code, Energy Conservation.         1. No portion of the building structure, including adjoining walls, floors and ceilings, shall be in contact with the return air stream or function as a component of this duct section.         2. The duct section shall not be penetrated by a refrigerant line, chase, refrigerant line, draw or figure metal of rigid fibrous glass duct board, or rigid metal and shall extend to and be saled by both the duct system shall contain a hranch duct fabricated of rigid fibrous glass duct board or rigid metal and shall extend to and be saled by both the duct system shall contain a hranch duct fabricated of rigid fibrous glass duct board or rigid metal and shall extend to and be youth the section and the grile side wall	Enclosed support platforms in unconditioned spaces.Enclosed support platforms located between the return air inlet(s) from conditioned spaces.Enclosed support platforms in unconditioned spaces.Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of th air-handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed and sealed according to the applicable requirements of this table and insulated according to the requirements of Section 503.2.7.1 o the Florida Building Code, Energy Conservation.1. No portion of the building structure, including adjoining walls, floors and ceilings, shall be in containal to the in containal ceilings, shall be in containal to the incontainal ceilings, shall be in containal to the incontainal ceilings, shall be in containal to the incontainal ceilings, shall be in containal ceilings, shall be in containal teiling	· · · · · · · · · · · · · · · · · · ·
2. Other panelized materials having inward facing surfaces with an air porosity no greater than that of a duet product meeting Section 22 of UL 181 which are sealed on all interior surfaces to create a continuous air barrier by one of the following: a. Sealants complying with the product and application standards of this table for fibrous glass duetboard or b. A suitable long-life caulk or mastic for all applications. Enclosed support patterns in unconditioned spaces. Enclosed support platforms located between the return air inlet(s) from conditioned spaces, conditioned spaces, contained spaces, glass duet board, or flexible duet which is constructed and sealed according to the applicable requirements of this table and insulated according to the requirements of Section 03.2.7.1 of the Florida Bailding Code, Energy Conservation. 1. No portion of the building structure, including adjoining walls. floors and ceilings, shall be in contact with the return air stream or function as a component of this duet section. 2. The duet section shall not be penetrated by a refingerant line, chase, refingerant line, writing, pipe or any object other than a component of the air distribution system. 3. Through-wall, through-floor and through ceiling penetrations into the duet board or rigid meal and shall extend to and be sealed by both the duet section and the grile side wall	2. Other panelized an air porosity no s Section 22 of UL 1 to create a continue a. Sealants comply standards of this ta b. A suitable long-         Enclosed support platforms in unconditioned spaces.       Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of th air-handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed and sealed according to the applicable requirements of this table and insulated according to the requirements of Section 503.2.7.1 or the Florida Building Code, Energy Conservation.         1. No portion of the building structure, including adjoining walls, floors and ceilings, shall be in conta	panois.
an air porosity no greater than that of a duct product meeting         Section 22 of UL 181 which are sealed on all interior surfaces         to create a continuous air barrier by one of the following:         a. Sealants complying with the product and application         standards of this table for fibrous glass ductboard or         b. A suitable long-life caulk or mastic for all applications.         Enclosed support         platforms in         conditioned spaces.         conditioned spaces.         conditioned spaces.         conditioned space and the inlet of the air-handling unit or furnace, shall         contain a duct section constructed         entirely of ripid metal, rigid fibrous         glass duct board, or flexible duct         which is constructed and scaled         according to the applicable         requirements of Section 503.2.7.1 of         the Florida Building Code, Energy         Conservation.         1. No portion of the building         structure, including adioining walls,         floors and ceilings, shall be in contact         which the return air stream or function         as a component of this table to including         structure, including adioining walls,         floors and ceilings, shall be in contact         which the return air stream or function     <	an air porosity no s         Section 22 of UL 1         to create a continue         a. Sealants comply         standards of this ta         b. A suitable long-         Enclosed support         platforms in         unconditioned spaces.         Enclosed support platforms located         between the return air inlet(s) from         conditioned spaces.         conditioned spaces.         conditioned space and the inlet of th         air-handling unit or furnace, shall         contain a duct section constructed         entirely of rigid metal, rigid fibrous         glass duct board, or flexible duct         which is constructed and sealed         according to the applicable         requirements of this table and         insulated according to the         requirements of Section 503.2.7.1 or         the Florida Building Code, Energy         Conservation.         1. No portion of the building         structure, including adjoining walls,         floors and ceilings, shall be in conta	
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Image: concreate a continuous air barrier by one of the following:       a. Sealants complying with the product and application standards of this table for fibrons glass ductboard or         Image: concent of the support platforms located platforms in unconditioned spaces.       Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of the dir-handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed and sealed according to the applicable requirements of this table and insulated according to the applicable conservation.         Image: conservation       Image: conservation constructed and sealed according to the requirements of Section 503 2.7.1 of the Florida Building Code, Energy Conservation.         Image: conservation       Image: conservation conservation conservation are structed and sealed according to the requirements of this table and insulated according to the requirements of Section 503 2.7.1 of the Florida Building Code, Energy Conservation.         Image: conservation       Image: conservation conservation         Image: conservation       Image: conservation         Image: conservation       Image: conservation         Image: conservation       Image: conservation <th>Enclosed support       a. Sealants comply         platforms in       b. A suitable long-         unconditioned spaces.       Enclosed support platforms located         between the return air inlet(s) from       conditioned space and the inlet of the         air-handling unit or furnace, shall       contain a duct section constructed         entirely of rigid metal, rigid fibrous       glass duct board, or flexible duct         which is constructed and sealed       according to the applicable         requirements of Section 503.2.7.1 or       the Florida Building Code, Energy         Conservation.       1. No portion of the building         structure, including adjoining walls,       floors and ceilings, shall be in conta</th> <th></th>	Enclosed support       a. Sealants comply         platforms in       b. A suitable long-         unconditioned spaces.       Enclosed support platforms located         between the return air inlet(s) from       conditioned space and the inlet of the         air-handling unit or furnace, shall       contain a duct section constructed         entirely of rigid metal, rigid fibrous       glass duct board, or flexible duct         which is constructed and sealed       according to the applicable         requirements of Section 503.2.7.1 or       the Florida Building Code, Energy         Conservation.       1. No portion of the building         structure, including adjoining walls,       floors and ceilings, shall be in conta	
a. Sealants complying with the product and application standards of this table for fibrous glass ductboard or b. A suitable long-life caulk or mastic for all applications.         Enclosed support platforms in unconditioned spaces.       Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of the air-handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed according to the applicable requirements of this table and insulated according to the requirements of Section 503.2.7.1 of the Florida Building Code, Energy Conservation.         1. No portion of the building structure, including adjoining walls, floors and ceilings, shall be in contact with the return air stream or function as a component of this duct section.         2. The duct section shall not be penetrated by a refrigerant line, chase, refrigerant line, wing, pipe or any object other than a component of the air distribution system.         3. Through-wall, through-floor and through ceiling penetrations into the duct system shall contain a branch duct fabricated of rigid fibrous glass duct board or rigid metal and shall extend to and be sealed by both the duct section and the grile side wall	Enclosed support platforms in unconditioned spaces.Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of th air-handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed and sealed according to the applicable requirements of this table and insulated according to the requirements of Section 503.2.7.1 or the Florida Building Code, Energy Conservation.1. No portion of the building structure, including adjoining walls, floors and ceilings, shall be in conta	
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extend to and be sealed by both the duct section and the grille side wall		
duct section and the grille side wall		
surface.		
	surface.	
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	Pa	age 61 of 155
	The branch duct shall be fabricated and	
	attached to the duct insert in accordance	
	with requirements for the duct type used	
	with requirements for the duct type used	<u>.                                    </u>

<sup>1</sup> Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.

# M5418

115410				Page 63 df	P155
Date Submitted 7	/19/2012	Section M1305.1.3	Proponent	Jack Glenn	
Chapter 3		Affects HVHZ No	Attachments	No	
TAC Recommendatio	n No Affirmative Reco	ommendation with a Second			
Commission Action	Pending Review				
<u>Comments</u>					
General Comments	No	Alternate Language	No		
Related Modification	ns				
Summary of Modific	ation				
Provides for in	stalling air handlers in atti	cs			
Rationale					
		of the code based on a settlement agre	ee between the Florida I	3uilding Commission and the	
Florida Home I	Builders Association.				
•	I entity relative to enforce	ement of code			
•	•	istent with the 2010 Florida Building Co	ode.		
Impact to build	ding and property owner	s relative to cost of compliance with o	code		
•	• • • •	istent with the 2010 Florida Building Co			
Impact to indu	stry relative to the cost o	of compliance with code			
None. Pr	roposed language is consi	istent with the 2010 Florida Building Co	ode.		
Requirements					
•	ble and substantial conn	ection with the health, safety, and we	elfare of the general pul	olic	
Yes. Pro	posed language is consis	tent with the 2010 Florida Building Coo	de.		
•	•	I provides equivalent or better produc	•	is of construction	
Yes. Pro	posed language is consis	tent with the 2010 Florida Building Coc	le.		

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities No, does not discriminate. Proposed language is consistent with the 2010 Florida Building Code.

#### Does not degrade the effectiveness of the code

Does not degrade the code. Proposed language is consistent with the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

Modifies Section M1305.1.3 and Add new Section M1305.1.3.1

M1305.1.3 Appliances in attics. Attics containing appliances shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance, but not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 Feet (1096 mm) long measured along the centerline of the passageway from the opening to the appliance. Air handlers located in attics shall meet the criteria of Section M1305.1.3.1. The passageway shall have continuous solid flooring in accordance with Chapter 5 not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present along all sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest appliance.

Exceptions:

1. The passageway and level service space are not required where the appliance can be serviced and removed through the required opening.

2. Where the passage way is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length, the passage way shall be not more than 50 feet (15 250 mm) long.

M1305.1.3.1 Air-handling units. Air-handling units shall be allowed in attics if the following conditions are met:

1. The service panel of the equipment is located within 6 feet (1829 mm) of an attic access.

2. A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly.

3. The attic access opening is of sufficient size to replace the air handler.

<u>4. A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. Said notice shall be in all capitals, in 16 point type, with the title and first paragraph in bold:</u>

## NOTICE TO HOMEOWNER

A PART OF YOUR AIR CONDITIONING SYSTEM, THE AIR HANDLER, IS LOCATED IN THE aTTrc. For proper, EFFTCIENT AND ECONOMIC OPERATION OF THEAIR CONDITIONING SYSTEM, YOU MUST ENSURE THAT REGULAR MAINTENANCE IS PERFORMED. YOUR AIR CONDITIONING SYSTEM IS EQUIPPED WITH ONE OR BOTH OF THE FOLLOWING:

# 1) A DEVICE THAT WILL ALERT YOU WHEN THE CONDENSATION DRAIN IS NOT WORKING PROPERLY OR

2) A DEVICE THAT WILL SHUT THE SYSTEM DOWN WHEN THE CONDENSATION DRAIN IS NOT WORKING. TO LIMIT POTENTIAL DAMAGE TO YOUR HOME, AND TO AVOID DISRUPTION OF SERVICE, IT IS RECOMMENDED THAT YOU ENSURE PROPER WORKING ORDER OF THESE DEVICES BEFORE EACH SEASON OF PEAK OPERATION.

# N4 . . . .

M4973				Page 65 36155
Date Submitted 7/	6/2012	Section 1308.1	Proponent	Michael Goolsby
Chapter 13	}	Affects HVHZ No	Attachments	No
TAC Recommendation Commission Action	n No Affirmative Reco Pending Review	mmendation with a Second		
<u>Comments</u>				
General Comments	Νο	Alternate Language	No	
Related Modification	s			
Summary of Modifica	ation			
Section formatt	ing			
Rationale				
		the HVHZ it makes reference and prov		
		n is to provide guidance to the applicab sions can be maintained in all jurisdiction		IZ sections. In this way,
Fiscal Impact Statem				
Impact to local	entity relative to enforce	ement of code		
Removes	confusion by providing a	ccurate direction regarding application of	of applicable code sect	tions
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Impact to indus	stry relative to the cost o	f compliance with code		
Removes	confusion by providing a	ccurate direction regarding application of	of applicable code sect	tions
Requirements				
Has a reasonal		ection with the health, safety, and welf	• ·	blic
	, ,	applicable sections of the code are prov		
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		s, products, methods, or systems of co		strated capabilities
	-	e to the applicable code sections and de		-
Does not degra	ade the effectiveness of t	he code		
		e to the applicable code sections and d	oes not limit the use o	r compliance of materials.
s the proposed code m	odification part of a prior	r code version? No		
1st Comment	Period History	<u>08/09/2012 - 09/</u> 2	<u>23/2012</u>	
Proponent	Jack Glenn	Submitted 9/23/2012	Attachments No	
Comment:				
	ot necessarv as Section I	R301.1 directs users to the provisions of	f Chapter 44 for struct	ures located in the High
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Velocity Hurricar				
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1st Comment Period History

08/09/2012 - 09/23/2012

Proponent	Jack Glenn	Submitted	9/23/2012	Attachments	No

### Comment:

Comment: This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

**M1308.1 Drilling and notching.** Wood-framed structural members shall be drilled, notched or altered in accordance with the provisions of Sections R502.8, R602.6, R602.6.1 and R802.7. Holes in load-bearing members of cold-formed steel light-frame construction shall be permitted only in accordance with Sections R505.2.5, R603.2.5 and R804.2.5. In accordance with the provisions of Sections R505.3.5, R603.3.4 and R804.3.4, cutting and notching of flanges and lips of load-bearing members of cold-formed steel light frame construction shall not be permitted. Structural insulated panels (SIPs) shall be drilled and notched or altered in accordance with the provisions of Section R613.7.

Exception: Buildings and structures located within the High Velocity Hurricane Zone shall comply with the provisions of Chapter 44.

# M4974

M4974				Page 67 071	55
Date Submitted	7/6/2012	Section 1413.1	Proponent	Michael Goolsby	
Chapter	14	Affects HVHZ No	Attachments	No	
TAC Recommend Commission Action		ecommendation with a Second	·		
<u>Comments</u>					
General Comment	ts No	Alternate Language	No		
Related Modifica	ations				
Summary of Mod	dification				
Section for	matting				
compliance Fiscal Impact Sta Impact to I	e with the intent of these pro atement local entity relative to enfo	ation is to provide guidance to the applica ovisions can be maintained in all jurisdict rcement of code g accurate direction regarding applicatior	ions.		
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•	ndustry relative to the cos oves confusion by providing	t of compliance with code g accurate direction regarding application	n of applicable code sec	tions.	
Requirements					
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		nd provides equivalent or better product to applicable sections of the code are pro-		ns of construction	
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	legrade the effectiveness of modification provides guidation	of the code ance to the applicable code sections and	does not limit the use o	r compliance of materials.	
s the proposed coo	de modification part of a p	rior code version? No			

1st Comme	nt Period Hist	ory	08/09/20	<u>12 - 09/23/2012</u>		
Proponent	Jack Glenn	Submitted	9/23/2012	Attachments	No	

#### Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

M1413.1 General. Evaporative cooling equipment and appliances shall comply with UL 1995 and shall be installed:

1. According to the manufacturer's instructions.

2. On level platforms in accordance with Section M1305.1.4.1.

3. So that openings in exterior walls are flashed in accordance with Section R703.8 (the HVHZ shall comply with Chapter 44).

- 4. So as to protect the potable water supply in accordance with Section P2902.
- 5. So that air intake opening locations are in accordance with Section R303.5.1.

# MOT

M4975		····		Page 69 08155
Date Submitted	7/6/2012	Section 1601.1.1	Proponent	Michael Goolsby
Chapter	16	Affects HVHZ No	Attachments	No
TAC Recommendation Commission Action		ecommendation with a Second		
<u>Comments</u>				
General Comment	ts No	Alternate Language	No	
Related Modifica	tions			
Summary of Mod				
Section for	matting			
Fiscal Impact Sta Impact to I	atement ocal entity relative to enfo	ovisions can be maintained in all jurisdicti rcement of code g accurate direction regarding application		tions.
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Does not d	liscriminate against mater	als, products, methods, or systems of c ance to the applicable code sections and	onstruction of demon	•
		e /1 1		

Does not degrade the effectiveness of the code

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

#### Is the proposed code modification part of a prior code version? No

1st Commer	nt Period His	tory	08/09/2	<u>012 - 09/23/2012</u>		_
Proponent	Jack Glenn	Submitted	9/23/2012	Attachments	No	

#### Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

Page: (

# M1601.1.1 Above-ground duct systems. Above-ground duct systems shall conform to the following:

1. Equipment connected to duct systems shall be designed to limit discharge air temperature to a maximum of  $250^{\circ}$ F ( $121^{\circ}$ C).

2. Factory-made air ducts shall be constructed of Class 0 or Class 1 materials as designated in Table M1601.1.1(1).

3. Fibrous duct construction shall conform to the SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standards.

4. Minimum thickness of metal duct material shall be as listed in Table M1601.1.1(2). Galvanized steel shall conform to ASTM A 653. Metallic ducts shall be fabricated in accordance with SMACNA Duct Construction Standards Metal and Flexible.

5. Use of gypsum products to construct return air ducts or plenums is permitted, provided that the air temperature does not exceed  $125^{\circ}F(52^{\circ}C)$  and exposed surfaces are not subject to condensation.

6. Duct systems shall be constructed of materials having a flame spread index not greater than 200.

7. Stud wall cavities and the spaces between solid floor joists to be used as air plenums shall comply with the following conditions:

7.1. These cavities or spaces shall not be used as a plenum for supply air.

7.2. These cavities or spaces shall not be part of a required fire-resistance-rated assembly.

7.3. Stud wall cavities shall not convey air from more than one floor level.

7.4. Stud wall cavities and joist-space plenums shall be isolated from adjacent concealed spaces by tight-fitting fireblocking in accordance with Section R602.8 <u>the HVHZ shall comply with Chapter 44</u>).

7.5. Stud wall cavities in the outside walls of building envelope assemblies shall not be utilized as air plenums.

# M/ 076

Date Submitted       7/6/2012       Section       1601.4.4       Proponent       Michael Goolsby         TAC Recommendation       No Affirmative Recommendation with a Second       No       Attachments       No         TAC Recommendation       No Affirmative Recommendation with a Second       Commission       No       Attachments       No         Commission       No       Atternate Language       No       Related Modifications       No       Related Modification         Section formatting       Section formatting       Section formatting       Related Modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions.       Fiscal Impact Statement         Impact to building and property owners relative to cost of compliance with code       Removes confusion by providing accurate direction regarding application of applicable code sections.         Impact to building and property owners relative to cost of compliance with code       Removes confusion by providing accurate direction regarding application of applicable code sections.         Requirements       Mass a reasonable and substantial connection with the health, safety, and welfare of the general public         It does so by ensuring direction to applicable sections of the code are provided.       Strengthes or improves the code, and provides equivalent or better products, methods, or systems of construction it does so by ensuring direction to applicable section	M4976				Page 71 09155
TAC Recommendation       No Affirmative Recommendation with a Second         Commission Action       Pending Review         Comments       No       Alternate Language       No         Related Modifications       Summary of Modification       Section formatting         Related Modifications       Summary of Modification       Section formatting         Related Modifications       Summary of Modification       Section formatting         Related Statement       Image: Statement       Summary of Modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions.       Firstal impact Statement         Impact to local entity relative to enforcement of code Removes confusion by providing accurate direction regarding application of applicable code sections.       Impact to building and property owners relative to cost of compliance with code Removes confusion by providing accurate direction regarding application of applicable code sections.       Impact to industry relative to the cost of compliance with code Removes confusion by providing accurate direction regarding application of applicable code sections.       Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public It does so by ensuring direction to applicable sections of the code are provided.       Strengthens of improves the code, and provides guidance to the code are provided.         Does not discriminate against materials, products, methods, or systems of con	Date Submitted	7/6/2012	Section 1601.4.4	Proponent	Michael Goolsby
Commission Action       Pending Review         Comments       No       Alternate Language       No         Related Modifications       Section formatting       No       Related Modification         Section formatting       Section formatting       No       No       No         Related Modification       Section formatting       No	Chapter	16	Affects HVHZ No	Attachments	No
General Comments       No       Alternate Language       No         Related Modifications       Related Modifications       Related Modification         Section formatting       Section formatting         Rationale       While this entire Chapter is applicable for the HVHZ it makes reference and provides direction to sections which are not applicable. The purpose of this proposed modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions.         Fiscal Impact Statement       Impact to local entity relative to enforcement of code         Removes confusion by providing accurate direction regarding application of applicable code sections.       Impact to building and property owners relative to cost of compliance with code         Removes confusion by providing accurate direction regarding application of applicable code sections.       Impact to industry relative to the cost of compliance with code         Removes confusion by providing accurate direction regarding application of applicable code sections.       Impact to industry relative to the cost of compliance with code         Removes confusion by providing accurate direction regarding application of applicable code sections.       Impact to industry relative to applicable sections of the code are provided.         Removes confusion by providing accurate direction regarding application of applicable code sections.       Impact to industry relative to applicable sections of the code are provided.         Removes confusion by providing ac					
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		•			
the proposed code modification part of a prior code version? No	This	modification provides guida	ance to the applicable code sections and	does not limit the use o	r compliance of materials.
	the proposed co	de modification part of a p	rior code version? No		

<u>1st Commer</u>	nt Period Hist	tory	08/09/2	<u>2012 - 09/23/2012</u>		
Proponent	Jack Glenn	Submitted	9/23/2012	Attachments	No	

### Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

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Page: 1

 $M1601.4.4 \ Fireblocking. \ Duct installations shall be fireblocked in accordance with Section R602.8 \ \underline{ the HVHZ shall comply with Chapter 44} .$ 

# M4977

··43//		<u>.</u>		Page 73 <del>6</del> 1/155
Date Submitted	7/6/2012	Section 1601.5.1	Proponent	Michael Goolsby
Chapter ·	6	Affects HVHZ No	Attachments	No
TAC Recommendatio		Recommendation with a Second		
Commission Action	Pending Review	/		
<u>Comments</u>				
General Comments	No	Alternate Language	No	
Related Modificatio	ns			
Summary of Modifi	cation			
Section forma	tting			
Rationale				
The purpose of	of this proposed modific	e for the HVHZ it makes reference and pr ation is to provide guidance to the applica rovisions can be maintained in all jurisdict	able and equivalent HVF	
Fiscal Impact State				
•	al entity relative to enfo		<b>6</b> 11 11 1	
Remove	es confusion by providir	ng accurate direction regarding application	n of applicable code sec	tions.
•		ners relative to cost of compliance with		41
		ng accurate direction regarding application	n of applicable code sec	tions.
	-	st of compliance with code and accurate direction regarding application	a of applicable code coa	tiona
Remove			I of applicable code sec	uons.
Requirements				
		onnection with the health, safety, and we	• ·	blic
	, ,	to applicable sections of the code are pr		
•	•	and provides equivalent or better produce to applicable sections of the code are pr	•	ns of construction
	•	rials, products, methods, or systems of ance to the applicable code sections and		•
Does not deg	rade the effectiveness	of the code		
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This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

#### Is the proposed code modification part of a prior code version? No

1st Comme	nt Period Hist	ory	08/09/20	<u> 12 - 09/23/2012</u>		
Proponent	Jack Glenn	Submitted	9/23/2012	Attachments	No	

#### Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

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Page: 1

M1601.5.1 General. The space shall be cleaned of loose combustible materials and scrap, and shall be tightly enclosed. The ground surface of the space shall be covered with a moisture barrier having a minimum thickness of 4 mils (0.1 mm). Plumbing waste cleanouts shall not be located within the space.

**Exception:** Plumbing waste cleanouts shall be permitted to be located in unvented crawl spaces that receive conditioned air in accordance with Section R408.3 the HVHZ shall comply with Chapter 44).

## M5655

				Page /5 <del>6</del> t 155	
Date Submitted 7/2	5/2012	Section 1601	Proponent	Ann Stanton	
Chapter 16		Affects HVHZ No	Attachments	No	
TAC Recommendation	No Affirmative Reco	mmendation with a Second			
Commission Action	Pending Review				
Comments					
General Comments	No	Alternate Language	e No		
Related Modifications					
Related mounications					
Summary of Modificat	tion				
Add Florida-spec	cific duct sealing and atta	chment criteria to be consistent wit	h requirements from the E	nergy Conservation code to	
maintain Florida-	-specific efficiencies per	Statute.			
Rationale					
Add Florida-spec	cific duct sealing and atta	chment critieria from the Energy co	de to maintain consistenc	y among codes and	
Florida-specific e	efficiencies.				
Fiscal Impact Stateme	ent				
Impact to local e	entity relative to enforce	ment of code			
None. Pro	posed language is currer	ntly in the 2010 Florida Building Coo	le.		

\_\_ 21.\_\_

#### Impact to building and property owners relative to cost of compliance with code None. Proposed language is currently in the 2010 Florida Building Code.

#### Impact to industry relative to the cost of compliance with code

None. Proposed language is currently in the 2010 Florida Building Code.

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes. Proposed language is currently in the 2010 Florida Building Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Yes. Proposed language is currently in the 2010 Florida Building Code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities No. Proposed language is currently in the 2010 Florida Building Code.

#### Does not degrade the effectiveness of the code

No. Proposed language is currently in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? OTHER

#### Explanation of Choice

Florida-specific duct sealing and attachment criteria are much more detailed than those in the IRC.

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

#### Explanation of Choice

Proposed language was in the 2010 FBC. It was processed in accordance with an approved plan from the Florida Building Commission for the purpose of maintaining Florida efficiencies.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### M1601.1 Duct design. Revise to read as shown:

M1601.1 Duct design. Duct systems serving heating, cooling and ventilation equipment shall be fabricated in accordance with the provisions of this section and ACCA Manual D or other approved methods <u>based on the following:</u>

1. Calculation of the supply air for each room shall be based on the greater of the heating load or sensible cooling load for that room.

2. Duct size shall be determined by the supply air requirements of each room, the available static pressure and the total equivalent length of the various duct runs.

3. Friction loss data shall correspond to the type of material used in duct construction.

M1601.1.1 Above-ground duct systems. Above-ground duct systems shall conform to the following:

- 1. Equipment connected to duct systems shall be designed to limit discharge air temperature to a maximum of 250°F (121°C) and shall meet the applicable requirements of Section M1601.4 and Table M1601.4.
- 2. Factory-made air ducts shall be constructed of Class 0 or Class 1 materials as designated in Table M1601.1.1(1) and shall meet the applicable requirements of Section M1601.4 and Table M1601.4.
- 3. Fibrous duct construction shall conform to the SMACNA Fibrous Glass Duct Construction Standards or NAIMA Fibrous Glass Duct Construction Standards and shall meet the applicable requirements of Section M1601.4 and Table M1601.4.
- 4. <u>Metallic ducts shall meet the applicable requirements of Section M1601.4 and Table M1601.4.</u> Minimum thickness of metal duct material shall be as listed in Table M1601.1.1(2). Galvanized steel shall conform to ASTM A 653. Metallic ducts shall be fabricated in accordance with SMACNA Duct Construction Standards Metal and Flexible.
- Use of gypsum products to construct return air ducts or plenums is permitted, provided that the air temperature does not exceed 125°F (52°C), that and exposed surfaces are not subject to condensation, and that applicable criteria of Section M1601.4 and Table M1601.4 are met.
- 6. [No change to IRC section]
- 7. [No change to IRC section]
- Cavities designed to deliver air from or return air to the conditioning system such as plenums, mechanical closets, enclosed support platforms, cases, air shafts, etc. shall be lined with an air barrier and sealed in accordance with the applicable requirements of Section M1601.4 and Table M1601.4 and shall be insulated in accordance with Section R403.2.1 of the *Florida Building Code, Energy Conservation*.

### M1601.4 Installation. Change to read as shown.

M1601.4 Duct iInstallation. Duct installation shall comply with Sections M1601.4.1 through M1601.4.7. An air distribution system shall be designed and installed to supply the required distribution of air. The installation of an air distribution system shall not affect the fire protection requirements specified in the building code. Ducts shall be constructed, braced, reinforced and installed to provide structural strength and durability. All transverse joints, longitudinal seams and fitting connections shall be securely fastened and sealed in accordance with the applicable standards of this section.

All enclosures which form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers and shall be constructed and sealed in accordance with the applicable criteria of Table M1601.4 and this section. Duct installation shall comply with Sections M1601.4.1 through M1601.4.13.

#### Page 77 of 155 See Section R403.2.2.1 of the Florida Building Code, Energy Conservation, for duct testing requirements

### M1601.4.1 Duct installation, general.

M1601.4.1.1 Mechanical fastening. All joints between sections of air ducts and plenums, between intermediate and terminal fittings and other components of air distribution systems, and between subsections of these components shall be mechanically fastened to secure the sections independently of the closure system(s).

M1601.4.1.2 Sealing. Air distribution system components shall be sealed with approved closure systems in accordance with specific criteria in Table M1601.4.

M1601.4.1.3 Space provided. Sufficient space shall be provided adjacent to all mechanical components located in or forming a part of the air distribution system to assure adequate access for: (1) construction and sealing in accordance with the requirements of Section M1601.4; (2) inspection; and (3) cleaning and maintenance. A minimum of 4 inches (102 mm) is considered sufficient space around air-handling units.

Exception: Retrofit or replacement units not part of a renovation.

<u>M1601.4.1.4</u> Product application. Closure products shall be applied to the air barriers of air distribution system components being joined in order to form a continuous barrier or they may be applied in accordance with the manufacturer's instructions or appropriate industry installation standard where more restrictive.

M1601.4.1.5 Surface preparation. The surfaces upon which closure products are to be applied shall be clean and dry in accordance with the manufacturer's installation instructions.

<u>M1601.4.1.6</u> Approved mechanical attachments. Approved mechanical attachments for air distribution system components include screws, rivets, welds, interlocking joints crimped and rolled, staples, twist in (screw attachment), and compression systems created by bend tabs or screw tabs and flanges or by clinching straps. Mechanical attachments shall be selected from Table M1601.4 to be appropriate to the duct system type.

M1601.4.1.7 Approved closure systems. The following closure systems and materials are approved for air distribution construction and sealing for the applications and pressure classes shown in Table M1601.4.

1. Metal closures.

a. Welds applied continuously along metal seams or joints through which air could leak.

b. Snaplock seams, and grooved, standing, double-corner, single-corner and Pittsburgh-lock seams, as defined by SMACNA, as well as all other rolled mechanical seams. All seams shall be rolled or crimped.

2. Gasketing, which achieves a 25/50 flame spread/smoke-density-development rating under ASTM E 84 or UL 723, provided that it is used only between mated surfaces which are mechanically fastened with sufficient force to compress the gasket and to fill all voids and cracks through which air leakage would otherwise occur.

3. Mastic closures. Mastics shall be placed over the entire joint between mated surfaces. Mastics shall not be diluted. Approved mastics include the following:

a. Mastic or mastic-plus-embedded fabric systems applied to fibrous glass ductboard that are listed and labeled in accordance with UL 181A, Part III.

b. Mastic or mastic-plus-embedded fabric systems applied to nonmetal flexible duct that are listed and labeled in accordance with UL 181B, Part II.

c. Mastic ribbons, which achieve a 25/50 flame spread/smoke density development rating under ASTM E 84 or UL 723, provided that they may be used only in flange-joints and lap-joints, such that the mastic resides between two parallel surfaces of the air barrier and that those surfaces are mechanically fastened.

4. Tapes. Tapes shall be applied such that they extend not less than 1 inch onto each of the mated surfaces and shall totally cover the joint. When used on rectangular ducts, tapes shall be used only on joints between parallel rigid surfaces and on right angle joints. Approved tapes include the following:

a. Pressure-sensitive tapes.

1) Pressure-sensitive tapes applied to fibrous glass ductboard that are listed and labeled in accordance with UL 181A, Part I.

2) Pressure-sensitive tapes applied to nonmetal flexible duct that are listed and labeled in accordance with UL 181B, Part I.

b. Heat-activated tapes applied to fibrous glass ductboard that are listed and labeled in accordance with UL 181A, Part II.

5. Aerosol sealant. Such sealants shall be installed by manufacturer-certified installers following manufacturer instructions and shall achieve 25/50 flame spread/smoke-density-development ratings under ASTM E 84 or UL 723.

6. Spray polyurethane foam shall be permitted to be applied without additional joint seals.

M1601.4.1.8 Cavities of the building structure. Cavities in framed spaces, such as dropped soffits and walls, shall not be used to deliver air from or return air to the conditioning system unless they contain an air duct insert which is insulated in accordance with Section 403.2.1 of the Florida Building Code, Energy Conservation, and constructed and sealed in accordance with the requirements Table M1601.4 appropriate for the duct materials used.

Exception: Return air plenums.

M1601.4.1 Joints and seams. Joints of duct systems shall be made substantially airtight by means of tapes, mastics, liquid sealants, gasketing or other approved closure systems. Closure systems used with rigid fibrous glass ducts shall comply with UL181A and shall be marked 181A P for pressure sensitive tape, 181A M for mastic or 181 A H for heat sensitive tape. Closure systems used with flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked 181B FX for pressure sensitive tape or 181B M for mastic. Duct connections to flanges of air distribution system equipment or sheet metal fittings shall be marked 181B C. Crimp joints for round metal ducts shall have a contact lap of at least 11/2 inches (38 mm) and shall be mechanically fastened by means of at least three sheet metal screws or rivets equally spaced around the joint. Closure systems used to seal metal ductwork shall be installed in accordance with the manufacturer's installation instructions.

### Exceptions:

1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.

2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally

spaced on the exposed portion of the joint so as to prevent a hinge effect.

3. Continuously welded and locking type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.

### **TABLE M1601.4**

### DUCT SYSTEM CONSTRUCTION AND SEALING

<u>DUCT</u> TYPE/CONNECTION	SEALING REQUIREMENTS	<u>MECHANICAL</u> ATTACHMENT	TEST
ITE/CONNECTION		ATTACHMENT	STANDAR
Metal duct, rigid and			
flexible			
Pressures less than 1-			
inch water gauge	Closure systems as described in		
	Section M1601.4.1.7:	approved:	
	1. Continuous welds.	1. Continuous welds.	
	2. Snaplock seams, and	2. Snaplock seams, and grooved,	
	grooved, standing, double-	standing, double-corner, single-	
		corner and Pittsburgh-lock seams	
	Pittsburgh-lock seams and all other rolled mechanical seams.	and all other rolled mechanical seams.	
	other rolled meenamear seams.	scams.	SMACNA
	3. Mastic, mastic-plus-	Crimp joints for round metal	HVAC Air
	embedded fabric, or mastic	ducts shall have a contact lap of at	
	<u>ribbons. `</u>	<u>least 1 ½ inches (38 mm).</u>	<u>Leakage T</u>
	4. Gaskets.	Round metal ducts shall be	<u>Manual</u>
		mechanically fastened by means	
	5. Pressure-sensitive tape.	of at least three sheet-metal	
		screws or rivets equally spaced	
	<u>6. Aerosol sealant</u>	around the joint. <sup>1</sup>	
		Mechanical attachments	
		approved:	
		1. Continuous welds	
	Closure systems as described in		
	Section M1601.4.1.7:	Round metal ducts shall be	
Pressures 1-inch water	1 Continuous welds	mechanically fastened by means of at least three sheet-metal	
<u>ressures 1-inch water</u> gauge or greater	1. Conulluous weius.	screws or rivets equally spaced	
uugo vi gicatoi	2. Mastic or mastic-plus-	around the joint. <sup>1</sup>	
	embedded fabric systems.		

			Page 80 of
High pressure duct systems designed to operate at pressures greater than 3-inch water gauge (4-inch water gauge pressure class)	3. Gaskets. The tested duct leakage class, at a test pressure equal to the design duct pressure class rating, shall be equal to or less than Leakage Class 6. Leakage testing may be limited to representative sections of the duct system but in no case shall such tested sections include less than 25 percent of the total installed duct area for the designated pressure class.		
<u>Plastic duct</u>	See Section M1601.1.2.	Joints between plastic ducts and plastic fittings shall be made in accordance with the manufacturer's installation instructions.	<u>ASTM D</u> 2412
<u>Fibrous glass duct,</u> rigid.	All joints, seams and duct wall penetrations between sections of duct and between duct and other distribution system components shall be sealed with closure systems as described in Section M1601.4.1.7:	independent of the closure system(s). Attachments of ductwork to air-	NAIMA Fibrous Glas Duct Construction Standards.
	<ol> <li>Heat-activated tapes.</li> <li>Pressure-sensitive tapes.</li> <li>Mastics or mastic-plus- embedded fabric systems.</li> </ol>	handling equipment shall be by mechanical fasteners in accordance with Section M1601.4.1.1. Where access is limited, two fasteners on one side shall be acceptable.	<u>UL 181</u> <u>UL 181A</u>
<u>Flexible duct systems,</u> nonmetal.	All duct collar fittings shall have a minimum 5/8 inch (16 mm) integral flange for sealing to other components and a minimum 3-inch (76 mm) shaft for insertion into the inner duct core.	Flexible nonmetal ducts shall be joined to all other air distribution system components by either terminal or intermediate fittings. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C.	<u>UL 181</u> <u>UL 181B</u> <u>ADC FDPIS</u>
	Flexible ducts having porous inner cores shall not be used. Exception: Ducts having a nonporous liner between the		

	porous inner core and the outer		Page 81 of 1
	÷		
	jacket. Fastening and sealing		
	requirements shall be applied to		
	such intermediate liners.		
	The reinforced lining shall be		
	sealed to the duct fitting using		
	one of the following sealing		
	materials which conforms to the	The reinforced core shall be	
	approved closure and	mechanically attached to the duct	
	mechanical attachment	fitting by a drawband installed	
	requirements of Section	directly over the wire-reinforced	
	M1601.4.1.7:	core and the duct fitting. The duct	
		fitting shall extend a minimum of	
<u>Duct core to duct</u>	1. Gasketing.	2 inches (51 mm) into each	
	T. Subroung.		
fitting		section of duct core. When the	
	2. Mastic, mastic-plus-	flexible duct is larger than 12	
	embedded fabric, or mastic	inches (303 mm) in diameter or	
	ribbons.	the design pressure exceeds 1-	
		inch water gauge, the drawband	
	3. Pressure-sensitive tape.	shall be secured by a raised bead	
	<u>5. Flessule-selisitive tape.</u>		
		or indented groove on the fitting.	
	<ol><li>Aerosol sealants, provided</li></ol>		
	that their use is consistent with		
	UL 181.		
	The outer jacket of a flexible		
	duct section shall be secured at		
	the juncture of the air		
	distribution system component		
	and intermediate or terminal		
	fitting in such a way as to		
	prevent excess condensation.		
	The outer jacket of a flexible		
	duct section shall not be		
	interposed between the flange of	F	
		•	
	the duct fitting and the flexible		
	duct, rigid fibrous glass duct		
	board, or sheet metal to which it		
	is mated.		
<b>.</b>			
<u>Duct outer jacket to</u>			
<u>duct collar fitting</u>			
	The duct collar fitting's integral		
	flange shall be sealed to the		
	rigid duct board or sheet metal		
	using one of the following		
	closure systems/materials which		
	conforms to the approved		

http://www.floridabuilding.org/Upload/Modifications/Rendered/Mod\_5655\_TextOfModification\_6.png

**M5655 Text Modification** 

	closure and mechanical		
	attachment standards of Section		
	M1601.4.1.7:	The duct collar fitting shall be	
		mechanically attached to the rigid	
	1.0.1.1		
	<u>1. Gasketing.</u>	duct board or sheet metal by	
		appropriate mechanical fasteners,	
	2. Mastic or mastic-plus-	either screws, spin-in flanges, or	
	embedded fabric systems.	dovetail flanges.	
	· · · · ·		
	3. Mastic ribbons when used to		
	attach a duct collar to sheet		
	metal.		
	4 D 111 1		
	4. Pressure-sensitive tape.		
	5. Aerosol sealants, provided		
	that their use is consistent with		
	<u>UL 181.</u>		
<u>Duct collar fitting to</u>			
rigid duct			
Terminal and			
intermediate fittings.			
miermemate mungs.			
Fittings and joints			
between dissimilar	Approved closure systems shall		
<u>duct types</u>	be as designated by air		
	distribution system component		
	material type in Section		
	M1601.4.1.7.		
	Exception: When the		
	components of a joint are		
	fibrous glass duct board and		
	metal duct, including collar		
	fittings and metal equipment		
	housings, the closure systems		
	approved for fibrous glass duct		
	shall be used.		
	Terminal fittings and air ducts		
	which penetrate the building		
	envelope shall be mechanically		
71 I I 0I - I	attached to the structure and		
<u>Terminal fittings and</u>	sealed to the envelope		
<u>air ducts to building</u>	component penetrated and shall		
envelope components	use one of the following closure		
	systems/materials which		
	conform to the approved closure		
	and mechanical application		
	requirements of Section		
	reduitements of peeron	I	

**M5655 Text Modification** 

or mastic-plus- fabrics. used in terminal e assemblies which he gasket material		
fabrics. used in terminal e assemblies which		
used in terminal e assemblies which		
e assemblies which		
e assemblies which		
he gasket material		
e fitting and the wall,		
loor sheathing.		
ng units located	All air-handling units shall be	
conditioned space	mechanically attached to other air	
iled using approved	distribution system components.	
tems described in		
.601.4.1.7 for		
<u>cts.</u>		
vities which will be		
<u>ırn air plenums shall</u>		
on M1601.4.1.8 and		
ed with a continuous		
made of durable		
materials. All		
s to the air barrier		
led with a suitable		
<u>astic material.</u>		
: Surfaces between		
and conditioned		
n which the		
ed air is drawn.		
above building		
ed as a return air		
ill be insulated to at		
etween the air		
walls, ceiling, floor		
aming and all		
<u>s of the air barrier</u>		
iled to the air barrier		
ved closure systems.		
all, through-floor and		
<u>iling air passageways</u>		
set shall be framed		
<u>to form an air-tight</u>		
<u>y.</u>		
Air passa demons		
: Air passageways set from conditioned		
set from conditioned		
		set from conditioned re specifically

Page	84	of	155

		Page 84 of 1
	<u>The following air barriers are</u> approved for use in mechanical closets:	
	1. One-half-inch-thick (12.7 mm) or greater gypsum wallboard, sealed with joint compound over taped joints between gypsum wallboard panels.	
	2. Other panelized materials having inward facing surfaces with an air porosity no greater than that of a duct product meeting Section 22 of UL 181 which are sealed on all interior surfaces to create a continuous air barrier by one of the following:	
	a. <u>Sealants complying with</u> the product and application standards of this table for fibrous glass ductboard or	
	b. <u>A suitable long-life caulk</u> or mastic for all applications.	
<u>Enclosed support</u> <u>platforms in</u> inconditioned spaces.	Enclosed support platforms located between the return air inlet(s) from conditioned space and the inlet of the air-handling unit or furnace, shall contain a duct section constructed entirely of rigid metal, rigid fibrous glass duct board, or flexible duct which is constructed and sealed according to the applicable requirements of this	
	table and insulated according to the requirements of Section 403.2.1 of the Florida Building Code, Energy Conservation.	
	structure, including adjoining walls, floors and ceilings, shall be in contact with the return air	

**M5655 Text Modification** 

			Page 85 of 155
	stream or function as a component of this duct section.		
	component of this duct section.		
	2. The duct section shall not be		
	penetrated by a refrigerant line, chase, refrigerant line, wiring,		
	pipe or any object other than a		
	component of the air		
	distribution system.		
	3. Through-wall, through-floor		
	and through ceiling penetrations		
	into the duct system shall contain a branch duct fabricated		
	of rigid fibrous glass duct board		
	or rigid metal and shall extend		
	to and be sealed by both the duct section and the grille side		
	wall surface.		
		The branch duct shall be	
		fabricated and attached to the duct insert in accordance with	
		requirements for the duct type	
		used.	
1 Where a duct connection is	s made that is partially inaccessible	e, three screws or rivets shall be equ	ally spaced on th
	exposed portion of the joint so as		<u>, pased on th</u>
	M1601.4.2 Plastic duct j	oints. <u>Reserved.</u>	

### M1601.4.3 Support.

M1601.4.3.1 Metal ducts. Metal ducts shall be supported by ½-inch (13 mm) wide 1-gage metal straps or 12-gage galvanized wire at intervals not exceeding 10 feet (3048 mm) or other approved means.

M1601.4.3.2 Rigid nonmetal ducts. Rigid nNonmetallic ducts shall be supported in accordance with the manufacturer's installation instructions.

M1601.4.3.3 Flexible ducts. Flexible ducts shall be configured and supported so as to prevent the use of excess duct material, prevent duct dislocation or damage, and prevent constriction of the duct below the rated duct diameter in accordance with the following requirements:

1. Ducts shall be installed fully extended. The total extended length of duct material shall not exceed 5 percent of the minimum required length for that run.

2. Bends shall maintain a center line radius of not less than one duct diameter.

3. Terminal devices shall be supported independently of the flexible duct.

4. Horizontal duct shall be supported at intervals not greater than 5 feet (1524 mm). Duct sag between supports shall not exceed ½ inch (12.7 mm) per foot of length. Supports shall be provided within 1½ feet (38 mm) of intermediate fittings and between intermediate fittings and bends. Ceiling joists and rigid duct or equipment may be considered to be supports.

5. Vertical duct shall be stabilized with support straps at intervals not greater than 6 feet (1829 mm).

<u>6. Hangers, saddles and other supports shall meet the duct manufacturer's recommendations and shall be of</u> <u>sufficient width to prevent restriction of the internal duct diameter. In no case shall the material supporting flexible</u> <u>duct that is in direct contact with it be less than 1½ inches (38 mm) wide.</u> Total Mods for **Mechanical** in **Withdrawn: 4** 

Total Mods for report: 42

# Sub Code: Mechanical

M	5652
141-	<b>U5Z</b>

15052		<u>-</u>		Page 88 <del>87</del> 155
Date Submitted	7/25/2012	Section 306.3.2	Proponent	Ann Stanton
Chapter	3	Affects HVHZ No	Attachments	No
FAC Recommend				
Commission Actio	on Pending Review	V		
<u>Comments</u>				
General Comment	ts No	Alternate Language	No	
Related Modifica	tions			
Summary of Mod	dification			
Add FL-spe	ecific air handler in the atti	c criteria from the 2010 code.		
Rationale				
This require	ement resulted from an ad	ministrative challenge to the 2001 Florid	la Building Code as an al	ternative to getting air handlers
out of resid	lential attics.			
Fiscal Impact Sta				
	ocal entity relative to enfo			
None	e. Proposed language is co	urrently in the 2010 Florida Building Cod	e.	
Impact to b	ouilding and property own	ners relative to cost of compliance with	i code	
None	e. Proposed language is co	urrently in the 2010 Florida Building Cod	e.	
Impact to i	ndustry relative to the co	st of compliance with code		
None	e. Proposed language is co	urrently in the 2010 Florida Building Cod	e.	
Requirements				
•	onable and substantial co	onnection with the health, safety, and w	velfare of the general pul	blic
		rently in the 2010 Florida Building Code.	• ·	
		and provides equivalent or better produ		ns of construction
-		rently in the 2010 Florida Building Code.	-	
Does not d	liscriminate against mate	rials, products, methods, or systems of	f construction of demon	strated capabilities
	•	ently in the 2010 Florida Building Code.		•
Does not d	legrade the effectiveness	of the code		
No. I	Proposed language is curr	ently in the 2010 Florida Building Code.		
Is the proposed co	de modification part of a prid	or code version?		

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Proposed language was in the 2010 FBC. It was processed in accordance with an approved plan from the Florida Building Commission for the purpose of maintaining Florida efficiencies.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### **1st Comment Period History**

08/09/2012 - 09/23/2012	

#### Comment:

5

52.

56

S

This was submitted to the IMC change # M19-12 except "1. The service panel of the equipment is located within six (6) feet [1829 mm] of an attic access." Was not part of the submittal.

2. A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly. Is no longer needed as it is covered in 307.2.3 of the 2012 IMC

3. The attic access opening is of sufficient size to replace the air handler. Is no longer needed as it is covered in 306.3 of the 2012 IMC

4. The notice is the only part needed to be added to the 2013 FMC.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

**306.3.2 Air Handling Units.** Air handling units shall be allowed in residential attics if the following conditions are <u>met:</u>

1. The service panel of the equipment is located within six (6) feet [1829 mm] of an attic access.

2. A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly.

3. The attic access opening is of sufficient size to replace the air handler.

4. A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. Said notice shall be in all capitals, in 16 point type, with the title and first paragraph in bold:

### NOTICE TO HOMEOWNER

A PART OF YOUR AIR CONDITIONING SYSTEM, THE AIR HANDLER, IS LOCATED IN THE ATTIC. FOR PROPER, EFFICIENT, AND ECONOMIC OPERATION OF THE AIR CONDITIONING SYSTEM, YOU MUST ENSURE THAT REGULAR MAINTENANCE IS PERFORMED.

YOUR AIR CONDITIONING SYSTEM IS EQUIPPED WITH ONE OR BOTH OF THE FOLLOWING: 1) A DEVICE THAT WILL ALERT YOU WHEN THE CONDENSATION DRAIN IS NOT WORKING PROPERLY OR 2) A DEVICE THAT WILL SHUT THE SYSTEM DOWN WHEN THE CONDENSATION DRAIN IS NOT WORKING. TO LIMIT POTENTIAL DAMAGE TO YOUR HOME, AND TO AVOID DISRUPTION OF SERVICE, IT IS RECOMMENDED THAT YOU ENSURE PROPER WORKING ORDER OF THESE DEVICES BEFORE EACH SEASON OF PEAK OPERATION.

No

#### General Comments

Alternate Language

**Related Modifications** 

Residential Section M1602.4

#### Summary of Modification

Balanced return air requirement and alternatives

No

#### Rationale

Restricted return air affects building pressures and increases air infiltration which in turn increases energy use and can cause comfort, building durability, and health and safety issues.

Supporting publication:

Cummings, J., C. Withers, "Balanced Return Air, Duct Airtightness, and Combustion/Dilution Air Code Compliance in 40 Central Florida Homes" Florida Solar Energy Center, FSEC-CR-1789-06, Nov. 29, 2006. (http://www.fsec.ucf.edu/en/publications/pdf/FSEC-CR-1789-06.pdf)

#### **Fiscal Impact Statement**

#### Impact to local entity relative to enforcement of code

Some additional effort to verify compliance. Proposed language is in the 2010 Florida Building Code.

#### Impact to building and property owners relative to cost of compliance with code

Some additional cost in some cases. Proposed language is in the 2010 Florida Building Code.

#### Impact to industry relative to the cost of compliance with code

Cost is justified since restricted return air affects building pressures and increases air infiltration which in turn increases energy use and can cause comfort, building durability, and health and safety issues. Proposed language is in the 2010 Florida Building Code.

#### Requirements

#### Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes. Restricted return air affects building pressures and increases air infiltration which in turn increases energy use and can cause comfort, building durability, and health and safety issues. Proposed language is in the 2010 Florida Building Code. Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. Restricted return air affects building pressures and increases air infiltration which in turn increases energy use and can cause comfort, building durability, and health and safety issues. Proposed language is in the 2010 Florida Building Code. Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No. Proposed language is in the 2010 Florida Building Code.

Does not degrade the effectiveness of the code

Increases code effectiveness. Proposed language is in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

**Explanation of Choice** 

It is important for Florida to keep its balanced return air requirement for the reasons provided above; allowing the requirement to lapse until it is included in the IMC code would be confusing, potentially cause safety and health issues, provide poorer energy performance in new homes and is not in the interest of the state. Florida is largely a ducted HVAC system state and this affects us as much or more than other states.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

Explanation of Choice

Submitted for 2012/13 ICC code development cycle.

### Comment Period History

08/09/2012 - 09/23/2012

Proponent BOAF CDC Submitted 9/23/2012 Attachments No	
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### Comment:

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5397-G1 This change is incomplete if compared to 601.4 FMC 2010 the 3rd option is missing "3. Habitable rooms only shall be required

to meet these requirements for proper balanced return air excluding bathrooms, closets, storage rooms and laundry rooms, except that all supply air into the master suite shall be included."

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

601.5 Balanced return air. Restricted return air occurs in buildings when returns are located in central zones and closed interior doors impede air flow to the return grill, or when ceiling spaces are used as return plenums and fire walls restrict air movement from one portion of the return plenum to another, causing excess air infiltration or exfiltration, depending on the pressure zones created. Provisions shall be made in both residential and commercial buildings to avoid unbalanced air flows and pressure differentials caused by restricted return air. Pressure differentials caused by air distribution systems across individually closed interior doors where returns are centrally located shall be limited to 0.01 inch WC (2.5 pascals) or less. Pressure differentials across fire walls or other partitions within ceiling space plenums shall be limited to 0.01 inch WC (2.5 pascals) by providing air duct pathways or air transfer pathways from the high pressure zone to the low pressure zone.

<u>601.5.1 Prescriptive alternatives.</u> The following alternatives may be used to demonstrate balanced return air for residential applications. Habitable rooms only shall be required to meet these requirements for proper balanced return air excluding bathrooms, closets, storage rooms and laundry rooms, except that all supply air into the master bedroom suite shall be included.

1. Transfer ducts or other transfer pathways may achieve this by providing return transfer that is 1½ (or more) times the cross sectional area (square inches or square centimeters) of the supply duct or supply ducts entering the room or space it is serving in addition to at least an unrestricted 1 inch (25.4 mm) door undercut to achieve proper return air balance.

2. Transfer grilles shall provide 0.50 square inches (3.226 cm<sup>2</sup>) or more (of grille area) for each 1.00 cfm (of supply air) for sizing through-the-wall transfer grilles in addition to at least an unrestricted 1 inch (25.4 mm) door undercut to achieve proper return air balance.

(·····)

Date Submitted       7/25/2012       Section       M1305.1.3.2       Proponent       Ann Stanton         TAC Recommendation       Withdrawn       No       No       No         TAC Recommendation       Withdrawn       No       No       No         Commission Action       Pending Review       No       No       No         Commission Action       Pending Review       No       No       No         Commission Action       No       Aternate Language       No         Related Modifications       6565, 5565       Summary of Modification       Add Florida-specific requirement to post notice that air handler is in the attic.         Related Modification       Add Florida-specific language resulted from resolution to an administrative challenge to the 2001 Florida Building Code and should be maintained.         Ficeal Impact Statement       Impact to local entity relative to enforcement of code       None. Proposed language is currently in the 2010 Florida Building Code.         Impact to building and property owners relative to cost of compliance with code       None. Proposed language is currently in the 2010 Florida Building Code.         Regiments       Has a reasonable and substantial connection with the health, safety, and welfare of the general public       Yes. Proposed language is currently in the 2010 Florida Building Code.         Ves. Proposed language is currently in the 2010 Florida Building Code. <t< th=""><th>М5658</th><th></th><th>· · ·</th><th></th><th>Page 95 <del>81</del>4155</th></t<>	М5658		· · ·		Page 95 <del>81</del> 4155
TAC Recommendation       Withdrawn         Commission Action       Pending Review         Commission Action       Pending Review         Comments       No       Alternate Language       No         Related Modifications       5656, 5656         Summary of Modification       Add Florida-specific requirement to post notice that air handler is in the attic.         Rationale       This Florida-specific language resulted from resolution to an administrative challenge to the 2001 Florida Building Code and should be maintained.         Fiscal Impact Statement       Impact to local entity relative to enforcement of code         None. Proposed language is currently in the 2010 Florida Building Code.       Impact to industry relative to te cost of compliance with code         None. Proposed language is currently in the 2010 Florida Building Code.       Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes. Proposed language is currently in the 2010 Florida Building Code.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Yes. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materials, products, methods, or systems of construction Yes. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materials, products, methods, or systems of construction Yes. Proposed language is currently in the 2010 Florida Building	Date Submitted	7/25/2012	Section M1305.1.3.2	Proponent	Ann Stanton
Commission Action       Pending Review         Comments       No         Atternate Language       No         Related Modifications       5655, 5656         Summary of Modification       Add Florida-specific requirement to post notice that air handler is in the attic.         Reliated Modification       Add Florida-specific requirement to post notice that air handler is in the attic.         Rationale       Impact Statement         Impact to local entity relative to enforcement of code       None. Proposed language is currently in the 2010 Florida Building Code.         Impact to local entity relative to enforcement of code       None. Proposed language is currently in the 2010 Florida Building Code.         Impact to industry relative to the cost of compliance with code       None. Proposed language is currently in the 2010 Florida Building Code.         Requirements       Has a reasonable and substantial connection with the health, safety, and weifare of the general public Yes. Proposed language is currently in the 2010 Florida Building Code.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Yes. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities No. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materials, products, methods, or systems of construction Yes. Proposed language is currently	Chapter	13	Affects HVHZ No	Attachments	No
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Rationale         This Florida-specific language resulted from resolution to an administrative challenge to the 2001 Florida Building Code and should be maintained.         Fiscal Impact to local entity relative to enforcement of code             None. Proposed language is currently in the 2010 Florida Building Code.         Impact to building and property owners relative to cost of compliance with code             None. Proposed language is currently in the 2010 Florida Building Code.         Impact to industry relative to the cost of compliance with code             None. Proposed language is currently in the 2010 Florida Building Code.         Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public             Yes. Proposed language is currently in the 2010 Florida Building Code.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction             Yes. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities             No. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities             No. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities             No. Proposed language is currently in the 2010 Florida Building Code.         Does not discriminate against materi	Summary of Mod	lification			
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YES	Is the proposed coo	de modification part of a prio	r code version?		

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Proposed language was in the 2010 FBC. It was processed in accordance with an approved plan from the Florida Building Commission for the purpose of maintaining Florida efficiencies.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### M1305.1.3.2 Air Handling Units. Air handling units shall be allowed in attics if the following conditions are met:

1. The service panel of the equipment is located within six (6) feet [1829 mm] of an attic access.

2. A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly.

3. The attic access opening is of sufficient size to replace the air handler.

4. A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. Said notice shall be in all capitals, in 16 point type, with the title and first paragraph in bold:

### NOTICE TO HOMEOWNER

A PART OF YOUR AIR CONDITIONING SYSTEM, THE AIR HANDLER, IS LOCATED IN THE ATTIC. FOR PROPER, EFFICIENT, AND ECONOMIC OPERATION OF THE AIR CONDITIONING SYSTEM, YOU MUST ENSURE THAT REGULAR MAINTENANCE IS PERFORMED.

YOUR AIR CONDITIONING SYSTEM IS EQUIPPED WITH ONE OR BOTH OF THE FOLLOWING: 1) A DEVICE THAT WILL ALERT YOU WHEN THE CONDENSATION DRAIN IS NOT WORKING PROPERLY OR 2) A DEVICE THAT WILL SHUT THE SYSTEM DOWN WHEN THE CONDENSATION DRAIN IS NOT WORKING. TO LIMIT POTENTIAL DAMAGE TO YOUR HOME, AND TO AVOID DISRUPTION OF SERVICE, IT IS RECOMMENDED THAT YOU ENSURE PROPER WORKING ORDER OF THESE DEVICES BEFORE EACH SEASON OF PEAK OPERATION.

No

#### General Comments

Alternate Language

**Related Modifications** 

None

#### **Summary of Modification**

Add SECTION M1305.1.3.2

#### Rationale

To comply with s. 553.73(7)(a) Florida Statutes, the proposed modification will supplement the most current version of the International Existing Building Code (IEBC) base code with Florida specific requirements in accordance with the Commission's approved code change process for the update to the 2013 Florida Building Code. The proposed modification is necessary in order to provide for reference correlation to relevant Energy Conservation Codes, as well as to maintain the settlement agreement on the subject of AHU location with the Florida Homebuilder's Association.

#### **Fiscal Impact Statement**

#### Impact to local entity relative to enforcement of code

No

None. Proposed language is currently adopted by the 2010 Florida Building Code.

#### Impact to building and property owners relative to cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

#### Impact to industry relative to the cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

#### Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code. Does not degrade the effectiveness of the code

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

### OTHER

**Explanation of Choice** 

The proposed code change was submitted in accordance with the Commission's update process for the 2013 FBC in order to provide for reference correlation to relevant Energy Conservation Codes, as well as to maintain the settlement agreement on the subject of AHU location with the Florida Homebuilder's Association.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

M1305.1.3.2 Air-handling units. Air-handling units shall be allowed in attics if the following conditions are met:

1. The service panel of the equipment is located within 6 feet (1829 mm) of an attic access.

2.A device is installed to alert the owner or shut the unit down when the condensation drain is not working properly.

3.The attic access opening is of sufficient size to replace the air handler.

<u>4.A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. Said notice shall be in all capitals, in 16 point type, with the title and first paragraph in bold:</u>

### NOTICE TO HOMEOWNER

A PART OF YOUR AIR CONDITIONING SYSTEM, THE AIR HANDLER, IS LOCATED IN THE ATTIC. FOR PROPER, EFFICIENT, AND ECONOMIC OPERATION OF THE AIR CONDITIONING SYSTEM, YOU MUST ENSURE THAT REGULAR MAINTENANCE IS PERFORMED. YOUR AIR CONDITIONING SYSTEM IS EQUIPPED WITH ONE OR BOTH OF THE FOLLOWING:

### 1) A DEVICE THAT WILL ALERT YOU WHEN THE CONDENSATION DRAIN IS NOT WORKING PROPERLY OR

2) A DEVICE THAT WILL SHUT THE SYSTEM DOWN WHEN THE CONDENSATION DRAIN IS NOT WORKING. TO LIMIT POTENTIAL DAMAGE TO YOUR HOME, AND TO AVOID DISRUPTION OF SERVICE, IT IS RECOMMENDED THAT YOU ENSURE PROPER WORKING ORDER OF THESE DEVICES BEFORE EACH SEASON OF PEAK OPERATION. Total Mods for Mechanical in No Affirmative Recommendation without a Second: 17

Total Mods for report: 42

# Sub Code: Mechanical

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M5204		. <u>.</u>			Pa	age 100 <del>8</del> 6155
Date Submitted	7/17/2012	Section 202		Proponent	Ann Stanton	
Chapter	2	Affects HVHZ	No	Attachments	No	
TAC Recommenda Commission Actic		ommendation without a	a Second			
<u>Comments</u>						
General Comment	ts No	Altern	ate Language	No		
Related Modifica	itions					
Summary of Mod	dification					
Propose Flo	orida-specific definitions.					
Rationale	sitiana maintain Elavida anas	fie officiencies from the		en ation and (on Flari		
	nitions maintain Florida-spec	TIC efficiencies from the	FBC-Energy Cons	ervation and/or Fiori	da law.	
Fiscal Impact Sta	atement ocal entity relative to enforc	oment of code				
	e. These definitions are in the		Code, Mechanical.			
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•	ndustry relative to the cost e. These definitions are in the	•				
Requirements						
	onable and substantial con These definitions are in the 2		• • •	e of the general pub	lic	
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Does not d	legrade the effectiveness of These definitions are in the 2	the code				
Is the proposed coo YES	de modification part of a prior o	ode version?				
The provisions con NO	ntained in the proposed amend	nent are addressed in the	e applicable internatic	onal code?		

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

**Explanation of Choice** 

These definitions are in the 2010 Florida Building Code, Mechanical.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### **1st Comment Period History**

### 08/09/2012 - 09/23/2012

	Proponent	Ken Cureton	Submitted	9/21/2012	Attachments	No
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#### Comment:

M5204-G1 The proposal provides for terms for consistency with the Energy Code.

## **1st Comment Period History**

08/09/2012 - 09/23/2012

						Page 101 01 155
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	-

#### Comment:

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g)

M5204-G2 Attic is the same as the 2012 IBC and the 2010 FBC

Air-Handling Unit is the same as the 2012 IMC and the 2010 FMC

Boiler and water heater are both defined in code; nothing has been submitted showing the need for this additional definition.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to

strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

Chapter 2, Definitions

Page 102 of 155

Section 201, General

Add to read as follows:

ATTIC. An enclosed unconditioned space located immediately below an uninsulated roof and immediately above the ceiling of a building. For the roof to be considered insulated, roof insulation shall be at least the R-value required to meet §R405.2.1 or C407.2.1 of the FBC-Energy Conservation

AIR-HANDLING UNIT. The fan unit of a furnace and the fan-coil unit of a split-system, packaged air conditioner or heat pump.

BOILER, HOT WATER SUPPLY. Any vessel used for generating hot water to be used external to the vessel, which exceeds any of the following limitations:

1. A heat input capacity of 400,000 Btuh (kW).

2. A water temperature of 210 F.

3. A nominal water capacity of 120 gal (454 L).

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Pending Review No n fific testing and labeling of ined testing and labeling r	Alte materials, eqipr	ernate Language		13 FBC-Mechanical.	
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ined testing and labeling r		nent and appliance re	euse from 2010 to 20	13 FBC-Mechanical.	
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oposal would move them			nd methods, equipme	ent and appliances since the	
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tity relative to enforceme	nt of code				
sed language is currently	in the 2010 Flor	ida Building Code.			
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nate against materials, pi	roducts, method	ls, or systems of cor	nstruction of demons	strated capabilities	
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	and property owners released language is currently and property owners released language is currently relative to the cost of co used language is currently and substantial connecti ed language is currently in proves the code, and pro- ed language is currently in nate against materials, pro- ed language is currently in the effectiveness of the ed language is currently in fication part of a prior code	and property owners relative to cost of seed language is currently in the 2010 Flor relative to the cost of compliance with o used language is currently in the 2010 Flor and substantial connection with the heat ed language is currently in the 2010 Flor proves the code, and provides equivaler ed language is currently in the 2010 Florid at against materials, products, method at language is currently in the 2010 Florid the effectiveness of the code ad language is currently in the 2010 Florid fication part of a prior code version?	<ul> <li>and property owners relative to cost of compliance with codesed language is currently in the 2010 Florida Building Code.</li> <li>arelative to the cost of compliance with codesed language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the health, safety, and welfated language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the health, safety, and welfated language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the health, safety, and welfated language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the health, safety, and welfated language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the health, safety, and welfated language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the health, safety, and welfated language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the 2010 Florida Building Code.</li> <li>and substantial connection with the 2010 Florida Building Code.</li> <li>and substantial connection with the 2010 Florida Building Code.</li> <li>and substantial connection with the 2010 Florida Building Code.</li> <li>and substantial connection with the 2010 Florida Building Code.</li> <li>and substantial connection with the 2010 Florida Building Code.</li> <li>and substantial connection part of a prior code version?</li> </ul>	<ul> <li>and property owners relative to cost of compliance with code</li> <li>and property owners relative to cost of compliance with code</li> <li>based language is currently in the 2010 Florida Building Code.</li> <li>arelative to the cost of compliance with code</li> <li>based language is currently in the 2010 Florida Building Code.</li> <li>and substantial connection with the health, safety, and welfare of the general put ed language is currently in the 2010 Florida Building Code.</li> <li>approves the code, and provides equivalent or better products, methods, or system ed language is currently in the 2010 Florida Building Code.</li> <li>ante against materials, products, methods, or systems of construction of demonse ad language is currently in the 2010 Florida Building Code.</li> <li>the effectiveness of the code</li> <li>ed language is currently in the 2010 Florida Building Code.</li> </ul>	An and property owners relative to cost of compliance with code used language is currently in the 2010 Florida Building Code. A relative to the cost of compliance with code used language is currently in the 2010 Florida Building Code. And substantial connection with the health, safety, and welfare of the general public ed language is currently in the 2010 Florida Building Code. Inproves the code, and provides equivalent or better products, methods, or systems of construction ed language is currently in the 2010 Florida Building Code. Interaction with the health, safety and welfare of the general public ed language is currently in the 2010 Florida Building Code. Inproves the code, and provides equivalent or better products, methods, or systems of construction ed language is currently in the 2010 Florida Building Code. Interagainst materials, products, methods, or systems of construction of demonstrated capabilities id language is currently in the 2010 Florida Building Code. the effectiveness of the code ed language is currently in the 2010 Florida Building Code. Interaction part of a prior code version?

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Proposed language was in the 2010 FBC. It was processed for the purpose of maintaining Florida-specific criteria.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

<u>1st Commer</u>	nt Period Histo	ory	08/09/20	<u>)12 - 09/23/2012</u>	
Proponent	Ken Cureton	Submitted	9/21/2012	Attachments	No

#### Comment:

The proposal relocates certain sections of Chapter 1 to Chapter 3 as per the 2010 FBC format.

<u>1st Commen</u>	<u>nt Period History</u>	,	08/09/20	<u> 12 - 09/23/2012</u>		
						Page 104 of 155
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	-

### Comment:

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC This code change is unnecessary as the provisions contained in the proposed amendment are applicable international code. Per FS 553.73 (7) (g) The amendment does not demonstrate by evidence or data that the geographical jurisdiction of strengthen the foundation code beyond the needs or regional variations addressed by the four This is covered in 104.10 of the building code and does not need to be repeated. This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to

strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)



### 301.4.1 Alternative materials, methods, equipment and appliances. Add to read as shown.

**301.4.2 Alternative materials, methods, equipment and appliances.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

301.4.2 Required testing. Add to read as shown.

301.4.2 Required Testing. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction.

301.4.2.1 Test methods. Add to read as shown.

<u>301.4.3.1 Test methods</u>. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the code official shall approve the testing procedures.

301.4.2.2 Testing agency. Add to read as shown.

301.4.2.2 Testing agency. All tests shall be performed by an approved agency.

301.4.2.3 Test reports. Add to read as shown.

<u>301.4.2.3 Test reports.</u> Reports of tests shall be retained by the code official for the period required for retention of public records.

### 301.4.3 Materials, equipment and appliance reuse. Add to read as shown.

<u>301.4.3 Materials, equipment and appliance reuse.</u> Materials, equipment, appliances and devices shall not be reused unless such elements have been reconditioned, tested and placed in good and proper working condition and approved.

## M5606

					Page	107 <del>6</del> P155	
Date Submitted 7/24/2012		Section 307.2.1		Proponent	Robert Cochell		
Chapter	3	Affects HVHZ	No	Attachments	No		
TAC Recommendat	ion No Affirmative Reco	mmendation without	t a Second				
Commission Action	Pending Review						
<u>Comments</u>							_
<b>General Comments</b>	No	Alter	rnate Language	No			
Related Modification	ons						
Summary of Modif	fication						
Condensate	shall notcause a nuisa	nce; but may be disc	harged to a green s	space.			

20

#### Rationale

The addition of " green space" better clarifies in Florida where condensate may be discharged. This is Florida specific as there is a low probability that the area would freeze and cause a nuisance. It was at one time in the code but was deleted for unknown reasons.

#### Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact.

Impact to building and property owners relative to cost of compliance with code

More economical for property owners.

Impact to industry relative to the cost of compliance with code More economical for industry.

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Neutral

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Strengthens the code by providing an economical discharge option for Florida.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate.

Does not degrade the effectiveness of the code

Does not degrade effectiveness.

#### Is the proposed code modification part of a prior code version? No

1st Comment Period History		08/09/2012 - 09/23/2012					
	Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	

#### Comment:

5

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g)

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

..... Condensate <u>may be discharged into green space</u> but shall not be discharged into a street, alley, or other areas so as to cause a nuisance.

### A5752

M5752					Page	109 <del>8</del> 9155
Date Submitted	7/30/2012	Section 307.2.2		Proponent	Cheryl Harris	
Chapter	3	Affects HVHZ	No	Attachments	No	
TAC Recommenda	ation No Affirmative Rec	ommendation without	a Second			
Commission Actio	on Pending Review					
Comments						
General Comment	ts No	Alter	nate Language	No		
Related Modifica	tions					
Summary of Mod	dification					
To maintair	n a Florida Specific exception	to condensate draina	age on wall mounted	ductless mini units.		
Rationale						
To allow an	n exception for wall mounted	ductless split units the	at are more common	ly found in Florida and	not addressed in the I	CC.
Fiscal Impact Sta	atement					

Impact to local entity relative to enforcement of code

Neutral

Impact to building and property owners relative to cost of compliance with code More cost effective

Impact to industry relative to the cost of compliance with code

More cost effective

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by providing a better method for ductless mini units
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate
- Does not degrade the effectiveness of the code Does not degrade the effectiveness of the code
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

22/12/2012 2013 Triennial

### Alternate Language

		luuge				
<u>1s</u>	t Comme	nt Period Histor	<b>'V</b> 08/09	0/2012 - 09/23/2012		Page 110 of 155
	Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	Yes
	Rationale					
	This mod we	ould match the current su	bmitted change to the base c	ode M21-12.		
	Fiscal Impac	t Statement				
	Impact to lo	ocal entity relative to enfo	prcement of code			
2	improve	the enforcement, allowing	g flexability			
2	Impact to b	uilding and property owr	ers relative to cost of comp	liance with code		
52-A	reduce c	cost, allow for smaller drai	n.			
57	Impact to ind	lustry relative to the cost	of compliance with code			
~	reduce c	cost, allow for smaller dra	n.			
	Requirement	ts				
	Has a reaso	onable and substantial co	onnection with the health, sa	fety, and welfare of t	the general public	
	Yes, allo	w for the drain to function	as the unit was designed			
	Strengthens	s or improves the code, a	and provides equivalent or b	etter products, meth	ods, or systems of constru	ction
	Yes, allo	w for the drain to function	as the unit was designed			
	Does not di	scriminate against mate	rials, products, methods, or	systems of construc	tion of demonstrated capa	pilities
	No, allov	vs for the drain to functior	as the unit was designed pe	r the manufacturer		
		egrade the effectiveness				
			as the unit was designed pe			
	Is the propos	sed code modification pa	rt of a prior code version?	No		

<u>1st</u>	Commen	t Period Histor	y	08/09/20	)12 - 09/23/2012	
	Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No

#### Comment:

M5752-G1

Something similar was submitted to the IMC change # M21-12 and would provide relief for oversizing the drains on ductless split units. M21-12

Exception: Where the drain line is less than 10 feet (3048 mm) in length, for wall mounted ductless split units less than 36,001 Btu/h, the size of the drainpipe need not be larger than the size of the factory drain outlet on the equipment.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

**307.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the Florida Building Code, International Plumbing Code relative to the material type.Condensate waste and drain line size shall be not less than 3/4-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

Exception: On wall mounted ductless split units less than 36,001 Btu/h where the drain line is less than 10 feet (3048 mm) in length, the factory drain outlet size shall be acceptable from the equipment to the place of disposal.

**307.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the *Florida Building Code*, *International Plumbing Code* relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

**Exception:** On wall mounted ductless split units less than 36,001 Btu/h where the drain line is less than 10 feet (3048 mm) in length, the factory drain outlet size shall be acceptable from the equipment to the place of disposal.

**Exception:** Where the drain line is less than 10 feet (3048 mm) in length, for wall mounted ductless split units less than 36,001 Btu/h, the size of the drainpipe need not be larger than the size of the factory drain outlet on the equipment.

### ſ

Date Submitted Chapter       7/30/2012 3       Section       307.2.3 Affects HVHZ       Proponent       Cheryl Harris Attachments       No         TAC Recommendation Commission Action       No Affirmative Recommendation without a Second Pending Review       No       No       No         Comments       No       Afternate Language       No       No         Related Modification       No       Afternate Language       No         Summary of Modification       To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.       No         Rationale       Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact to local entity relative to enforcement of code More cost effective       No         Impact to industry relative to the cost of compliance with code More cost effective       Impact to industry relative to the cost of compliance with code More cost effective         Requirements       Kas a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.       Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not didscriminate       Does not discriminate	4	· · · · · · · · · · · · · · · · · · ·			Page 113 🗃	Р <sub>155</sub>
TAC Recommendation       No Affirmative Recommendation without a Second         Commission Action       Pending Review         Comments       No       Alternate Language       No         Related Modifications       No       Alternate Language       No         Summary of Modification       To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.         Rationale       Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact Statement       Impact to local entity relative to enforcement of code Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective       More cost effective         Requirements       Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.       Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.       Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities	bmitted 7/30/20	/2012 Se	ction 307.2.3	Proponent	Cheryl Harris	
Commission Action       Pending Review         Comments       No       Alternate Language       No         General Comments       No       Alternate Language       No         Related Modifications       Summary of Modification       To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.         Rationale       Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact to local entity relative to enforcement of code Neutral       Impact to building and property owners relative to cost of compliance with code More cost effective         Impact to building and property owners relative to cost of compliance with code More cost effective       Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discrimiante	r 3	Aff	ects HVHZ No	Attachments	No	
Comments         No         Alternate Language         No           Related Modifications         Summary of Modification         To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.           Rationale         Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.           Fiscal Impact to local entity relative to enforcement of code Neutral         Impact to local entity relative to enforcement of code More cost effective           Impact to industry relative to the cost of compliance with code More cost effective         More cost effective           Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.           Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.           Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate	commendation	No Affirmative Recomme	ndation without a Second			
General Comments       No       Alternate Language       No         Related Modifications       Related Modifications       Related Modifications         Summary of Modification       To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.         Rationale       Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact Statement       Impact to local entity relative to enforcement of code Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective       More cost effective         Impact to industry relative to the cost of compliance with code More cost effective       More cost effective         Requirements       Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate	ssion Action	Pending Review				
Related Modifications         Summary of Modification         To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.         Rationale         Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact Statement         Impact to local entity relative to enforcement of code Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective         Impact to industry relative to the cost of compliance with code More cost effective         Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate	ents					
Summary of Modification         To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.         Rationale         Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact Statement         Impact to local entity relative to enforcement of code Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective         Impact to industry relative to the cost of compliance with code More cost effective         Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate	I Comments	No	Alternate Language	No		
To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.          Rationale         Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact Statement         Impact to local entity relative to enforcement of code Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective         Impact to industry relative to the cost of compliance with code More cost effective         Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate	d Modifications					
To maintain a current Florida specific code that allows an alternate to a separate drain line for overflow of condensate from a drain pan.          Rationale         Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact Statement         Impact to local entity relative to enforcement of code Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective         Impact to industry relative to the cost of compliance with code More cost effective         Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate						
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Rationale         Provides an economical alternate to a separate drain line for condensate overflow particularly for condomium applications that are prevalent in Florida.         Fiscal Impact Statement         Impact to local entity relative to enforcement of code Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective         Impact to industry relative to the cost of compliance with code More cost effective         Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate		rent Florida specific code tha	it allows an alternate to a separa	te drain line for overflow	of condensate from a drain	
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<ul> <li>Fiscal Impact Statement</li> <li>Impact to local entity relative to enforcement of code Neutral</li> <li>Impact to building and property owners relative to cost of compliance with code More cost effective</li> <li>Impact to industry relative to the cost of compliance with code More cost effective</li> <li>Requirements</li> <li>Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.</li> <li>Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.</li> <li>Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate</li> </ul>					onium applications that are	
Neutral         Impact to building and property owners relative to cost of compliance with code More cost effective         Impact to industry relative to the cost of compliance with code More cost effective         Requirements         Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discrimiante	•					
Impact to building and property owners relative to cost of compliance with code More cost effective       More cost effective         Impact to industry relative to the cost of compliance with code More cost effective       More cost effective         Requirements       Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.         Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.         Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discrimiante	•		t of code			
More cost effective Impact to industry relative to the cost of compliance with code More cost effective Requirements Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes. Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system. Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate	Neutral	-				
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More cost effective Requirements Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes. Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system. Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate						
<ul> <li>Requirements         <ul> <li>Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.</li> <li>Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.</li> </ul> </li> <li>Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate</li> </ul>	•	-	pliance with code			
<ul> <li>Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes.</li> <li>Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code by allowing an alternate method/system.</li> <li>Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discrimiante</li> </ul>	More cost effe	ffective				
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Improves the code by allowing an alternate method/system. Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discrimiante	Yes.					
Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discrimiante	Strengthens or imp	nproves the code, and prov	ides equivalent or better produc	cts, methods, or system	s of construction	
Does not discrimiante	Improves the	e code by allowing an altern	ate method/system.			
		•	ducts, methods, or systems of o	construction of demons	trated capabilities	
			ode			
Does not degrade the effectiveness of the code	•					
Is the proposed code modification part of a prior code version?	0	5				
YES						

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

08/09/2012 -	09/23/2012	

						Page 114 of 155
Propone	nt BOAF CDC	Submitted	9/23/2012	Attachments	No	-

#### Comment:

51

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This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the

54-G1 applicable international code. Per FS 553.73 (7) (g)

2012 IMC 307.2.3 4 covers this issue.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

**307.2.3 Auxiliary and secondary drain systems.** In addition to the requirements of Section 307.2.1, where damage to any building components could occur as a result of overflow

from the equipment primary condensate removal system, one of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired appliance that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall

have a minimum depth of 1 ½ inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steelpans shall have a minimum thickness of not less than 0.0236 inch (0.6010 mm) (No. 24 gage). Nonmetallic pans shall have a minimum thickness

of not less than 0.0625 inch (1.6 mm).

2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.

As an alternative to a separate drain line, a water-level detection device that will shut off the equipment served prior to overflow of the pan shall be provided. The water level detection device shall connect to the drain pan at a higher level than the primary drain connection.

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WI5755		,		Page 116 ðf <sup>1</sup> 1	155
Date Submitted	7/30/2012	Section 307.2.3	Proponent	Cheryl Harris	
Chapter	3	Affects HVHZ No	Attachments	No	
TAC Recommend Commission Acti		ecommendation without a Second	·		
<u>Comments</u>					
General Commen	nts No	Alternate Language	No		
Related Modific	ations				
Summary of Mo	dification				
•		I to alternate method of condensate drai	nage pan overflow.		
Rationale					
	is redundant if the Florida S	pecific modification to 307.2.3 is accepte	ed.		
Fiscal Impact St	tatement				
Impact to Neu	local entity relative to enfo	rcement of code			
Impact to		ers relative to cost of compliance with	code		
•	industry relative to the cos e cost effective	t of compliance with code			
Requirements					
Has a reas	sonable and substantial co	nnection with the health, safety, and w	elfare of the general pub	lic	
•	ns or improves the code, a roves the code	nd provides equivalent or better produ	cts, methods, or system	s of construction	
	discriminate against mater s not discriminate	ials, products, methods, or systems of	construction of demons	trated capabilities	
	degrade the effectiveness as not degrade the effective				
	ode modification part of a prio	r code version?			
YES					

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

### Alternate Language

	nate Eurige	lugo				
1st	t Commer	nt Period History	<u>08/09/</u>	2012 - 09/23/2012		Page 117 of 155
Г	Proponent	Oscar Calleja	Submitted	9/23/2012	Attachments	Yes
	Rationale					
		dditions to the Base Code for proper	Code language			
	Fiscal Impact		<u>-</u>			
	•	al entity relative to enforcement of	code			
A-C		ilding and property owners relative	to cost of complia	ance with code		
0	More cost	• • • •				
<b>P</b>	•	Istry relative to the cost of complian t effective.	ice with code			
	Requirements					
	•	, nable and substantial connection wi	ith the health safe	ty and wolfare of the conor	al public	
	Yes		tin the nearth, said	ety, and wenale of the gener		
		or improves the code, and provides the Code	s equivalent or be	tter products, methods, or s	ystems of construct	tion
	Does not dis	criminate against materials, produc	ts, methods, or s	stems of construction of de	emonstrated capabil	lities
	Does not.					
	Does not deg	grade the effectiveness of the code				
	Does not.					
	Is the propose	ed code modification part of a prior	code version?			
	YES					
	The provisio NO	ns contained in the proposed a	mendment are a	ddressed in the applicab	le international co	ode?

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

<u>1st Commen</u>	t Period Hist	ory	08/09/2012	<u>2 - 09/23/2012</u>		
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	

### Comment:

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This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g)

2012 IMC 307.2.3 4 covers this issue.

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

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**307.2.3** Auxiliary and secondary drain systems. In addition to the requirements of Section 307.2.1, where damage to any building components could occur as a result of overflow

from the equipment primary condensate removal system, one of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired appliance that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall

have a minimum depth of 1 ½ inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steelpans shall have a minimum thickness of not less than 0.0236 inch (0.6010 mm) (No. 24 gage). Nonmetallic pans shall have a minimum thickness

of not less than 0.0625 inch (1.6 mm).

2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.

As an alternative to a separate drain line, a water-level detection device that will shut off the equipment served prior to overflow of the pan shall be provided. The water level detection device shall connect to the drain pan at a higher level than the primary drain connection.

3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water-level detection device conforming to UL 508 that will shut off the equipment served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.

4. A water level detection device conforming to UL 508 shall be provided that will shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line, or in the equipment supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan.

Exception: Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

**307.2.3 Auxiliary and secondary drain systems.** In addition to the requirements of Section 307.2.1, where damage to any building components could occur as a result of overflow

from the *equipment* primary condensate removal system, one of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired *appliance* that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall

have a minimum depth of 1 ½ inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steelpans shall have a minimum thickness of not less than 0.0236 inch (0.6010 mm) (No. 24 gage). Nonmetallic pans shall have a minimum thickness

of not less than 0.0625 inch (1.6 mm).

2. <u>A separate overflow drain line shall be connected to the drain pan provided with the *equipment*. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.</u>

As an alternative to a separate drain line, a water-level detection device that will shut off the equipment served prior to overflow of the pan shall be provided. The water level detection device shall connect to the drain pan at a higher level than the primary drain connection.

3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water-level detection device conforming to UL 508 that will shut off the *equipment* served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.

4. <u>Reserved</u> A water-level detection device conforming to UL 508 shall be provided that will shut off the *equipment* served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line, or in the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan.

**Exception:** Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

### M5758

M5758				Page 120	<del>ðf</del> 155
Date Submitted	7/30/2012	Section 504.3	Proponent	Cheryl Harris	
Chapter	5	Affects HVHZ No	Attachments	No	
TAC Recommend Commission Acti		commendation without a Second			
Comments					
General Commen	its No	Alternate Language	No		
Related Modifica	ations				
Summary of Mo	dification				
To maintai	in Florida Specific Code rela	ted to an alternate method for a clothe	s dryer exhaust vent clear	nout.	
Rationale					
To provide	a clarification on a means f	or cleanout that occurs frequently in FI	orida condomium and apa	artment complexes.	
Fiscal Impact St	tatement				
Impact to Neu	local entity relative to enfor tral	cement of code			
•	building and property owne e cost effective	ers relative to cost of compliance with	n code		
•	industry relative to the cos e cost effective	t of compliance with code			
Requirements					
Has a reas Yes	sonable and substantial cor	nection with the health, safety, and v	velfare of the general pub	lic	
•	ns or improves the code, an ngthens the code	nd provides equivalent or better prod	ucts, methods, or system	is of construction	
	<b>discriminate against materi</b> s not discriminate	als, products, methods, or systems o	f construction of demons	strated capabilities	
	degrade the effectiveness of s not degrade the effectiven				
Is the proposed co YES	ode modification part of a prior	code version?			

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

						Fage 121 01 155
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	-

08/09/2012 - 09/23/2012

#### Comment:

61

58-0

**M57** 

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g)

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

**504.3 Cleanout.** Each vertical riser shall be provided with a means for cleanout. <u>Such means may include the</u> <u>exhaust duct connection to an individual dryer outlet if it is accessible and readily disassembled.</u>

Page: 1

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M5761					Page 123 😚
Date Submitted7/30.Chapter5	/2012	Section 504.6.4.1 Affects HVHZ N	lo	Proponent Attachments	Cheryl Harris No
TAC Recommendation Commission Action	No Affirmative Reco Pending Review	mmendation without a S	Second		
<u>Comments</u>					
General Comments	No	Alternat	te Language	No	
Related Modifications					
Summary of Modification	on				
•		ted to clothes dryer exh	haust booster fans		
Rationale					
in condomium and Fiscal Impact Statemer	d apartment complexes		dryer booster fans	in the Florida marke	t that has frequent installations
Impact to building More cost e	• • • •	relative to cost of com	pliance with code	1	
Impact to industr More cost e	•	f compliance with code	9		
Requirements					
Has a reasonable Yes	and substantial conne	ection with the health, s	safety, and welfar	e of the general pub	lic
Strengthens or in Strengthens	•	provides equivalent or	better products,	methods, or system	s of construction
Does not discrim Does not dis	•	, products, methods, o	or systems of cons	struction of demons	trated capabilities
•	e the effectiveness of t egrade the effectivenes				
Is the proposed code mod	ification part of a prior co	de version?			

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

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#### Comment:

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61

**M57** 

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g)

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.:

**504.6.4.1 Specified length.** The maximum length of the exhaust duct shall be <u>35 feet (10 668 mm) from the</u> connection to the transition duct from the dryer to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table 504.6.4.1.

Exception. Where a clothes dryer booster fan is installed and listed and labeled for the application, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the booster fan manufacturer's installation instructions. Where a clothes dryer booster fan is installed and not readily accessible from the room in which the dryer is located, a permanent identifying label shall be placed adjacent to where the exhaust duct enters the wall. The label shall bear the words: "This dryer exhaust system is equipped with a remotely located booster fan."

### ME767

M5767				Page 126 df	155
Date Submitted 7/30/2	2012	Section 508.1.1	Proponent	Cheryl Harris	
Chapter 5		Affects HVHZ No	Attachments	No	
TAC Recommendation Commission Action	No Affirmative Recor Pending Review	nmendation without a Second			
<u>Comments</u>					
General Comments	No	Alternate Language	No		
<b>Related Modifications</b>					
Summary of Modificatio	n				
•		to makeup air temperature			
Rationale					
	nt Florida specific code t	that is a more appropriate temperatu	ure differential for Florida	climate.	
Fiscal Impact Statement	t .				
•	tity relative to enforcer	nent of code			
	and property owners	relative to cost of compliance with	code		
• •	relative to the cost of otential problems	compliance with code			
Requirements					
•	and substantial conne	ction with the health, safety, and w	elfare of the general pub	lic	
Strengthens or im Improves the	• • •	provides equivalent or better produ	icts, methods, or system	s of construction	
Does not discrimit Does not dis	•	products, methods, or systems of	construction of demons	trated capabilities	
•	the effectiveness of the grade the effectiveness				
Is the proposed code modif YES	fication part of a prior coo	de version?			

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

<u>08/09/2012 - 09/23/2012</u>

Proponent BOAF CDC Submitted 9/23/2012 Attachments No

#### Comment:

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this change does not match the language in 508.1 IMC 2012

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g)

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.:

508.1.1 Makeup air temperature. <u>Reserved.</u> The temperature differential between makeup air and the air in the conditioned space shall not exceed 10°F

### Exceptions:

1. Makeup air that is part of the air conditioning system.

2. Makeup air that does not decrease the comfort conditions of the occupied space.

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M5768		- <u>.</u>	····.	Page 129 8	3₽ <sub>155</sub>
Date Submitted	7/30/2012	Section 510.8.1	Proponent	Cheryl Harris	
Chapter	5	Affects HVHZ No	Attachments	No	
TAC Recommend Commission Act		commendation without a Second			
<u>Comments</u>					
General Commer	nts No	Alternate Language	No		
Related Modific	ations				
Summary of Mo					
	in Florida specific code relate	d to duct joints.			
Rationale Provides r	needed clarification to the coo	le.			
Fiscal Impact S	tatement				
Impact to Neu	local entity relative to enfore	cement of code			
Impact to Neu	• • • •	rs relative to cost of compliance with	code		
<b>Impact to</b> Neu	industry relative to the cost tral	of compliance with code			
Requirements					
Has a reas Yes		nection with the health, safety, and we	elfare of the general put	lic	
•	ens or improves the code, an roves the code	d provides equivalent or better produce	cts, methods, or system	is of construction	
	discriminate against materia es not discriminate.	ls, products, methods, or systems of	construction of demons	strated capabilities	

- Does not degrade the effectiveness of the code Does not degrade the effectivess of the code.
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

### Alternate Language

10					Page 130 of 155
st Comme	ent Period History	<u>08/0</u>	<u>9/2012 - 09/23/2012</u>		
Proponent	Oscar Calleja	Submitted	9/23/2012	Attachments	Yes
Rationale					
Provides ne	eded clarification to the Code and	language made co	nsistent with the IMC		
Fiscal Impac	t Statement				
Impact to lo	ocal entity relative to enforcement	of code			
Neutral					
Impact to b	uilding and property owners relat	ive to cost of com	pliance with code		
Neutral					
Impact to inc	lustry relative to the cost of com	liance with code			
Impact to b Neutral Impact to inc Neutral					
Requiremen	ts				
Has a reaso	onable and substantial connection	n with the health, s	afety, and welfare of the g	general public	
Yes					
•	s or improves the code, and prov	ides equivalent or	better products, methods	s, or systems of constr	uction
•	s the code.				
	iscriminate against materials, pro t discriminate.	ducts, methods, of	r systems of construction	of demonstrated capa	IDIIITIES
	egrade the effectiveness of the co	de			
	t degrade the effectiveness of the				
	C C				
Is the propos	sed code modification part of a pr	for code version?			
YES					
YES	ons contained in the propose	d amendment ar	e addressed in the app	licable international	code?

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

1st	Comment	Period History		08/09/20	<u>)12 - 09/23/2012</u>		
	Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	
	Comment:						
61	This change does not match the language in 510.8.1 IMC 2012						
There is no justification show for this code change.							
576	The provision this is based upon has support with the other Elevide Changes to the 2010 EPC						
Σ		ge is unnecessary as the national code. Per FS 553		ained in the pro	posed amendment are ad	equately addressed in the	
		t daga wat daga saturata bu		lata that the gas	graphical jurisdiction of El	arida avhibita a paad ta	

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

### Page 131 of 155

**510.8.1 Duct joints**. Ducts shall be made tight with the male end of the duct overlapped a minimum of 1 inch (25 mm) with duct joints extending in the direction of airflow.

**510.8.1 Duct joints.** Ducts shall be made tight with <u>the male end of the duct overlapped a minimum of 1 inch (25 mm) with duct joints extending in the direction of airflow. lap joints having a minimum lap of 1 inch (25 mm).</u> Joints used in ANSI/SMACNA Round Industrial Duct Construction Standards and ANSI/SMACNA Rectangular Industrial Duct Construction Standards are also acceptable.

### M5616

					Page	133 012155
Date Submitted	7/24/2012	Section 601.5	Balanced Return Air.	Proponent	amador barzaga	
Chapter	6	Affects HVHZ	Yes	Attachments	Yes	
TAC Recommenda	ation No Affirmative Rec	ommendation witho	ut a Second			
Commission Actio	on Pending Review					
Comments						
General Comment	ts No	Alte	ernate Language	No		
Related Modifica	tions					
Summary of Mod	dification					
Add Florida	a Specific design and perform	ance requirement fr	om the 2010 Florida E	Building Code		
Rationale						

Balance air return has been part of the Florida Building Code for the past three code cycles. Maintaining this Section is consistent with the Florida Statutes requirements for Energy Conservation, equipment performance and inclusion in the code is necessary to avoid diminishing the expected level of performance standards

#### **Fiscal Impact Statement**

Impact to local entity relative to enforcement of code

None. Proposed language is in the 2010 Florida Building Code.

#### Impact to building and property owners relative to cost of compliance with code

None. Proposed language is in the 2010 Florida Building Code.

#### Impact to industry relative to the cost of compliance with code

None. Proposed language is in the 2010 Florida Building Code.

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes, this modification provides direction and proposed language is in the 2010 Florida Building Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Yes, this modification provides direction and proposed language is in the 2010 Florida Building Code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities No, this modification provides direction and proposed language is in the 2010 Florida Building Code.

#### Does not degrade the effectiveness of the code

No, this modification provides direction and proposed language is in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### <u>08/09/2012 - 09/23/2012</u>

					Fage 154 01 155
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments No	0

#### Comment:

**N5616-G1** 

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

### 601.4 Balanced Return Air.

Restricted return air occurs in buildings when returns are located in central zones and closed interior doors impede air flow to the return grill or when ceiling spaces are used as return plenums and fire walls restrict air movement from one portion of the return plenum to another. Provisions shall be made in both residential and commercial buildings to avoid unbalanced air flows and pressure differentials caused by restricted return air. Pressure differentials across closed doors where returns are centrally located shall be limited to 0.01 inch WC (2.5 pascals) or less. Pressure differentials across fire walls in ceiling space plenums shall be limited to 0.01 inch WC (2.5 pascals) by providing air duct pathways or air transfer pathways from the high pressure zone to the low zone.

### Exceptions:

1. Transfer ducts may achieve this by increasing the return transfer 11/2 times the cross sectional area (square inches) of the supply duct entering the room or space it is serving and the door having at least an unrestricted 1 inch (25.4 mm) undercut to achieve proper return air balance.

2. Transfer grilles shall use 50 square inches (322.6 cm2) (of grille area) to 100 cfm (of supply air) for sizing through-the-wall transfer grilles and using an unrestricted 1 inch (25.4 mm) undercutting of doors to achieve proper return air balance.

3. Habitable rooms only shall be required to meet these requirements for proper balanced return air excluding bathrooms, closets, storage rooms and laundry rooms, except that all supply air into the master suite shall be included.

The proposed language was in the 2010 Florida Building Code and is in accordance with the Florida Statutes for the purpose of maintaining Florida efficiencies.

### M5779

wi5779			· · · · · · · · · · · · · · · · · · ·	Page 137	∂ <b>7</b> 155
Date Submitted 7	7/30/2012	Section 603.1.5	Proponent	Cheryl Harris	
Chapter 6	3	Affects HVHZ No	Attachments	No	
TAC Recommendation	on No Affirmative Rec Pending Review	ommendation without a Second			
Comments					
General Comments	No	Alternate Language	No		
Related Modificatio	ns				
Summary of Modifie					
	da Specific Code as relate	d to the application of closure product	ts to air distribution system	ns.	
Rationale	lad clarification on the one	liantian of closure products for Elevide	- huildin ee		
		lication of closure products for Florida	a buildings.		
Fiscal Impact State	ment al entity relative to enforc	amont of code			
Impact to loca	•				
Impact to buil Neutral	lding and property owner	s relative to cost of compliance with	code		
Impact to indu Neutral	ustry relative to the cost o	of compliance with code			
Requirements					
Has a reasona Yes	able and substantial conr	ection with the health, safety, and w	velfare of the general pub	lic	
Strengthens of Improve	•	I provides equivalent or better produ	ucts, methods, or system	s of construction	
	c <b>riminate against material</b> ot discriminate	s, products, methods, or systems of	f construction of demons	trated capabilities	
•	rade the effectiveness of ot degrade the effectivene				
Is the proposed code I	modification part of a prior c	ode version?			

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

<u>08/09/2012 - 09/23/2012</u>

No

Proponent BOAF CDC Submitted 9/23/2012 Attachments

#### Comment:

No data or justification was provided.

Manufacturers installation has to be followed, code does not have to spell this out for every item.

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

# 603.1.5 Surface preparation. The surfaces upon which closure products are to be applied shall be clean and dry in accordance with the manufacturer's installation instructions.

### M5783

				Page 140 t	ðP155
Date Submitted 7	7/30/2012	Section 603.1.6	Proponent	Cheryl Harris	
Chapter 6	i	Affects HVHZ No	Attachments	No	
TAC Recommendation	on No Affirmative Reco Pending Review	ommendation without a Second			
<u>Comments</u>					
General Comments	No	Alternate Language	No		
Related Modification	ns				
Summary of Modific	cation				
To maintain Fl	orida Specific Code as rel	ated to approved mechanical attachme	nts to air distribution sy	stem components.	
Rationale					
To provide cla	rification on approved med	chanical attachments for air distribution	system componnents f	or Florida buildings.	
Fiscal Impact Stater					
Impact to loca Improve	al entity relative to enforce s	ement of code			
Impact to buil Neutral	ding and property owners	s relative to cost of compliance with c	ode		
Impact to indu Neutral	ustry relative to the cost o	f compliance with code			
Requirements					

~ ~

Has a reasonable and substantial connection with the health, safety, and welfare of the general public yes

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate
- Does not degrade the effectiveness of the code Does not degrade the effectiveness of the code
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

<u>08/09/2012 - 09/23/2012</u>

No

Attachments

Comment:

M5783-G1

No data or justification was provided.

Manufacturers installation has to be followed, code does not have to spell this out for every item.

Submitted

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

9/23/2012

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

603.1.6 Approved mechanical attachments. Approved mechanical attachments for air distribution system components include screws, rivets, welds, interlocking joints crimped and rolled, staples, twist in (screw attachment), and compression systems created by bend tabs or screw tabs and flanges or by clinching straps. Mechanical attachments shall be selected to be appropriate to the duct system.

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М5784			Page 143 39	
Date Submitted 7/30/2012	Section 603.1.7	Proponent	Cheryl Harris	
Chapter 6	Affects HVHZ No	Attachments	No	
TAC RecommendationNo AffirmativeCommission ActionPending Rev	e Recommendation without a Second iew			
Comments				
General Comments No	Alternate Language	No		
Related Modifications				
Summary of Modification	related to approved closure systems for air dis	tribution systems		
Rationale	related to approved closure systems for all dis	subution systems.		
	d closure systems for air distribution systems in	n Florida buildings.		
Fiscal Impact Statement				
Impact to local entity relative to e Improves	nforcement of code			
Impact to building and property on neutral	wners relative to cost of compliance with co	de		
Impact to industry relative to the neutral	cost of compliance with code			
Requirements				
	connection with the health, safety, and welfa	are of the general pul	blic	
Strengthens or improves the cod Improves	e, and provides equivalent or better products	, methods, or system	is of construction	
1	aterials products methods or systems of co	nstruction of demon	strated canabilities	

- criminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate
- Does not degrade the effectiveness of the code Does not degrade the effectiveness of the code.
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

<u>08/09/2012 - 09/23/2012</u>

Proponent	BOAF CDC	Submitted

23/2012

Attachments

No

#### Comment:

M5784-G1

No data or justification was provided.

Manufacturers installation has to be followed, code does not have to spell this out for every item.

These item are covered in 603.9 IMC 2012.

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

9/23/2012

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

603.1.7 Approved closure systems. Closure system materials, including adhesives when used, shall have a flame spread rating not over 25 without evidence of continued progressive combustion and a smoke-developed rating not over 50 when tested in accordance with the ASTM E 84. The following closure systems and materials are approved for air distribution construction and sealing for the applications and pressure classes prescribed in Sections 603.2 through 603.10:

1. Metal Closures.

a. Welds applied continuously along metal seams or joints through which air could leak.

b. Snaplock seams, and grooved, standing, double-corner, and Pittsburgh-lock seams as defined by SMACNA, as well as all other rolled mechanical seams. All seams shall be rolled or crimped.

2. Gasketing, which achieves a 25/50 flame spread, smoke density development rating under ASTM E 84 or UL 723, provided that it is used only between mated surfaces which are mechanically fastened with sufficient force to compress the gasket and to fill all voids and cracks through which air leakage would otherwise occur.

<u>3. Mastic Closures. Mastic shall be placed over the entire joint between mated surfaces. Mastics shall not be diluted.</u> <u>Approved mastics include the following:</u>

a. Mastic or mastic plus embedded fabric systems applied to fibrous glass ductboard that are listed and labeled in accordance with the UL 181A, Part III.

b. Mastic or mastic plus embedded fabric systems applied to nonmetal flexible duct that are listed and labeled in accordance with the UL 181B, Part II.

c. Mastic ribbons, which achieve a 25/50 flame spread, smoke density development rating under ASTM E 84 or UL 723, provided that they may be used only in flange-joints and lap-joints, such that the mastic resides between two parallel surfaces of the air barrier and that those surfaces are mechanically fastened.

<u>4. Tapes. Tapes shall be applied such that they extend not less than 1 inch (25 mm) onto each of the mated surfaces and shall totally cover the joint. When used on rectangular ducts, tapes shall be used only on joints between parallel rigid surfaces and on right angle joints. Approved tapes include the following:</u>

a. Pressure-sensitive tapes.

1) Pressure-sensitive tapes applied to fibrous glass ductboard that are listed and labeled in accordance with the UL 181A, Part I.

2) Pressure-sensitive tapes applied to nonmetal flexible duct that are listed and labeled in accordance with the UL 181B, Part I.

<u>b. Heat-activated tapes applied to fibrous glass ductboard that are listed and labeled in accordance with the UL 181A, Part II.</u>

5. Aerosol Sealant. Such sealants shall be installed by manufacturer-certified installers following manufacturer instructions and shall achieve 25/50 flame spread/smoke density development ratings under ASTM E 84 or UL 723.

6. Foams. Spray polyurethane foam shall be permitted to be applied without additional joint seals.

### M5787

M5787					Page	146 <del>8</del> 0155
Date Submitted 7/30/2	2012	Section 603.10		Proponent	Cheryl Harris	
Chapter 6		Affects HVHZ	No	Attachments	No	
TAC Recommendation	No Affirmative Recor	nmendation withou	t a Second			
Commission Action	Pending Review					
<u>Comments</u>						
General Comments	No	Alte	rnate Language	No		
<b>Related Modifications</b>						
Summary of Modification	n					
To maintain Florida	Specific Code as relat	ted to duct supports	6			
Rationale						

To provide clarification as to acceptable duct support in Florida buildings.

#### **Fiscal Impact Statement**

Impact to local entity relative to enforcement of code

Improves

Impact to building and property owners relative to cost of compliance with code Neutral

Impact to industry relative to the cost of compliance with code

Neutral

#### Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public Yes

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction Improves the code
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities Does not discriminate
- Does not degrade the effectiveness of the code

Does not degrade the effectiveness of the code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

<u>08/09/2012 - 09/23/2012</u>

						Faye 147
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	

#### Comment:

5

5787.

No data or justification was provided.

Manufacturers installation has to be followed, code does not have to spell this out for every item.

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g) these items are covered in 603.9 IMC 2012.

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

603.10 Supports. Ducts shall be supported with approved hangers at intervals not exceeding 10 feet (3048 mm) in accordance with requirements of Sections 603.10.1 - 603.10.3, or by other approved duct support systems designed in accordance with the Florida Building Code, Building International Building Code. Flexible and other factory-made ducts shall be supported in accordance with the manufacturer's installation instructions.

603.10.1 Metal ducts. Metal ducts shall be supported by <sup>1</sup>/<sub>2</sub>-inch (13 mm) wide 1-gage metal straps or 12-gage galvanized wire at intervals not exceeding 10 feet (3048 mm) or other approved means.

603.10.2 Rigid nonmetal ducts. Rigid nonmetallic ducts shall be supported in accordance with the manufacturer's installation instructions.

603.10.3Flexible ducts. Flexible ducts shall be configured and supported so as to prevent the use of excess duct material, prevent duct dislocation or damage, and prevent constriction of the duct below the rated duct diameter in accordance with the following requirements:

1. Ducts shall be installed fully extended. The total extended length of duct material shall not exceed 5 percent of the minimum required length for that run.

2. Bends shall maintain a center line radius of not less than one duct diameter.

3. Terminal devices shall be supported independently of the flexible duct.

<u>4. Horizontal duct shall be supported at intervals not greater than 5 feet (1524 mm). Duct sag between supports shall not exceed ½ inch (12.7 mm) per foot of length. Supports shall be provided within 1½ feet (38 mm) of intermediate fittings and between intermediate fittings and bends. Ceiling joists and rigid duct or equipment may be considered to be supports.</u>

5. Vertical duct shall be stabilized with support straps at intervals not greater than 6 feet (1829 mm).

6. Hangers, saddles and other supports shall meet the duct manufacturer's recommendations and shall be of sufficient width to prevent restriction of the internal duct diameter. In no case shall the material supporting flexible duct that is in direct contact with it be less than 1½ inches (38 mm) wide.

## M--0-

VI5785		<u>-</u>		Page 149 <b>6</b> f <sup>1</sup> 15	5
Date Submitted	7/30/2012	Section 603.2	Proponent	Cheryl Harris	
Chapter	6	Affects HVHZ No	Attachments	No	
TAC Recommend	lation No Affirmative	Recommendation without a Second	•		
Commission Acti	on Pending Revie	W			
<u>Comments</u>					
General Commen	its No	Alternate Langu	iage No		
Related Modifica	ations				
Summary of Mo					
To maintai	in Florida Specific Code r	elated to duct sizing.			
Rationale					
Provides c	larification for equivalent	computation method as it relates to F	lorida buildings.		
Fiscal Impact St	atement				
•	local entity relative to en	forcement of code			
•	roves				
Impact to Neu	• • • •	ners relative to cost of compliance	with code		
		ost of compliance with code			
Neu	•	ost of compliance with code			
Requirements					
Has a reas Yes.		connection with the health, safety, a	nd welfare of the general pu	DIIC	
•	ns or improves the code oves	and provides equivalent or better p	products, methods, or system	ns of construction	
	discriminate against mat s not discriminate	erials, products, methods, or syster	ns of construction of demon	strated capabilities	
Does not a	degrade the effectivenes	s of the code			

- Does not degrade the effectiveness of the code Does not degrade the effectiveness of the code.
- Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state? YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process? NO

08/09/2012 - 09/23/2012	

						Fage 100 01 100
Proponent	BOAF CDC	Submitted	9/23/2012	Attachments	No	-

#### Comment:

5

5785-(

5

This code change is unnecessary as the provisions contained in the proposed amendment are adequately addressed in the applicable international code. Per FS 553.73 (7) (g)

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

603.2 Duct sizing. Ducts installed within a single dwelling unit shall be sized in accordance with ACCA Manual D or other approved methods. Ducts installed within all other buildings shall be sized in accordance with the ASHRAE Handbook of Fundamentals or other equivalent computation procedure <u>based on the following:</u>

1. Calculation of the supply air for each room shall be based on the greater of the heating load or sensible cooling load for that room.

2. Duct size shall be determined by the supply air requirements of each room, the available static pressure and the total equivalent length of the various duct runs.

3. Friction loss data shall correspond to the type of material used in duct construction.

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M5656					Page 1	53 <del>8</del> 2155
Date Submitted	7/25/2012	Section 202		Proponent	Ann Stanton	
Chapter	2	Affects HVHZ	No	Attachments	No	
TAC Recommendat Commission Action		ommendation witho	ut a Second			
<u>Comments</u>						
General Comments	s No	Alte	ernate Language	No		
Related Modificati	ions					
5655	<b>C</b> = = (1 = 1)					
Summary of Modif	ns relative to duct sealing c	riteria common to th	e Energy Mechanica	l and Residenital cod	95	
Rationale			c Energy, Meenanica			
Definitions connot used in the	ommon to Florida-specific d he base code.	uct sealing and atta	chment criteria from	he Energy code are r	needed in explanation of t	erms
Fiscal Impact State		amont of code				
•	cal entity relative to enforc Proposed language is curre		rida Building Code.			
Impact to bu	uilding and property owners Proposed language is curre	s relative to cost of	compliance with co	de		
•	dustry relative to the cost of Proposed language is curre	•				
Requirements						
Has a reason	nable and substantial conn Proposed language is curren			re of the general put	blic	
•	s or improves the code, and Proposed language is curren	•	•	, methods, or systen	ns of construction	
	scriminate against material oposed language is current			nstruction of demons	strated capabilities	
	grade the effectiveness of roposed language is current		a Building Code.			
Is the proposed code	e modification part of a prior c	ode version?				
YES						

The provisions contained in the proposed amendment are addressed in the applicable international code? NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Proposed language was in the 2010 FBC. It was processed in accordance with an approved plan from the Florida Building Commission for the purpose of maintaining Florida efficiencies.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

Add or change the following as read:

AIR-HANDLING UNIT. The fan unit of a furnace and the fan-coil unit of a split-system, packaged air conditioner or heat pump.

**ATTIC.** An enclosed unconditioned space located immediately below an uninsulated roof and immediately above the ceiling of a building. For the roof to be considered insulated, roof insulation shall be at least the R-value required to meet Section R405.2.1 *or Section C407.2.1 of the Florida Building Code, Energy Conservation*.

BOILER, HOT WATER SUPPLY. Any vessel used for generating hot water to be used external to the vessel, which exceeds any of the following limitations:

1. A heat input capacity of 400,000 Btuh (117.2 kW).

2. A water temperature of 210°F (99°C).

3. A nominal water capacity of 120 gal (454 L).

**CONDITIONED SPACE.** That volume of a structure which is either mechanically heated, cooled or both heated and cooled by direct means. Spaces within the thermal envelope that are not directly conditioned shall be considered buffered unconditioned space. Such spaces may include, but are not limited to, mechanical rooms, stairwells and unducted spaces beneath roofs and between floors. Air leakage into dropped ceiling cavities does not constitute conditioned space. See "SPACE (a) conditioned space in Section 202 of the *Florida Building Code, Energy Conservation*. An area, room or space being heated or cooled pby any equipment or appliance.

**DRAWBAND.** A fastener which surrounds and fastens a duct fitting with either the inner lining or the outer jacket of flexible ducts. Tension ties, clinch bands, draw ties, and straps are considered drawbands.

DUCT FITTING. Couplings that join sections of ducting together or to other air distribution system components. When used to join sections of flexible non-metal duct, duct fittings are typically metal or other rigid material and have a raised bead or indented groove against which the drawband is secured. Terminal fittings join ducting to supply outlets and return inlets at the end of the distribution system and include register and return boots and register and return boxes. Intermediate fittings join flexible non-metal duct to other sections of flexible non-metal duct, to sections of other types of ducting, and to mechanical equipment and include collars, take-offs, tap-ins, sleeves, and the supply and return ends of air handlers and furnaces. See "INTEGRAL FLANGE DUCT COLLAR FITTING"

**ENCLOSED SUPPORT PLATFORM.** A framed enclosure located inside or outside the conditioned space, which supports a furnace or central heating/air conditioning air handler and which may contain and protect a return duct section of the air distribution system.

**EXISTING BUILDING.** A building or portion thereof that was previously occupied or approved for occupancy by the authority having jurisdiction. (Reference Section 101.4.1 of the *Florida Building Code, Energy Conservation*.)

**FLEXIBLE NON-METAL DUCT.** A type of flexible air duct comprised of a wire-reinforced core (usually plastic), an insulation layer and an outer jacket (usually a durable reinforced plastic).

**GASKETS OR GASKETING.** A compressible, resilient, elastic packing, made of foam rubber or of a synthetic foam polymer. A gasket is distinct from the components being joined and must be capable of closing all air leakage pathways between the air barriers of the joint and of creating an air-tight seal.

INTEGRAL FLANGE DUCT COLLAR FITTING. . A type of duct collar fitting having a flange that is secured to and sealed to the cylinder or sleeve of the fitting. A function of this flange is to provide a surface which can be sealed to rigid ductboard.

**MASTIC.** A thick, pliable substance that adheres well to specific materials and is used for sealing different building components together. Mastics are often used in conjunction with fibrous or mesh fabric.

MASTIC RIBBONS. Mastic ribbons are malleable, putty-like packings which are used in applications akin to those of gasketing; but, they do not have the elasticity of gasketing. Such mastics contain nearly 100 percent solid, require no curing in air, and are used without reinforcing fabric.

**MECHANICAL CLOSET.** For the purposes of this code, a closet used as an air plenum which contains the blower unit or air handler of a central air conditioning or heating unit.

**MECHANICAL EQUIPMENT PLENUM CHAMBER.** In an air distribution system, that part of the casing, or an air chamber furnace, to or from which the air duct system delivers conditioned air.

<u>SEAL or SEALING – AIR DUCT</u>. The use of closure products, either welds, mastic, mastic plus embedded fabric, adhesives, caulking, gaskets, pressure sensitive tapes, heat-activated tapes or combinations thereof as allowed by specific sections of this code, to close cracks, joints, seams, and other openings in the air barriers of air duct, air handling units, and plenum chambers for the purpose of preventing air leakage. No joining of opening from which a closure product is absent shall be considered sealed unless considered otherwise in specific cases identified by this code. Closeness of fit between mated parts alone shall not be considered a seal.