Plumbing

Proposed Code Modifications

2013 Florida Building Code - Full Report

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

TAC: Plumbing

Sub Code: Building

Total Mods for Plumbing: 37

P5224

Date Submitted	7/17/2012	**Section**	2902.2	**Proponent**	Suzanne Davis
Chapter	29	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

To be consistent with the Florida Statutes and to implement the Commission plan to update the 2013 Code

Rationale

To continue Commission policy in formatting Chapter 29 and to implement the FBC process for the 2013 FBC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Currently used under the 2010 Code, no new requirements being established

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

Currently used under the 2010 Code, no new requirements being established

Impact to industry relative to the cost of compliance with code

Currently used under the 2010 Code, no new requirements being established

Requirements

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

Carried over from the previous, field tested and proven to be effective

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from the previous, field tested and proven to be effective

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

Carried over from the previous, field tested and proven to be effective

Does not degrade the effectiveness of the code

Carried over from the previous, field tested and proven to be effective

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

To continue Commission policy in formatting Chapter 29 and to implement the FBC process for the 2013 FBC.

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

403.2 Separate facilities. Change to read as shown.

Exceptions:

2. Separate facilities shall not be required for food service establishments which seat 10 persons or less.

3. No change

Sub Code: Fuel Gas

P5282

Date Submitted	7/22/2012	**Section**	202	**Proponent**	Rebecca Quinn obo DEM
Chapter	2	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

5283, 5285

Summary of Modification

Achieves consistency in the definitions across all codes. Approved as Submitted by FEMA as G8-12.

Rationale

This proposal brings this definition in the FBC, Fuel Gas Code into consistency with the definition that is already in the Building Code. Approved as Submitted by FEMA for 2015 IPC, IMC, and IFGC (G8-12).

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Consistency of definitions across all codes.

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

Consistency of definitions across all codes.

Impact to industry relative to the cost of compliance with code

Consistency of definitions across all codes.

Requirements

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

Consistency of definitions across all codes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Consistency of definitions across all codes.

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

Consistency of definitions across all codes.

Does not degrade the effectiveness of the code

Consistency of definitions across all codes.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Thomas Allen **Submitted** 9/23/2012 **Attachments** No

Comment:

This change is unnecessary, this is not information needed in the fuel gas code, and it is in the building code already in the flood requirements.

It has been submitted to the I-Code process and has been approved “As Submitted” by the code committee, however it still has to go to the final action hearing in October to be included in the 2015 IPC, if this is needed it will be approved in Portland for inclusion into the 2015 IPC.

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 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)

P5282-G1

General Comment - 08/09/2012 - 09/23/2012

P5282-G2

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

Comment:
This change is unnecessary, this is not information needed in the fuel gas code, and it is in the building code already in the flood requirements.

It has been submitted to the I-Code process and has been approved “As Submitted” by the code committee, however it still has to go to the final action hearing in October to be included in the 2015 IPC, if this is needed it will be approved in Portland for inclusion into the 2015 IPC.

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 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)

DESIGN FLOOD ELEVATION. The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the *building's* perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

P4950

Date Submitted	7/5/2012	**Section**	306.3.2 Air-handling units.	**Proponent**	Suzanne Davis
Chapter	3	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Update section 306.3.2 IFGC.

Rationale

Update section 306.3.2 IFGC to be consistent with the Energy Code and was part of a settlement agreement established with the Home Builders Association. This modification will also implement Commission plans for the 2013 code changes.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. currently used under the 2010 FBC. No new requirements being established.

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

No impact. currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried forward from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried forward from previous field tested code. Proven to be effective.

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

Carried forward from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried forward from previous field tested code. Proven to be effective.

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

Update section 306.3.2 IFGC to be consistent with the Energy Code and was part of a settlement agreement established with the Home Builders Association. This modification will also implement Commission plans for the 2013 code changes.

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

306.3.2 Air-handling units. Add to read as shown:

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

1. The service panel of the equipment is located within 6 feet (1829 mm) feet 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 thatthe 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 YOUENSURE PROPER WORKING ORDER OF THESE DEVICES BEFORE EACH SEASON OF PEAK OPERATION.

Date Submitted	7/3/2012	**Section**	310.1.1	**Proponent**	Robert Torbin
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

modify current 310.1.1: Permit the use of a listed arc-resistant CSST as an alternate method and material in lieu of direct electrical bonding.

Rationale

The use of a CSST product with a protective, arc-resistant jacket is an alternate method of protection against electrical arcing damage caused by high voltage transient events such as a nearby lightning strike. An arc-resistant jacket does not rely on direct bonding to the grounding electrode system to reduce or eliminate damage from electrical arcing. Instead, the protective jacket acts as a resistor and is designed to locally absorb and dissipate the arcing energy over a short length of the jacket. The jacket, in essence, disrupts the focus of the arc and reduces the energy level below the threshold value that can cause a perforation of the tubing wall. This dynamic action is equally effective compared to the current CSST bonding method regardless of the bonding conductor size or length. The protection against arcing is provided uniformly throughout the piping system, and is not affected by close proximity to other metallic systems that may not be similarly bonded. The ICC Evaluation Service has developed listing criteria for arc-resistant jackets to verify that this design approach will provide an ability to resist damage from transient arcing currents under a wide range of conditions without the need for additional bonding as prescribed currently in 310.1.1 of the 2012 edition of the IFGC.

CSST with arc-resistant jacket has been commercially installed since 2004, and at the present time, three different (black-jacketed) products are commercially available. Field experience has been very favorable with no known cases of indirect lightning damage to CSST piping systems using these arc-resistant jackets. Currently, at least 10 states permit the installation of the arc-resistant CSST without the need for additional bonding. Given that both conventional (yellow) and advanced (black) CSST products will continue to be commercially available, both methods of electrical protection of CSST systems should be recognized and permitted within the Code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

There will be no impact to the local code enforcement agency as the electrical inspection of bonding required for yellow CSST systems would not be required. There are no additional bonding or installation requirements for arc-resistant CSST products.

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

There will be a minimal cost impact to property owners relative to the cost of code compliance. While the bonding of the CSST will not be required (saving an estimated $45), the arc-resistant CSST is 5% more expensive than conventional yellow CSST. The change should be cost-neutral.

Impact to industry relative to the cost of compliance with code

There will be no impact on the industry relative to the cost of compliance with the code change as this work would be fully accounted for at the time of construction, and there are no associated operational costs as the arc-resistant jacket is a passive protective measure.

Requirements

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

Since 2004, field experience with arc-resistant jackets has been very favorable with no known cases of indirect lightning damage to CSST piping using the arc-resistant jackets. Currently, at least 10 states permit the installation of the arc-resistant CSST without the need for additional bonding.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The protection against arcing is provided uniformly throughout the piping system, and does not depend on the level or quality of bonding provided for the gas piping system. The jacket is not affected by close proximity to other metallic systems that may not be equally bonded.

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

The proposed change does not alter or discriminate against any code approved gas piping material, and only seeks to elevate the level of protection to the whole house based on known problems with lightning induced arcing from non-bonded metallic systems.

Does not degrade the effectiveness of the code

The code already addresses the need for protection against electrical insults and the proposed change makes the code more effective by expanding the coverage for this requirement by offering an alternative method of protection.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P4925-G1

Proponent Robert Torbin **Submitted** 9/21/2012 **Attachments** No

Comment:

Delete Section 309.1 Grounding in its entirety as it would be redundant with the proposed Section 310.1.1 CSST and, therefore, unnecessary. Proposed Section 310.1.1 is more comprehensive with specific instructions on how to install bonding connections for CSST.

General Comment - 08/09/2012 - 09/23/2012

P4925-G2

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)

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.

Add the following paragraph to the existing section 310.1.1:

310.1.1 CSST.
Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system. The bonding jumper shall connect to a metallic pipe or fitting between the point of delivery and the first downstream CSST fitting. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent. Gas piping systems that contain one or more segments of CSST shall be bonded in accordance with this section.

CSST with an arc-resistant jacket listed by an approved agency for installation without the direct bonding, as prescribed in this section, shall be installed in accordance with section 310.1 and the manufacturer's installation instructions.

Date Submitted	7/3/2012	**Section**	310.1	**Proponent**	Robert Torbin
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Delete current 310.1 and 310.1.1 and replace with: All metal gas piping and tubing shall be bonded to the grounding electrode system of the premises. The bonding conductor shall not be smaller than 6 AWG copper wire or equivalent.

Rationale

All metallic gas piping systems should be bonded similar to the requirements for bonding metal water piping and exposed structural metal, and for the same reasons. The metallic gas piping (steel, copper or CSST) is an excellent conductor, and thus, needs to be bonded for safety. The underground fuel gas service piping to a dwelling or small commercial building is commonly nonmetallic or is electrically isolated from the metallic building piping. This is similar to the plastic water pipe supply line to smaller buildings or structures. Yet, metal water piping in these buildings or structures is required to be bonded with a “full size” conductor even though not connected to a water pipe grounding electrode. Many residential, commercial and industrial buildings contain as much or more metallic gas piping as metal water piping that is not being used as a grounding electrode. Metallic gas piping is just as conductive and poses an identical risk of electrical shock as water piping, and, therefore, should be bonded in the same manner.

The proposed type of bonding for metal gas piping is commonly practiced in North America and around the globe. The Canadian Electrical Code (CSA C22.1) requires all metallic gas piping to be bonded (with a 6 AWG conductor) directly to the grounding electrode system as stated in Section 10-406). US homes that install lightning protection systems in accordance with NFPA 780 require the bonding of any and all metallic gas piping systems with at least a 6 AWG copper conductor. The metal gas piping systems in many buildings often consists of hundreds of feet of piping, and an equipment grounding conductor of 12 or 14 AWG will not adequately bond the system to safely de-energize it in a ground fault or over-voltage condition. The gas piping contains flammable gases that can create hazardous conditions leading to fires and explosions.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

There will be minimal impact to the local code enforcement agency as electrical inspection of bonding is already required for such systems as the copper water piping. There are no special bonding requirements for gas piping and the inspection can be performed at the same time as these other systems.

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

There will be a minimal cost impact to property owners relative to the cost of code compliance. Bonding of gas piping will require labor time and materials, and is estimated at less than $20 for the clamps and bonding wire and 0.5 labor hours estimated at $25.

Impact to industry relative to the cost of compliance with code

There will be no impact on the industry relative to the cost of compliance with the code change as this work would be fully accounted for at the time of construction, and there are no associated operational costs as bonding is a passive protective measure.

Requirements

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

There are numerous lightning induced residential fires each year and bonding of all metallic systems is an important element of lightning protection (see NEC 250.104B and 250.106 and NFPA 780). In areas that require full bonding of gas piping systems, the number of lightning fires has been reduced.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Bonding of CSST gas piping and metallic water piping are already required and expanding the bonding to all gas piping improves the level of protection for consumers by moving towards an equipotential state without requiring the installation of a lightning protection system.

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

The proposed change does not alter or discriminate against any code approved gas piping material, and only seeks to elevate the level of protection to the whole house based on known problems with lightning induced arcing from non-bonded metallic systems.

Does not degrade the effectiveness of the code

The code already addresses the need for protection against electrical insults and the proposed change makes the code more effective by expanding the coverage for this requirement.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P4924-G1

Proponent Robert Torbin **Submitted** 9/21/2012 **Attachments** No

Comment:

Given that this proposal requires bonding of all gas piping regardless of material, then Section 309.1 Grounding is redundant and unnecessary. Therefore, delete Section 309.1 if proposal is accepted.

General Comment - 08/09/2012 - 09/23/2012

P4924-G2

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)

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.

SECTION 310 (IFGS) ELECTRICAL BONDING

310.1 Metal pipe and tubing ~~other than CSST~~.
Each above-ground portion of a gas piping system installed in, or attached to a building or structure, ~~other than corrugated stainless steel tubing (CSST) that is likely to become energized~~ shall be electrically continuous and bonded to an effective ground-fault current path. ~~Gas piping other than CSST shall be considered to be bonded where it is connected to appliances that are connected to the equipment grounding conductor of the circuit supplying that appliance.~~

~~310.1.1 CSST.~~
~~Corrugated stainless steel tubing (CSST)~~ All gas piping systems shall be bonded to the electrical service grounding electrode system. ~~The bonding jumper shall connect to a metallic pipe or fitting between the point of delivery and the first downstream CSST fitting~~. The bonding conductor and clamp shall be connected in an accessible location to a metallic pipe or fitting downstream of the point of delivery. The bonding ~~jumper~~ conductor shall be not smaller than 6 AWG copper wire or equivalent. ~~Gas piping systems that contain one or more segments of CSST shall be bonded in accordance with this section.~~

P5036

Date Submitted	7/9/2012	**Section**	311 CARBON MONOXIDE CONTR	**Proponent**	Suzanne Davis
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section 311 IFGC to implement fBC approved plan for 2013 code.

Rationale

To clarify the scope of the FBC in accordance with the FS and to also implement the FBC process for the 2013 FBC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To clarify the scope of the FBC in accordance with the FS and to also implement the FBC process for the 2013 FBC.

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

General Comment - 08/09/2012 - 09/23/2012

P5036-G1

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:

The proposal provides for carbon monoxide control provisions as per 553.885 FS.

General Comment - 08/09/2012 - 09/23/2012

P5036-G2

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

Comment:
BOAF CDC:
IBC 2012 Section 908.7 and IRS 2012 Section 315 cover Carbon Monoxide Alarms with better language than the 2010 FBC. 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.

Section 311 CARBON MONOXIDE CONTROL SYSTEMS. Add text to read as follows:

SECTION 311

CARBON MONOXIDE CONTROL SYSTEMS

311 Carbon monoxide control systems. See Section 916 of the Florida Building Code, Building.

P5249

Date Submitted	7/18/2012	**Section**	•401.10 Third Party Testing & Certification	**Proponent**	Joseph Eysie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

General Comments Yes

Alternate Language No

Related Modifications

5248

Summary of Modification

Remove the language from the 2012 IFGC which requires that piping, tubing and fittings shall either be tested by an approved third party agency or certified by an approved third party certification agency

Rationale

If the proposed Modification is not approved, the code will discriminate against steel pipe in fuel gas systems.

Based on our research and findings the 3rd party certification and testing criteria for steel pipe used in fuel gas systems does not currently exist and this would preclude steel pipe from being utilized in fuel gas systems in Florida.

If the proposed Modification is not approved, the code would preclude contractors from utilizing steel pipe for specific applications, , where steel pipe is more cost effective or preferred. Steel pipe is field tested and has proven to be effective and safe.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The proposed Modification should have no impact relative to enforcement of code

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

If the proposed Modification is not approved, the code may increase piping material costs by excluding steel pipe from gas systems, which would passed on to property owners.

Impact to industry relative to the cost of compliance with code

If the proposed Modification is not approved, the code may increase piping material costs by excluding steel pipe from gas systems.

Requirements

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

Yes, the proposed modification would ensure that the gas pipe requirements within the 2010 Florida Building Code would remain unchanged. Steel pipe is field tested and has proven to be effective and safe.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, the proposed modification would ensure that the gas pipe requirements within the 2010 Florida Building Code would remain unchanged and ensure the availability of steel pipe as an available product in fuel gas systems.

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

No, the proposed modification would ensure that the gas pipe requirements within the 2010 Florida Building Code would remain unchanged. If the proposed modification is rejected then steel pipe for fuel gas installations would be prohibited.

Does not degrade the effectiveness of the code

No, the proposed modification would not degrade the effectiveness of the code and will ensure that the gas pipe requirements within the 2010 Florida Building Code would remain unchanged.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

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

Comment:

Steel pipe can still be accepted under 104.11 FBC as an alternative material. This is not a Florida specific problem and need to be addressed in the I-Codes.

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.

P5249-G1

~~**401.10 Third-party testing and certification.** All piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this code and shall be identified in accordance with Section 401.9. Piping, tubing and fittings shall either be tested by an approved third-party testing agency or certified by an approved *third-party certification agency*.~~

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Date Submitted	7/18/2012	**Section**	401.09 Identification	**Proponent**	Joseph Eysie
Chapter	4	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Provide alternative language to Section 401.9 of the IFGC

Rationale

If the proposed language within the text of the Modification is not approved, the code will discriminate against certain fittings in fuel gas systems that are currently unable to be marked.

Given the large assortment of pipe lengths, fittings, and pipe tubing associated with installation, requiring Manufacturer Identification is not be feasible for all fittings.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

The proposed Modification should have no impact relative to enforcement of code

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

If the proposed Modification is not adopted, the code may increase piping material costs.

Impact to industry relative to the cost of compliance with code

If the proposed Modification is not adopted, the code may increase piping material costs.

Requirements

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

Yes, the proposed modification would ensure that the gas pipe requirements within the 2010 Florida Building Code remain unchanged

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, the proposed modification would ensure that the gas pipe requirements within the 2010 Florida Building Code remain unchanged and would ensure the availability of pipe fittings.

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

No, the proposed modification would ensure that the gas pipe requirements within the 2010 Florida Building Code would remain unchanged.

Does not degrade the effectiveness of the code

No, the proposed modification would not degrade the effectiveness of the code and will ensure that the gas pipe requirements within the 2010 Florida Building Code would remain unchanged.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5248-G1

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

Comment:

This change was submitted to the IFGC. FG8 -12
BOAF supports this change.

401.9 Identification. Each length of pipe and tubing and each pipe fitting, utilized in a fuel gas system, shall bear the identification of the manufacturer.

Exception: The manufacturer identification for fittings and pipe nipples shall be on each piece or shall be printed on the fitting or nipple packaging or provided documentation

P4951

Date Submitted	7/5/2012	**Section**	Chapter 8	**Proponent**	Suzanne Davis
Chapter	8	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update Chapter 8 Referenced Standards to be consistent with FBC plans for the 2013 code

Rationale

To correlate the IFGC with the FBC and subcodes. Also to implement FBC policies for the 2013 code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. no new requirements established.

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

No impact. Currently used under the 2010 FBC. no new requirements established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. no new requirements established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To correlate the IFGC with the FBC and subcodes. Also to implement FBC policies for the 2013 code.

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

General Comment - 08/09/2012 - 09/23/2012

P4951-G1

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The proposal provides for code correlation.

Chapter 8 Referenced Standards

Change to add as shown.

Florida Codes Florida Building Commission

c/o Florida Department of Business and Professional Regulation

Building Codes and Standards

1940 North Monroe Street

Tallahassee, Florida 32399.

Standard reference number	Title	Referenced in code section number
FBC-B—13	Florida Building Code, Building	101.1, 201.3, 301.14, 302.1, 302.2, 305.6, 306.6, 401.1.1, 412.6, 413.3, 413.3.1, 501.1, 501.3, 501.12, 501.15.4, 609.3, 614.2, 706.1, 706.3
Chapter 13	Florida Building Code, Energy Conservation	301.2
Chapter 27	Florida Building Code, Building: Electrical (NEC/NFPA 70)	201.3, 306.3.1, 306.4.1, 306.5.2, 309.1, 309.2, 413.8.2.4, 703.6, 706.3.6,
FBC-M—13	Florida Building Code, Mechanical	201.3, 301.10, 301.13, 304.11, 501.1, 614.2, 618.5, 621.1, 624.1, 631.2, 632.1, 703.1.2, 706.3.2
FBC-P—13	Florida Building Code, Plumbing	201.3, 301.6, 624.1.1, 624.2
FRC—13	Florida Residential Code	703.2.1

FFPC—13	Florida Fire Prevention Code	201.3, 303.4, 401.2, 412.1, 412.6, 412.7, 412.7.3, 412.8, 413.1, 413.3, 413.3.1, 413.4, 413.8.2.5, 701.1, 701.2, 703.2, 703.2.2, 703.3.8, 703.4, 703.5, 704.1.2, 704.3, 704.4, 706.2, 706.3.4, 706.3.5, 707.1, 707.2, 708.1

P4953

Date Submitted	7/5/2012	**Section**		**Proponent**	Suzanne Davis
Chapter	Appendix C	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section Appendix C IFGC to implement FBC approved plan for 2013 Code.

Rationale

To be consistent with Commission policies with regard to treatment of appendecies. Commission policy has been to reserve the majority of the appendices in the I-Codes.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To be consistent with Commission policies with regard to treatment of appendecies. Commission policy has been to reserve the majority of the appendices in the I-Codes.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The Commission has no authority to adopt an appendix as an option for local adoption.

P4953-G1

RESERVED (not to be adopted or utilized)

P4954

Date Submitted	7/5/2012	**Section**		**Proponent**	Suzanne Davis
Chapter	Appendix D	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section Appendix D IFGC to implement FBC approved plan for 2013 Code.

Rationale

To be consistent with Commission policies with regard to treatment of appendecies. Policy has been to reserve the majority of the appendices in the I-Code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To be consistent with Commission policies with regard to treatment of appendecies. Policy has been to reserve the majority of the appendices in the I-Code.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The Commission has no authority to adopt an appendix as an option for local adoption.

P4954-G1

RESERVED (not to be adopted or utilized)

P5038

Date Submitted	7/9/2012	**Section**	101, 102	**Proponent**	Suzanne Davis
Chapter	1	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	Yes				

Related Modifications

Summary of Modification

Update section 101-110 Plumbing to implement FBC approved plan for 2013 code

Rationale

To continue Commission policy in formatting Chapter 1 and to implement the FBC process for the 2013 FBC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To continue Commission policy in formatting Chapter 1 and to implement the FBC process for the 2013 FBC.

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

P5038-A1

Proponent BOAF CDC **Submitted** 9/23/2012 **Attachments** Yes CDC

Text of Modification

Florida Supplement to the I Codes:

This draft is prepared under the following assumptions:

For the purposes of using this supplement the following references apply throughout:

International Building Code, use the current Florida Building Code, Building

International Residential Code, use the current Florida Building Code, Residential

International Plumbing Code, use the current International Plumbing Code with the Florida Supplement to the I Codes Florida Building Code, Plumbing Section.

International Mechanical Code, use the current International Mechanical Code with the Florida Supplement to the I Codes Florida Building Code, Mechanical Section.

International Fire Code, use the current Florida Fire Prevention Code.

International Fuel Gas Code, use the current International Fuel Gas Code with the Florida Supplement to the I Codes Florida Building Code, Fuel Gas Section.

International Existing Building Code, use the current International Existing Building Code with the Florida Supplement to the I Codes Florida Building Code, Existing Section.
International Energy Conservation, use the current Florida Building Code, Energy Conservation
Where accessibility is required, Use the current Florida Building Code, Building, Accessibility

The Florida Supplement lists the Florida Code Changes and the sections that do not apply in Florida

FLORIDA BUILDING CODE, PLUMBING SUPPLEMENT 2013

CHAPTER 1 ADMINISTRATION

101.1 Title. These regulations shall be known as the *Plumbing Code* of the State of ***Florida*** ~~[NAME OF JURISDICTION]~~, hereinafter referred to as “this code.”

102 – 110 are Reserved and The provisions of Chapter 1 Sections 102 - 110 *Florida Building Code, Building* shall govern the administration and enforcement of the *Florida Building Code, Plumbing*.

CHAPTER 2 DEFINITIONS

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have the meanings as defined in Webster’s *Third New International Dictionary of the English Language Unabridged*. ~~ordinarily accepted meanings such as the context implies.~~

GRAY WATER. ~~Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays.~~As defined by 381.0065(2)(b) and (d) *Florida Statutes*, “Graywater” means that part of domestic sewage that is not blackwater, including waste from the bath, lavatory, laundry, and sink, except kitchen sink waste. “Blackwater” means that part of domestic sewage carried off by toilets, urinals, and kitchen drains.

GREASE INTERCEPTOR.

Hydromechanical. Plumbing appurtenances that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Continuous separation is accomplished by air entrainment, buoyancy and interior baffling.

Gravity. Plumbing appurtenances of not less than 7550~~0~~ gallons (2839~~1893~~ L) capacity that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Separation is accomplished by gravity during a retention time of not less than 30 minutes.

INDIVIDUAL SEWAGE DISPOSAL SYSTEM. ~~A system for disposal of domestic sewage by means of a septic tank, cesspool or mechanical treatment, designed for utilization apart from a public *sewer* to serve a single establishment or building.~~
An approved onsite sewage treatment and disposal system in accordance with Sections 381.0065 and 381.00655, *Florida Statutes* and Chapter 64E-6, *Florida Administrative Code*, Standards for Onsite Sewage Treatment and Disposal Systems. Synonymous with private sewage disposal system and private septic system.

RECLAIMED WATER. Water that has received treatment and is reused after flowing out of a domestic wastewater treatment facility.

REUSE. The deliberate application of reclaimed water for beneficial purpose.

CHAPTER 3 GENERAL REGULATIONS

301.3 Connections to drainage system.

Plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems required by Chapter 8.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved gray water system for flushing of water closets and urinals ~~or for subsurface landscape irrigation~~ in accordance with Chapter 13. Any sewage that discharges from the building must be connected to the sanitary drainage system of the building or premises and discharge to a sewage system in accordance with Chapter 7.

305.1 Corrosion. Pipes passing through concrete or cinder walls and floors or other corrosive material shall be protected against external corrosion by a protective sheathing or wrapping or other means that will withstand any reaction from the lime and acid of concrete, cinder or other corrosive material. Sheathing or wrapping shall allow for movement includingexpansion and contraction of piping. The wall thickness of the material shall be not less than 0.025 inch (0.64 mm).

Exception: Sleeving is not required for installation of CPVC into concrete or similar material.

305.1.1 Penetration. Protective sleeves around piping penetrating concrete slab-on-grade floors shall not be of cellulose-containing materials. If soil treatment is used for subterranean termite protection, the sleeve shall have a maximum wall thickness of 0.010 inch, and be sealed within the slab using a non-corrosive clamping device to eliminate the annular space between the pipe and the sleeve. No termiticides shall be applied inside the sleeve

317 Public Food Service Establishments and Food Establishments.

317.1 Requirements. Public food service establishments and food establishments, as defined in Chapter 381 Florida Statutes, Chapter 500 Florida Statutes and Chapter 509 Florida Statutes, shall comply with the applicable code requirements found in the Florida Building Code, Building, Chapter 4, Special Occupancy.

318.1 General. Irrigation/sprinkler systems and risers for spray heads shall not be installed within 1 foot (305 mm) of the building sidewall.

CHAPTER 4 FIXTURES, FAUCETS AND FIXTURE FITTINGS

403.1.3 Potty parity. In assembly occupancies, restrooms which are open to the public must have a ratio of 3:2 water closets provided for women as the combined total of water closets and urinals provided for men, unless these are two or fewer such fixtures for men, in accordance with §553.86, *Florida Statutes*.

Exception: This section does not apply to establishments licensed under Chapter 509, *Florida Statutes*, if the establishment does not provide meeting or banquet rooms which accommodate more than 150 people, and the establishment has at least the same number of water closets for women as the combined total of water closets and urinals for men.

403.1.3.1 Definitions.

1. **New construction**. Means new construction, building, alteration, rehabilitation or repair that equals or exceeds 50 percent of the replacement value existing on October 1, 1992, unless the same was under design or construction, or under construction contract before October 1, 1992.

2. **Assembly occupancy**. The use of a building or structure, or any portion thereof, for the gathering together of people for purposes such as civic, social or religious functions or for recreation, or for food **or drink consumption, or awaiting transportation.**

3. Historic building. A building which is (a) listed on the National Register of Historic Places; (b) listed on the State Register of Historic Places; (c) listed on a municipal register of historic property, designated according to local ordinance; or (d) included in a district which is listed on a municipal, state or national register of historic property and which has been determined to contribute to the historic significance of the district.

403.1.3.2 Occupancy content calculation. The occupancy content of a building, which determines the number of water closets required for men, shall be calculated using the square footage per person requirements established by the *Florida Building Code, Building.*

403.1.4 For the purposes of calculating the minimum number of required plumbing facilities, the requirements of Table 403.1 shall apply to any areas outside of the building that are used as part of the building's designated occupancy (single or mixed). Where additional seating is also utilized in these areas, the actual number of seats shall be added to the number of persons calculated by Table 403.1 to obtain the total additional facilities required.

403.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required ~~in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.~~ for food service establishments which seat 10 persons or less.

3. Separate facilities shall not be required in mercantile *occupancies* in which the maximum occupant load is 100 or fewer.

403.6 Sanitary facilities for public swimming pools. Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirement of Table 403.6. Unisex restrooms shall meet all the requirements for materials, drainage and signage as indicated in sections 424.1.6.1.1 through 424.1.6.1.4 of the *FBC, Building*. Each shall include a water closet, a diaper change table, a urinal, and a lavatory. Pools with a bathing load larger than 40 persons shall provide separatesanitary facilities labeled for each sex. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water's edge of each pool served by the facilities.

Exception: Where a swimming pool serves only a designated group of residential dwelling units and not the general public, poolside sanitary facilities are not required if all living units are within a 200 foot horizontal radius of the nearest water's edge, are not over three stories in height and are each equipped with private sanitary facilities.

403.6.1 Required fixtures. Fixtures shall be provided as indicated on Table 403.8. The fixture count of Table 403.8 is deemed to be adequate for the pool and pool deck area that is up to three times the area of the pool surface provided. An additional set of fixtures shall be provided in the men's restroom for every 7,500 square feet or major fraction thereof for pools greater than 10,000 square feet. Women's restrooms shall have a ratio of three to two water closets provided for women as the combined total of water closets and urinals provided for men. Lavatory counts shall be equal.

403.6.2 Outside access. Outside access to facilities shall be provided for bathers at outdoor pools. Where the restrooms are located within an adjacent building and the restroom doors do not open to the outside, the restroom doors shall be within 50 feet of the buildings exterior door. If the restrooms are not visible from any portion of the pool deck, signs shall be posed showing directions to the facilities. Directions shall be legible from any portion of the pool deck; letters shall be a minimum of 1-inch high.

403.6.3 Sanitary facility floors. Floors of sanitary facilities shall be constructed of concrete or other nonabsorbent materials, shall have a smooth, slip-resistant finish, and shall slope to floor drains. Carpets, duckboards and footbaths are prohibited. The intersection between the floor and walls shall be coved where either floor or wall is not made of waterproof materials such as tile or vinyl.

TABLE 403.6
PUBLIC SWIMMING POOL - REQUIRED FIXTURES COUNT

SIZE	MEN'S RESTROOMS			WOMEN'S RESTROOMS	
	Urinals	WC	Lavatory	WC	Lavatory
0 - 2500 sq ft	1	1	1	1	1
2501 - 5000 sq ft	2	1	1	5	1
5001 - 7500 sq ft	2	2	2	6	2
7501 - 10,000 sq ft	3	2	3	8	3

Section 404 Accessible Plumbing Facilities.
404.1 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with the ~~*International*~~ *Florida Building Code, Accessibility*.

423.3 Reclaimed water. Reclaimed water shall be permitted to be used for aesthetic uses such as decorative pools or fountains in accordance with Florida Department of Environmental Protection (DEP). Reuse of reclaimed water activities shall comply with the requirements of DEP rules.

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

602.3 Individual water supply. Where a potable public water supply is not available, individual sources of potable water supply meeting the requirements of *Florida Statute* 373 shall be utilized.

602.4 Reclaimed water. Reclaimed water shall be permitted to be used for flushing water closets and urinals and other fixtures which do not require potable water in accordance with Florida Department of Environmental Protection (DEP) Chapter 62-610, *F.A.C*. Reuse of reclaimed water activities shall comply with the requirements of DEP Chapter 62-610, *FAC*.

CHAPTER 7 SANITARY DRAINAGE

701.2 Sewer required. Buildings in which plumbing fixtures are installed and premises having drainage piping shall be connected to a ~~*public sewer,*~~ publicly owned or investor-owned sewerage system where available, or an *approved* onsite sewage treatment and ~~*private*~~sewage disposal system in accordance with Chapter 64E-6, *Florida Administrative Code*, Standards for Onsite Sewage Treatment and Disposal Systems ~~the *International Private Sewage Disposal Code*.~~

1003.2 Approval. The size, type and location of each interceptor and of each separator shall be approved by the plumbing official. Where the interceptor or separator is located within an onsite sewage treatment and disposal system, such interceptor or separator shall be approved by the health official. The interceptor or separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of this section based on the anticipated conditions of use. Wastes that do not require treatment or separation shall not be discharged into any interceptor or separator.

1003.3.3 Grease interceptors and automatic grease removal devices not required. A grease interceptor or anautomatic grease removal device shall not be required for individual dwelling units or any private living quarters.

1003.3.4 Hydromechanical grease interceptors and automatic grease removal devices. *Hydromechanicalgrease interceptors* and automatic grease removal devices shall be sized in accordance with ASME A112.14.3Appendix A, ASME 112.14.4, CSA B481.3 or PDI G101. Hydromechanical grease interceptors and automatic grease removal devices shall be designed and tested in accordance with ASME A112.14.3 Appendix A, ASME112.14.4, CSA B481.1, PDI G101 or PDI G102. Hydromechanical grease interceptors and automatic grease removal devices shall be installed in accordance with the manufacturer's instructions. Where manufacturer'sinstructions are not provided, hydromechanical grease interceptors and grease removal devices shall be installedin compliance with ASME A112.14.3, ASME 112.14.4,CSA B481.3 or PDI G101. ~~This section shall not apply to*gravity grease interceptors*.~~

Exception: Grease interceptors that are sized, constructed and approved in accordance with Rule 64E-6, Florida Administrative Code and that are located outside the building shall not be required to meet the requirements of this section.

~~**1003.3.4.1 Grease interceptor capacity.** Grease interceptors shall have the grease retention capacity indicated in Table 1003.3.4.1 for the flow-through rates indicated.~~

~~**TABLE 1003.3.4.1**~~

~~**CAPACITY OF GREASE INTERCEPTORSa** For SI: 1 gallon per minute = 3.785 L/m, 1 pound = 0.454 kg.~~

~~a. For total flow-through ratings greater than 100 (gpm), double the flow through rating to determine the grease retention capacity (pounds).~~

~~**1003.3.4.2 Rate of flow controls.** Grease interceptors shall be equipped with devices to control the rate of water flow so that the water flow does not exceed the rated flow. The flow-control device shall be vented and terminate not less than 6 inches (152 mm) above the flood rim level or be installed in accordance with the manufacturer's instructions.~~

~~**1003.3.5 Automatic grease removal devices.** Where automatic grease removal devices are installed, such devices shall be located downstream of each fixture or multiple fixtures in accordance with the manufacturer's instructions. The automatic grease removal device shall be sized to pretreat the measured or calculated flows for all connected fixtures or equipment. Ready *access* shall be provided for inspection and maintenance.~~

1003.11 Sand interceptors in commercial establishments. Sand and similar interceptors for heavy solids shall be designed and located so as to be provided with ready access for cleaning, and shall have a water seal of not less than 6 inches (152 mm).

CHAPTER 13 GRAY WATER RECYCLING SYSTEMS

SECTION 1301 GENERAL

1301.1 Scope. The provisions of Chapter 13 shall govern the materials, design, construction and installation of gray water systems for flushing of water closets and urinals and for subsurface landscape irrigation. See Figures 1301.1(1) and 1301.1(2).
Exception Subsurface Landscape Irrigation Systems shall not be utilized with a onsite sewage treatment and disposal system. Per (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC.

CHAPTER 14 REFERENCED STANDARDS

Florida Codes
Florida Building Commission
c/o Florida Department of Business and Professional Regulation
Building Codes and Standards
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Standard Referenced in code
Reference Number Title section number
FBC-B 2013 Florida Building Code, Building 201.3, 305.4, 307.1, 307.2, 307.3, 308.2, 309.1, 310.1, 310.3, 315.1, 403.1, Table 403.1, 404.1, 407.3, 417.6, 502.6, 606.5.2, 1106.5
Ch. 11 Florida Building Code, Building - Accessibility 404.1.1 315.1
Ch. 553.86 Florida Statute, Public Restrooms 403.1.1

Florida Building Code, Energy Conservation 313.1, 607.2, 607.2.1
Ch. 27 Florida Building Code, Building-Electrical (National Electrical Code, NFPA 70)
201.3, 502.1, 504.3, 1113.1.3
FEBC—2013 Florida Existing Building Code 101.2
FBC-FG 2013 Florida Building Code, Fuel Gas 101.2, 201.3, 502.1
FBC-M 2013 Florida Building Code, Mechanical 201.3, 307.6, 310.1, 422.9,
502.1, 612.1, 1202.1
FRC-2013 Florida Residential Code 101.2
FFPC-2013 Florida Fire Prevention Code 201.3, 1201.1

Ch. 62-610 Florida Administrative Code-Reuse of Reclaimed Water and Land Application	602.4
Ch. 64E-6 Florida Administrative Code-Standards for Onsite Sewage and Disposal Systems	701.2, 1003.5.2
Ch. 373 Florida Statute, Water Resources	602.3
Ch. 381 Florida Statute, Food Products	317.1
Ch. 500 Florida Statute, Lodging and Food Service Establishments	317.1
Ch. 509 Florida Statute, Public Lodging and Food Service Establishments	317.1

Rationale

This is a compilation of the changes show in the supplement from the state, the proposed changes that meet the requirement of statutory or were proposed to the I-Code process. And should cover the requirements for the supplement.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None, these are the current statutory requirements, base code requirements or changes brought forward from the previous code.

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

None, these are the current statutory requirements, base code requirements or changes brought forward from the previous code.

Impact to industry relative to the cost of compliance with code

None, these are the current statutory requirements, base code requirements or changes brought forward from the previous code.

Requirements

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

Yes, allows for providing the required statutory requirements and standardizes the code requirements for design.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, allows for providing the required statutory requirements and standardizes the code requirements for design.

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

No, the same materials that were allowed prior to the will still be allowed.

Does not degrade the effectiveness of the code

No, helps standardize the code and allow for staying current with the base code as it is developed and updated.

General Comment - 08/09/2012 - 09/23/2012

P5038-G1

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:

The proposal provides for continuation to the Commission's policy deferring the administrative requirements of the sub-codes to the FBC, B.

[A] 101.1 ~~Title.~~ ~~These regulations shall be known as the *International Plumbing Code* of [NAME OF JURISDICTION] hereinafter referred to as "this code."~~ **~~101.1~~ Scope.** The provisions of Chapter 1, Florida Building Code, Building shall govern the administration and enforcement of the *Florida Building Code, Plumbing*.

101.2 Scope. Change to read as shown:

101.2 Scope. Reserved.

101.3 Intent. Change to read as shown:

101.3 Intent. Reserved.

101.4 Scope. Change to read as shown:

101.4 Severability. Reserved.

Section 102 Applicability. Change to read as shown:

Section 102 Applicability. Reserved.

PART 2 – ADMINISTRATION AND ENFORCEMENT

Section 103 Department of Plumbing Inspection. Change to read as shown:

Section 103 Department of Plumbing Inspection. Reserved

Section 104 Duties and Powers of the Code Official. Change to read as shown:

Section 104 Duties and Powers of the Code Official. Reserved

Section 105 Approval. Change to read as shown:

Section 105 Approval. Reserved

Section 106 Permits. Change to read as shown:

Section 106 Permits. Reserved

Section 107 Inspections and Testing. Change to read as shown:

Section 107 Inspections and Testing. Reserved

Section 108 Violations. Change to read as shown:

Section 108 Violations. Reserved

Section 109 Means of Appeal. Change to read as shown:

Section 109 Means of Appeal. Reserved

Section 110 Temporary Equipment Systems and Uses. Reserved.

Florida Supplement to the I Codes:

This draft is prepared under the following assumptions:

For the purposes of using this supplement the following references apply throughout:

International Building Code, use the current Florida Building Code, Building

International Residential Code, use the current Florida Building Code, Residential

International Plumbing Code, use the current International Plumbing Code with the Florida Supplement to the I Codes Florida Building Code, Plumbing Section.

International Mechanical Code, use the current International Mechanical Code with the Florida Supplement to the I Codes Florida Building Code, Mechanical Section.

International Fire Code, use the current Florida Fire Prevention Code.

International Fuel Gas Code, use the current International Fuel Gas Code with the Florida Supplement to the I Codes Florida Building Code, Fuel Gas Section.

International Existing Building Code, use the current International Existing Building Code with the Florida Supplement to the I Codes Florida Building Code, Existing Section.

International Energy Conservation, use the current Florida Building Code, Energy Conservation

Where accessibility is required, Use the current Florida Building Code, Building, Accessibility

The Florida Supplement lists the Florida Code Changes and the sections that do not apply in Florida

FLORIDA BUILDING CODE, PLUMBING SUPPLEMENT 2013

CHAPTER 1 ADMINISTRATION

101.1 Title. These regulations shall be known as the *Plumbing Code* of the State of ***Florida*** ~~[NAME OF JURISDICTION~~], hereinafter referred to as "this code."

102 – 110 are Reserved and The provisions of Chapter 1 Sections 102 - 110 *Florida Building Code, Building* shall govern the administration and enforcement of the *Florida Building Code, Plumbing*.

CHAPTER 2 DEFINITIONS

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have the meanings as defined in Webster's *Third New International Dictionary of the English Language Unabridged*. ~~ordinarily accepted meanings such as the context implies.~~

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GRAY WATER. ~~Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays.~~As defined by 381.0065(2)(b) and (d) *Florida Statutes*, "Graywater" means that part of domestic sewage that is not blackwater, including waste from the bath, lavatory, laundry, and sink, except kitchen sink waste. "Blackwater" means that part of domestic sewage carried off by toilets, urinals, and kitchen drains.

GREASE INTERCEPTOR.

Hydromechanical. Plumbing appurtenances that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Continuous separation is accomplished by air entrainment, buoyancy and interior baffling.

Gravity. Plumbing appurtenances of not less than 7550~~0~~ gallons (2839~~1893~~ L) capacity that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Separation is accomplished by gravity during a retention time of not less than 30 minutes.

INDIVIDUAL SEWAGE DISPOSAL SYSTEM. ~~A system for disposal of domestic sewage by means of~~

~~a septic tank, cesspool or mechanical treatment, designed for utilization apart from a public *sewer* to serve a single establishment or building.~~

An approved onsite sewage treatment and disposal system in accordance with Sections 381.0065 and 381.00655, *Florida Statutes* and Chapter 64E-6, *Florida Administrative Code*, Standards for Onsite Sewage Treatment and Disposal Systems. Synonymous with private sewage disposal system and private septic system.

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RECLAIMED WATER. Water that has received treatment and is reused after flowing out of a domestic wastewater treatment facility.

REUSE. The deliberate application of reclaimed water for beneficial purpose.

CHAPTER 3 GENERAL REGULATIONS

301.3 Connections to drainage system.
Plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems required by Chapter 8.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved gray water system for flushing of water closets and urinals ~~or for subsurface landscape irrigation~~ in accordance with Chapter 13. Any sewage that discharges from the building must be connected to the sanitary drainage system of the building or premises and discharge to a sewage system in accordance with Chapter 7.

305.1 Corrosion. Pipes passing through concrete or cinder walls and floors or other corrosive material shall be protected against external corrosion by a protective sheathing or wrapping or other means that will withstand any reaction from the lime and acid of concrete, cinder or other corrosive material. Sheathing or wrapping shall allow for movement includingexpansion and contraction of piping. The wall thickness of the material shall be not less than 0.025 inch (0.64 mm).

Exception: Sleeving is not required for installation of CPVC into concrete or similar material.

305.1.1 Penetration. Protective sleeves around piping penetrating concrete slab-on-grade floors shall not be of cellulose-containing materials. If soil treatment is used for subterranean termite protection, the sleeve shall have a maximum wall thickness of 0.010 inch, and be sealed within the slab using a non-corrosive clamping device to eliminate the annular space between the pipe and the sleeve. No termiticides shall be applied inside the sleeve

317 Public Food Service Establishments and Food Establishments.

317.1 Requirements. Public food service establishments and food establishments, as defined in Chapter 381 Florida Statutes, Chapter 500 Florida Statutes and Chapter 509 Florida Statutes, shall comply with the applicable code requirements found in the Florida Building Code, Building, Chapter 4, Special Occupancy.

318.1 General. Irrigation/sprinkler systems and risers for spray heads shall not be installed within 1 foot (305 mm) of the building sidewall.

CHAPTER 4 FIXTURES, FAUCETS AND FIXTURE FITTINGS

403.1.3 Potty parity. In assembly occupancies, restrooms which are open to the public must have a ratio of 3:2 water closets provided for women as the combined total of water closets and urinals provided for men, unless these are two or fewer such fixtures for men, in accordance with §553.86, *Florida Statutes*.

Exception: This section does not apply to establishments licensed under Chapter 509, *Florida Statutes*, if the establishment does not provide meeting or banquet rooms which accommodate more than 150 people, and the establishment has at least the same number of water closets for women as the combined total of water closets and urinals for men.

403.1.3.1 Definitions.

1. **New construction**. Means new construction, building, alteration, rehabilitation or repair that equals or exceeds 50 percent of the replacement value existing on October 1, 1992, unless the same was under design or construction, or under construction contract before October 1, 1992.

2. **Assembly occupancy**. The use of a building or structure, or any portion thereof, for the gathering together of people for purposes such as civic, social or religious functions or for recreation, or for food **or drink consumption, or awaiting transportation.**

3. Historic building. A building which is (a) listed on the National Register of Historic Places; (b) listed on the State Register of Historic Places; (c) listed on a municipal register of historic property, designated according to local ordinance; or (d) included in a district which is listed on a municipal, state or national register of historic property and which has been determined to contribute to the historic significance of the district.

403.1.3.2 Occupancy content calculation. The occupancy content of a building, which determines the number of water closets required for men, shall be calculated using the square footage per person requirements established by the *Florida Building Code, Building*.

403.1.4 For the purposes of calculating the minimum number of required plumbing facilities, the requirements of Table 403.1 shall apply to any areas outside of the building that are used as part of the building's designated occupancy (single or mixed). Where additional seating is also utilized in these areas,

the actual number of seats shall be added to the number of persons calculated by Table 403.1 to obtain the total additional facilities required.

403.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.

2. Separate facilities shall not be required ~~in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.~~ for food service establishments which seat 10 persons or less.

3. Separate facilities shall not be required in mercantile *occupancies* in which the maximum occupant load is 100 or fewer.

403.6 Sanitary facilities for public swimming pools. Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirement of Table 403.6. Unisex restrooms shall meet all the requirements for materials, drainage and signage as indicated in sections 424.1.6.1.1 through 424.1.6.1.4 of the *FBC, Building*. Each shall include a water closet, a diaper change table, a urinal, and a lavatory. Pools with a bathing load larger than 40 persons shall provide separatesanitary facilities labeled for each sex. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water's edge of each pool served by the facilities.

Exception: Where a swimming pool serves only a designated group of residential dwelling units and not the general public, poolside sanitary facilities are not required if all living units are within a 200 foot horizontal radius of the nearest water's edge, are not over three stories in height and are each equipped with private sanitary facilities.

403.6.1 Required fixtures. Fixtures shall be provided as indicated on Table 403.8. The fixture count of Table 403.8 is deemed to be adequate for the pool and pool deck area that is up to three times the area of the pool surface provided. An additional set of fixtures shall be provided in the men's restroom for every 7,500 square feet or major fraction thereof for pools greater than 10,000 square feet. Women's restrooms shall have a ratio of three to two water closets provided for women as the combined total of water closets and urinals provided for men. Lavatory counts shall be equal.

403.6.2 Outside access. Outside access to facilities shall be provided for bathers at outdoor pools. Where the restrooms are located within an adjacent building and the restroom doors do not open to the outside, the restroom doors shall be within 50 feet of the buildings exterior door. If the restrooms are not visible from

any portion of the pool deck, signs shall be posed showing directions to the facilities. Directions shall be legible from any portion of the pool deck; letters shall be a minimum of 1-inch high.

403.6.3 Sanitary facility floors. Floors of sanitary facilities shall be constructed of concrete or other nonabsorbent materials, shall have a smooth, slip-resistant finish, and shall slope to floor drains. Carpets, duckboards and footbaths are prohibited. The intersection between the floor and walls shall be coved where either floor or wall is not made of waterproof materials such as tile or vinyl.

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TABLE 403.6

PUBLIC SWIMMING POOL - REQUIRED FIXTURES COUNT

SIZE	MEN'S RESTROOMS			WOMEN'S RESTROOMS	
	Urinals	WC	Lavatory	WC	Lavatory
0 - 2500 sq ft	1	1	1	1	1
2501 - 5000 sq ft	2	1	1	5	1
5001 - 7500 sq ft	2	2	2	6	2
7501 - 10,000 sq ft	3	2	3	8	3

Section 404 Accessible Plumbing Facilities.

404.1 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with the ~~*International*~~ *Florida Building Code, Accessibility.*

423.3 Reclaimed water. Reclaimed water shall be permitted to be used for aesthetic uses such as decorative pools or fountains in accordance with Florida Department of Environmental Protection (DEP). Reuse of reclaimed water activities shall comply with the requirements of DEP rules.

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

602.3 Individual water supply. Where a potable public water supply is not available, individual sources of potable water supply meeting the requirements of *Florida Statute* 373 shall be utilized.

602.4 Reclaimed water. Reclaimed water shall be permitted to be used for flushing water closets and urinals and other fixtures which do not require potable water in accordance with Florida Department of Environmental Protection (DEP) Chapter 62-610, *F.A.C.* Reuse of reclaimed water activities shall comply with the requirements of DEP Chapter 62-610, *FAC*.

CHAPTER 7 SANITARY DRAINAGE

701.2 Sewer required. Buildings in which plumbing fixtures are installed and premises having drainage piping shall be connected to a ~~*public sewer*~~, publicly owned or investor-owned sewerage system where available, or an *approved* onsite sewage treatment and ~~*private*~~sewage disposal system in accordance with Chapter 64E-6, *Florida Administrative Code*, Standards for Onsite Sewage Treatment and Disposal Systems the ~~*International Private Sewage Disposal Code.*~~

CHAPTER 10

1003.2 Approval. The size, type and location of each interceptor and of each separator shall be approved by the plumbing official. Where the interceptor or separator is located within an onsite sewage treatment and disposal system, such interceptor or separator shall be approved by the health official. The interceptor or separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of this section based on the anticipated conditions of use. Wastes that do not require treatment or separation shall not be discharged into any interceptor or separator.

1003.3.3 Grease interceptors and automatic grease removal devices not required. A grease interceptor or anautomatic grease removal device shall not be required for individual dwelling units or any private living quarters.

1003.3.4 Hydromechanical grease interceptors and automatic grease removal devices. *Hydromechanicalgrease interceptors* and automatic grease removal devices shall be sized in accordance

with ASME A112.14.3Appendix A, ASME 112.14.4, CSA B481.3 or PDI G101. Hydromechanical grease interceptors and automatic grease removal devices shall be designed and tested in accordance with ASME A112.14.3 Appendix A, ASME112.14.4, CSA B481.1, PDI G101 or PDI G102. Hydromechanical grease interceptors and automatic grease removal devices shall be installed in accordance with the manufacturer's instructions. Where manufacturer'sinstructions are not provided, hydromechanical grease interceptors and grease removal devices shall be installedin compliance with ASME A112.14.3, ASME 112.14.4,CSA B481.3 or PDI G101. ~~This section shall not apply to*gravity grease interceptors*.~~

Exception: Grease interceptors that are sized, constructed and approved in accordance with Rule 64E-6, Florida Administrative Code and that are located outside the building shall not be required to meet the requirements of this section.

~~**1003.3.4.1 Grease interceptor capacity.** Grease interceptors shall have the grease retention capacity indicated~~

~~in Table 1003.3.4.1 for the flow-through rates indicated.~~

~~-~~

~~**TABLE 1003.3.4.1**~~

~~**CAPACITY OF GREASE INTERCEPTORSa** For SI: 1 gallon per minute = 3.785 L/m, 1 pound = 0.454 kg.~~

~~a. For total flow-through ratings greater than 100 (gpm), double the flow through rating to determine the grease retention capacity (pounds).~~

~~-~~

~~**1003.3.4.2 Rate of flow controls.** Grease interceptors shall be equipped with devices to control the rate of water flow so that the water flow does not exceed the rated flow. The flow-control device shall be vented and~~

~~terminate not less than 6 inches (152 mm) above the flood rim level or be installed in accordance with the manufacturer's instructions.~~

~~-~~

~~**1003.3.5 Automatic grease removal devices.** Where automatic grease removal devices are installed, such devices shall be located downstream of each fixture or multiple fixtures in accordance with the manufacturer's instructions. The automatic grease removal device shall be sized to pretreat the measured or calculated flows for all connected fixtures or equipment. Ready *access* shall be provided for inspection and maintenance.~~

1003.11 Sand interceptors in commercial establishments. Sand and similar interceptors for heavy solids shall be designed and located so as to be provided with ready access for cleaning, and shall have a water

seal of not less than 6 inches (152 mm).

CHAPTER 13 GRAY WATER RECYCLING SYSTEMS

SECTION 1301 GENERAL

1301.1 Scope. The provisions of Chapter 13 shall govern the materials, design, construction and installation of gray water systems for flushing of water closets and urinals and for subsurface landscape irrigation. See Figures 1301.1(1) and 1301.1(2).

Exception Subsurface Landscape Irrigation Systems shall not be utilized with a onsite sewage treatment and disposal system. Per (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC.

CHAPTER 14 REFERENCED STANDARDS

Florida Codes

Florida Building Commission

c/o Florida Department of Business and Professional Regulation

Building Codes and Standards

2555 Shumard Oak Boulevard

Tallahassee, Florida 32399-2100

Standard Referenced in code

Reference Number Title section number

FBC-B 2013 Florida Building Code, Building 201.3, 305.4, 307.1, 307.2, 307.3, 308.2, 309.1, 310.1, 310.3, 315.1, 403.1, Table 403.1,

404.1, 407.3, 417.6, 502.6, 606.5.2, 1106.5

Ch. 11 Florida Building Code, Building - Accessibility 404.1.1 315.1

Ch. 553.86 Florida Statute, Public Restrooms 403.1.1

Florida Building Code, Energy Conservation 313.1, 607.2, 607.2.1

Ch. 27 Florida Building Code, Building-Electrical (National Electrical Code, NFPA 70)

201.3, 502.1, 504.3, 1113.1.3

FEBC—2013 Florida Existing Building Code 101.2

FBC-FG 2013 Florida Building Code, Fuel Gas 101.2, 201.3, 502.1

FBC-M 2013 Florida Building Code, Mechanical 201.3, 307.6, 310.1, 422.9, 502.1, 612.1, 1202.1

FRC-2013 Florida Residential Code 101.2

FFPC-2013 Florida Fire Prevention Code 201.3, 1201.1

Ch. 62-610 Florida Administrative Code-Reuse of Reclaimed Water and Land Application	602.4
Ch. 64E-6 Florida Administrative Code-Standards for Onsite Sewage and Disposal Systems	701.2, 1003.5.2
Ch. 373 Florida Statute, Water Resources	602.3
Ch. 381 Florida Statute, Food Products	317.1
Ch. 500 Florida Statute, Lodging and Food Service Establishments	317.1
Ch. 509 Florida Statute, Public Lodging and Food Service Establishments	317.1

P5285

Date Submitted	7/22/2012	**Section**	202	**Proponent**	Rebecca Quinn obo DEM
Chapter	2	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

5282, 5283

Summary of Modification

Achieves consistency in the definitions across all codes. Approved as Submitted by FEMA as G8-12.

Rationale

This proposal brings this definition in the FBC, Plumbing Code into consistency with the definition that is already in the Building Code. Approved as Submitted by FEMA for 2015 IPC, IMC, and IFGC (G8-12).

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Consistency of definitions across all codes.

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

Consistency of definitions across all codes.

Impact to industry relative to the cost of compliance with code

Consistency of definitions across all codes.

Requirements

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

Consistency of definitions across all codes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Consistency of definitions across all codes.

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

Consistency of definitions across all codes.

Does not degrade the effectiveness of the code

Consistency of definitions across all codes.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5285-G1

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

Comment:
This change was submitted to the ICC process.

This change is unnecessary, this is not information needed in the plumbing code, and it is in the building code already in the flood requirements.

It has been submitted to the I-Code process and has been approved “As Submitted” by the code committee, however it still has to go to the final action hearing in October to be included in the 2015 IPC, if this is needed it will be approved in Portland for inclusion into the 2015 IPC.

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 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)

DESIGN FLOOD ELEVATION. The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the *building's* perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

P5322

Date Submitted	7/19/2012	**Section**	202	**Proponent**	Joe Bigelow
Chapter	2	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

To be consistent with Florida Statute (ss. 381.0065-381.0067) and to implement the Commission plan to update the 2013 Code

Rationale

To be consistent with Florida Statute 381.0065-381.0067 and to implement the Commission plan to update the 2013 Code

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Currently used under the 2010 Code, no new requirements being established

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

Currently used under the 2010 Code, no new requirements being established

Impact to industry relative to the cost of compliance with code

Currently used under the 2010 Code, no new requirements being established

Requirements

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

Carried over from the previous, field tested and proven to be effective

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from the previous, field tested and proven to be effective

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

Carried over from the previous, field tested and proven to be effective

Does not degrade the effectiveness of the code

Carried over from the previous, field tested and proven to be effective

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

To be consistent with the Florida Statutes and to implement the Commission plan to update the 2013 Code

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

General Comment - 08/09/2012 - 09/23/2012

P5322-G1

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The proposal adds new definition for “bedroom” as per HB 704.

General Comment - 08/09/2012 - 09/23/2012

P5322-G2

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

Comment:
Private sewage disposal requirements and systems are not regulated by the plumbing code. This is a DOH requirement and does not belong in the plumbing code, a reference to Florida Statute 381.0065-381.0067 would be sufficient

"Bedroom" means a room that can be used for sleeping and that:

a. For site-built dwellings has a minimum of 70 square feet of conditioned space;

b. For manufactured homes is constructed according to the standards of the United States Department of Housing and Urban Development and has a minimum of 50 square feet of floor area;

c. Is located along an exterior wall;

d. Has a closet and a door or an entrance where a door could be reasonably installed; and

e. Has an emergency means of escape and rescue opening to the outside in accordance with the Florida Building Code.

This definition is specific to on-site sewage treatment system as regulated by Chapter 4E-6 FAC for onsite sewage treatment and Disposal System - See Section 701.2

P5997

Date Submitted	8/2/2012	**Section**	202	**Proponent**	Eberhard Roeder
Chapter	2	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Make definitions consistent with Florida Statutes and onsite sewage treatment and disposal regulations in 64E-6, Florida Administrative Code

Rationale

Florida Statutes provide several definitions that differ from the base code. The Department of Health is the regulatory authority permitting onsite sewage treatment and disposal systems (381.0065(2)(b),(d),(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC, provides specifications for them.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Proposal simplifies enforcement by making definitions consistent with current Florida Statutes and onsite sewage regulations.

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

none

Impact to industry relative to the cost of compliance with code

none

Requirements

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

Sewage contains pathogens, and treatment and disposal of it is necessary for the protection of health, safety and welfare.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The proposed language is consistent with Florida Statutes and Administrative Code and avoids confusion.

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

Not applicable to definitions.

Does not degrade the effectiveness of the code

By making the building code and the onsite sewage treatment code more consistent with each other the code system overall will become more effective.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5997-G1

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

Comment:

Private sewage disposal requirements and systems are not regulated by the plumbing code. This is a DOH requirement and does not belong in the plumbing code, a reference to Florida Statute (381.0065(2)(b),(d),(j); 381.0065(3)(a)(b)(k), and 64E-6 FAC would be sufficient.

GRAY WATER. ~~Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays.~~ As defined by 381.0065(2)(b) and (d) Florida Statutes, "Graywater" means that part of domestic sewage that is not blackwater, including waste from the bath, lavatory, laundry, and sink, except kitchen sink waste. "Blackwater" means that part of domestic sewage carried off by toilets, urinals, and kitchen drains.

GREASE INTERCEPTOR.

Hydromechanical. Plumbing appurtenances that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Continuous separation is accomplished by air entrainment, buoyancy and interior baffling.

Gravity. Plumbing appurtenances of not less than 75~~50~~0 gallons (2839~~1893~~ L) capacity that are installed in or at the end of the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Separation is accomplished by gravity during a retention time of not less than 30 minutes.

INDIVIDUAL SEWAGE DISPOSAL SYSTEM. ~~A system for disposal of domestic sewage by means of a septic tank, cesspool or mechanical treatment, designed for utilization apart from a public sewer to serve a single establishment or building.~~

An approved onsite sewage treatment and disposal system in accordance with Sections 381.0065 and 381.00655, Florida Statutes and Chapter 64E-6, Florida Administrative Code, Standards for Onsite Sewage Treatment and Disposal Systems. Synonymous with private sewage disposal system and private septic system.

P5999

Date Submitted	8/2/2012	**Section**	202	**Proponent**	Eberhard Roeder
Chapter	2	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

P 5997

Summary of Modification

Eliminate old grease trap language; provide for 750 gallon minimum passive or gravity grease interceptor volume as in Florida's onsite sewage regulations.

Rationale

"Grease trap" is a term that is not used in the base code (IPC) anymore and appears to have lost its usefulness. The proposal also consolidates the Florida specific and the IPC language for grease interceptor, and continues the 750 gallon minimum requirement of passive or gravity grease interceptors as required for onsite sewage treatment and disposal systems in 64E-6, FAC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Proposal simplifies enforcement by making definitions consistent with current Florida onsite sewage regulations.

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

none

Impact to industry relative to the cost of compliance with code

none

Requirements

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

Properly operating grease interceptors protect sewer systems and onsite sewage and disposal systems and their functioning, which in turn protects health, safety and welfare of the general public.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The proposed language is consistent with Florida Administrative Code and avoids confusion.

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

not applicable

Does not degrade the effectiveness of the code

By making the building code and the onsite sewage treatment code more consistent with each other the code system overall will become more effective.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5999-G1

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

Comment:

The struck thru info is unnecessary as the current provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

~~**GREASE INTERCEPTOR.** An interceptor whose rated flow exceeds 50 gpm or has a minimum storage capacity of 750 gallons or more and is located outside the building.~~

~~**GREASE TRAP.** An interceptor whose rated flow is 50 gpm or less and is located inside the building.~~

GREASE INTERCEPTOR.

Hydromechanical. Plumbing appurtenances that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Continuous separation is accomplished by air entrainment, buoyancy and interior baffling.

Gravity. Plumbing appurtenances of not less than 75~~50~~0 gallons (2839~~1893~~ L) capacity that are installed in or at the end of the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Separation is accomplished by gravity during a retention time of not less than 30 minutes.

(Note: by deleting the definition of "grease trap", the following changes can be made to the Florida specific language)

1003.3.4.1 Grease interceptor capacity.
Grease interceptors ~~and grease traps~~ shall have the grease retention capacity indicated in Table 1003.3.4.1 for the flow-through rates indicated.

1003.3.4.2 Rate of flow controls.
Grease interceptors ~~and grease traps~~ shall be equipped with devices to control the rate of water flow so that the water flow does not exceed the rated flow. The flow-control device shall be vented and terminate not less than 6 inches (152 mm) above the flood rim level or be installed in accordance with the manufacturer's instructions.

Date Submitted	8/2/2012	**Section**	301.3	**Proponent**	Eberhard Roeder
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

P 5892

Summary of Modification

Delete language for gray water landscape irrigation systems. Such systems are onsite sewage treatment and disposal systems in the jurisdiction of the Dept. of Health (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC, provides specifications.

Rationale

The Department of Health is the regulatory authority permitting onsite sewage treatment and disposal systems (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC, provides specifications for them. Graywater recycling systems for flushing of water closets and urinals should be addressed in the building code, while graywater and laundry water disposal systems are addressed in the onsite sewage treatment and disposal code. The proposed language mirrors the approach in the previous Appendix C.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Proposal simplifies enforcement by clarifying that there is only a single jurisdiction over onsite sewage treatment and disposal systems. Graywater and laundry wastewater system tanks are included in the definition of “onsite sewage treatment and disposal system” per 381.0065(2)(j) Fl. Statutes.

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

none

Impact to industry relative to the cost of compliance with code

none

Requirements

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

Graywater contains pathogens, and treatment and disposal of this water is necessary for the protection of health and safety. Application of Florida’s onsite sewage regulations provides uniformity and protection. E.g., Florida, but not the base code, requires an unsaturated zone to remove pathogens.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The proposed language is consistent with Florida’s onsite sewage standards. Instead of creating a new methodology for drainfield sizing in the base code, 64E-6 FAC already provides an established methodology and construction standards that protect groundwater better from pollution.

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

The standards of 64E-6, Florida Administrative Code, allow for alternative drainfield materials, while the base code language in Chapter 13 specifies only gravel for the drainfield.

Does not degrade the effectiveness of the code

By making the building code and the onsite sewage treatment code more consistent with each other the code system overall will become more effective.

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

NO

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?

NO

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

301.3 Connections to drainage system.
Plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems required by Chapter 8.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved gray water system for flushing of water closets and urinals ~~or for subsurface landscape irrigation~~ in accordance with Chapter 13. Any sewage that discharges from the building must be connected to the sanitary drainage system of the building or premises and discharge to a sewage system in accordance with Chapter 7.

P5287

Date Submitted	7/22/2012	**Section**	309.2	**Proponent**	Rebecca Quinn obo DEM
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Reformat the exception to eliminate awkward and confusing placement. Approved as Submitted by FEMA for 2015 IPC as P20-12

Rationale

Proposal simply moves the exception language below the list. It is awkward and confusing to have the exception placed between the parent language and the list. ICC staff recommended deletion of “all” in four places. Approved as Submitted by FEMA for 2015 IPC as P20-12

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Clarification only.

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

Clarification only.

Impact to industry relative to the cost of compliance with code

Clarification only.

Requirements

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

Clarification only.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Clarification only.

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

Doesn’t affect material specifications.

Does not degrade the effectiveness of the code

Doesn’t affect the technical requirements.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

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

Comment:

This change was submitted to the ICC process.

This change is editorial in nature and is unnecessary, if this is needed it will be approved in Portland for inclusion into the 2015 IPC.

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)

P5287-G1

309.2 Flood hazard. For structures located in flood hazard areas, the following systems and equipment shall be located and installed as required by Section 1612 of the International Building Code:

~~**Exception:** The following systems are permitted to be located below the elevation required by Section 1612 of the International Building Code for utilities and attendant equipment provided that the systems are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to such elevation.~~

1. ~~All~~ Water service pipes.

2. Pump seals in individual water supply systems where the pump is located below the design flood elevation.

3. Covers on potable water wells shall be sealed, except where the top of the casing well or pipe sleeve is elevated to at least 1 foot (305 mm) above the design flood elevation.

4. ~~All~~ Sanitary drainage piping.

5. ~~All~~ Storm drainage piping.

6. Manhole covers shall be sealed, except where elevated to or above the design flood elevation.

7. ~~All~~ Other plumbing fixtures, faucets, fixture fittings, piping systems and equipment.

8. Water heaters.

9. Vents and vent systems.

Exception: The systems listed in this section are permitted to be located below the elevation required by Section 1612 of the International Building Code for utilities and attendant equipment provided that the systems are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to such elevation.

P5041

Date Submitted	7/9/2012	**Section**	312	**Proponent**	Suzanne Davis
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section 312.10.1 and 312.10.2 Plumbing. Change to read as shown to implement FBC approved plan for 2013 code

Rationale

The proposed code change carries forward a declaratory statement issued by the Commission. Also implements FBC approved plan for the 2013 Code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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 carries forward a declaratory statement issued by the Commission. Also implements FBC approved plan for the 2013 Code.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:

The proposal implements DCA04-DEC-040 which provides that the Commission has no authority to regulate annual inspection and testing of backflow preventer devices. Such inspection is within the authority of DEP.

P5041-G1

General Comment - 08/09/2012 - 09/23/2012

P5041-G2

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 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)

312.10.1 Inspections. Change to read as shown.

312.10.1 Inspections. Inspections~~Annual~~ shall be made of all backflow prevention assemblies and air gaps to determine whether they are operable.

312.10.2 Testing. Change to read as shown.

312.10.2 Testing.
Reduced pressure principle, double check, pressure vacuum breaker, reduced pressure detector fire protection, double check detector fire protection, and spill-resistant vacuum breaker backflow preventer assemblies and hose connection backflow preventers shall be tested at the time of installation~~,~~ and immediately after repairs or relocation ~~and at least annually~~. The testing procedure shall be performed in accordance with one of the following standards: ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CSA B64.10 or CSA B64.10.1.

P5043

Date Submitted	7/9/2012	**Section**	318 Irrigation	**Proponent**	Suzanne Davis
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section 318.1 Plumbing to implement FBC approved plan for 2013 code

Rationale

This is part of a state agency regulation related to termite regulation. To implement the fBC process for the 2013 FBC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

This is part of a state agency regulation related to termite regulation. To implement the fBC process for the 2013 FBC.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The proposal provides for continuation of provisions for termite protection.

P5043-G1

General Comment - 08/09/2012 - 09/23/2012

P5043-G2

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

What is the state agency regulation? What are there requirements?

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)

Section 318 Irrigation

318.1 General. Add to read as shown.

318.1 General. Irrigation/sprinkler systems and risers for spray heads shall not be installed within 1 foot (305 mm) of the building sidewall.

P5684

Date Submitted	7/26/2012	**Section**	M309.3	**Proponent**	Rebecca Quinn obo DEM
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

5138, 5271, 5679

Summary of Modification

Limits application of Coastal A Zone requirements only if the CAZ is delineated on a map or designated by the community. Submitted as public comment at suggestion of IBC Structural Committee (S102-12).

Rationale

Consistency with same changes in FBC, Building. The IBC Structural Committee viewed S102-12 favorably, but requested modification of language in the definitions of “Coastal A Zone” and “Limit of Moderate Wave Action.” Those changes have been approved by a ballot by the ASCE 24 committee.

Currently the FBC, Building, by reference to ASCE 24-05, requires the designer to determine if Coastal A Zone conditions are present. And ASCE 24 already requires buildings in Coastal A Zones to meet the same requirements as Coastal High Hazard Areas (Zone V). The next edition of ASCE 24 is nearing its final draft; the next edition will specify that the Coastal A Zone is recognized only if the Limit of Moderate Wave Action is shown on the map, or if the CAZ is otherwise designated by the community (a small number of Florida communities do this). Thus, designers and communities will no longer that to do site-by-site evaluations to determine wave conditions in areas outside of the Zone V.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Facilitates enforcement and compliance by clarifying where the CAZ requirements apply.

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

Facilitates enforcement and compliance by clarifying where the CAZ requirements apply.

Impact to industry relative to the cost of compliance with code

Facilitates enforcement and compliance by clarifying where the CAZ requirements apply.

Requirements

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

Recognizes moderate wave conditions only where such conditions are identified on a map or otherwise designated.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Recognizes moderate wave conditions only where such conditions are identified on a map or otherwise designated.

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

Doesn’t affect material specifications.

Does not degrade the effectiveness of the code

Recognizes moderate wave conditions only where such conditions are identified on a map or otherwise designated.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5684-G1

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

Comment:

This change is premature, Coastal A Zones are designated by the community and are not part of ASCE 24 2005, the next edition of ASCE 24 has the requirements in it.

The coastal A Zone will not be in the 2015 I-Codes unless the standard is completed before the final action hearing, and then it will come in in the next cycle as the base code.

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)

This change was submitted to the I-Code process

P309.3 Flood hazard areas subject to high-velocity wave action and coastal A zones. Structures located in flood hazard areas subject to high-velocity wave action and coastal A zones shall meet the requirements of Section 309.2. The plumbing systems, pipes and fixtures shall not be mounted on or penetrate through walls intended to break away under flood loads.

P5683

Date Submitted	7/26/2012	**Section**	P309.3	**Proponent**	Rebecca Quinn obo DEM
Chapter	3	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

5271, 5682

Summary of Modification

Achieves terminology consistency between the building code, the residential code and ASCE 24. Approved as Submitted for the 2015 IBC (S103-12).

Rationale

S103-12, Approved as Submitted by FEMA for the foundation IBC, IMC and IPC. Makes changes everywhere the term “flood hazard areas subject to high velocity wave action” appears, replace with “coastal high hazard area.” The two terms are exactly the same. This change will mean consistency of terms between the Building code, ASCE 24, the Residential Code, and the NFIP.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact due to change in terminology to use Coastal High Hazard Area.

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

No impact due to change in terminology to use Coastal High Hazard Area.

Impact to industry relative to the cost of compliance with code

No impact due to change in terminology to use Coastal High Hazard Area.

Requirements

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

No impact due to change in terminology to use Coastal High Hazard Area.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

No impact due to change in terminology to use Coastal High Hazard Area.

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

Doesn’t affect material specifications.

Does not degrade the effectiveness of the code

No impact due to change in terminology to use Coastal High Hazard Area.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

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

Comment:

This change was submitted to the ICC process.

This change is editorial in nature and is unnecessary, if this is needed it will be approved in Portland for inclusion into the 2015 IPC.

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)

P5683-G1

P309.3 ~~Flood hazard areas subject to high velocity wave action~~ coastal high hazard areas. Structures located in ~~flood hazard areas subject to high velocity wave action~~ coastal high hazard areas shall meet the requirements of Section 309.2. The plumbing systems, pipes and fixtures shall not be mounted on or penetrate through walls intended to break away under flood loads.

P5061

Date Submitted	7/10/2012	**Section**	403	**Proponent**	Suzanne Davis
Chapter	4	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section 404.1 Plumbing to implement FBC approved plan for 2013 code

Rationale

Consistent with FS with regard to Potty Parity and to also implement FBC approved plan for 2013 code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

Consistent with FS with regard to Potty Parity and to also implement FBC approved plan for 2013 code.

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

General Comment - 08/09/2012 - 09/23/2012

P5061-G1

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:

The proposal provides for provisions for “Potty Parity” as per 553.86 FS.

403.1.3 Potty parity. Add to read as shown.

403.1.3 Potty parity. In assembly occupancies, restrooms which are open to the public must have a ratio of 3:2 water closets provided for women as the combined total of water closets and urinals provided for men, unless these are two or fewer such fixtures for men, in accordance with §553.86, *Florida Statutes*.

Exception: This section does not apply to establishments licensed under Chapter 509, *Florida Statutes*, if the establishment does not provide meeting or banquet rooms which accommodate more than 150 people, and the establishment has at least the same number of water closets for women as the combined total of water closets and urinals for men.

403.1.3.1 Definitions.

1. **New construction.** Means new construction, building, alteration, rehabilitation or repair that equals or exceeds 50 percent of the replacement value existing on October 1, 1992, unless the same was under design or construction, or under construction contract before October 1, 1992.

2. **Assembly occupancy.** The use of a building or structure, or any portion thereof, for the gathering together of people for purposes such as civic, social or religious functions or for recreation, or for food **or drink consumption, or awaiting transportation.**

3. Historic building. A building which is (a) listed on the National Register of Historic Places; (b) listed on the State Register of Historic Places; (c) listed on a municipal register of historic property, designated according to local ordinance; or (d) included in a district which is listed on a municipal, state or national register of historic property and which has been determined to contribute to the historic significance of the district.

403.1.3.2 Occupancy content calculation. The occupancy content of a building, which determines the number of water closets required for men, shall be calculated using the square footage per person requirements established by the *Florida Building Code, Building.*

[Florida law]

P5062

Date Submitted	7/10/2012	**Section**	403	**Proponent**	Suzanne Davis
Chapter	4	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section 403.1.4 Plumbing to implement FBC approved plan for 2013.

Rationale

Implement the FBC process for the 2013 code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

Implement the FBC process for the 2013 code.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The proposal clarifies the calculation of minimum number of facilities in accordance with DCA05-DEC-215.

P5062-G1

403.1.4 Add to read as shown.

403.1.4 For the purposes of calculating the minimum number of required plumbing facilities, the requirements of Table 403.1 shall apply to any areas outside of the building that are used as part of the building's designated occupancy (single or mixed). Where additional seating is also utilized in these areas, the actual number of seats shall be added to the number of persons calculated by Table 403.1 to obtain the total additional facilities required.

P5572

Date Submitted	7/22/2012	**Section**	608.13.2 and 608.13.7	**Proponent**	David Brown
Chapter	6	**Affects HVHZ**	No	**Attachments**	Yes
General Comments	Yes				
Alternate Language	No				

Related Modifications

None

Summary of Modification

Sections 608.13.2 & 608.13.7 of the Code require an additional sentence to bring them into compliance with a number of federal anti-terrorism laws and the Florida Statutes.

Rationale

The devices named in Sections 608.13.2 & 608.13.7 of the Code violate a number of federal anti-terrorism laws because they provide terrorists with direct access to the public drinking water supply. They also violate the Florida Statutes. They do not belong in residential areas.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

It would relieve the County of having to monitor residential backflow valves. However, if the responsibility "to provide for safe drinking water at all times" was shifted to the utilities, where it belongs, they would need extra personnel. So, cost wise, it is probably a wash.

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

This Modification is only intended to apply to homeowners residential areas. It would not impact building owners. But the impact to homeowners would be in the $100,000,000s. The cost was so much in Wyoming that they banned residential backflow valves altogether.

Impact to industry relative to the cost of compliance with code

This Modification is only intended to apply to homeowners in residential areas. So there would be no impact to industry.

Requirements

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

This has an ABSOLUTE connection with the public's health, safety, and welfare! These two valves provide direct access to the public's drinking water supply and make it easy for a terrorist to contaminate a community's water supply with readily available deadly chemicals and bio-toxins.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This improves the code by modifying two sections that currently violate a number of federal anti-terrorism laws. It also brings these two sections into conformity with the Florida Statutes.

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

This does not discriminate. In fact, according to the Florida Department of Environmental Protection, the only demonstrated capability of these two types of valves is that they fail a lot - so much so that at any given moment, 1 in 8 will not pass certification!

Does not degrade the effectiveness of the code

This vastly improves the effectiveness of the code by eliminating devices that are prone to failure and allowing them to be replaced with devices with an empirical record of being simple, reliable and less costly - which is the best of all possible worlds when it comes to plumbing devices.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5572-G1

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

Comment:

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.

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)

Please see the attached Support File

for how the Florida Building Code must be brought into required compliance with federal

anti-terrorism laws and Florida Statutes 120.52(8)(e), 120.52(8)(f) & 120.54(1)

by adding the following sentence to Building Code Sections 608.13.2 and 608.13.7:

"These devices shall not be installed in residential areas."

So that they read:

608.13.2 Reduced pressure principle backflow preventers.

Reduced pressure principle backflow preventers shall conform to ASSE 1013, AWWA C511, CAN/CSA B64.4 or CSA B64.4.1. Reduced pressure detector assembly backflow preventers shall conform to ASSE 1047. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged. These devices shall not be installed in residential areas.

608.13.7 Double check-valve assemblies.

Double check-valve assemblies shall conform to ASSE 1015, CSA B64.5, CSA B64.5.1 or AWWA C510. Double-detector check-valve assemblies shall conform to ASSE 1048. These devices shall be capable of operating under continuous pressure conditions. These devices shall not be installed in residential areas.

Federal laws and the Florida Statutes are the foundation documents that determine what regulators can and can't do.

Executive Summary

The Florida Building Code must be brought into required compliance with federal anti-terrorism laws and Florida Statutes 120.52(8)(e), 120.52(8)(f) & 120.54(1) by adding the following sentence to Building Code Sections 608.13.2 and 608.13.7:

"These devices shall not be installed in residential areas."

First, a number of federal anti-terrorism laws have been enacted since "9/11" to deter the activities of terrorists. Many of these laws consider the public drinking water supply to be a critical infrastructure that must be protected against terrorist attacks. This infrastructure is composed of water sources, treatment plants and extensive distribution systems. To protect the distribution systems, the laws prohibit devices that provide direct access into public drinking water supplies so as to deny terrorists the means to contaminate public water supplies with easily available deadly chemicals and bio-toxins.

Federal laws must be obeyed! According to the U.S. Supreme Court, "A state [Florida] may not pursue policies that undermine federal law". The Florida Building Code (Plumbing) does violate federal anti-terrorism laws by including two devices that allow terrorists direct access into our residential water distribution systems using an over-pressurization technique. The extreme dangers of this contamination technique have been enumerated by a number of water system professionals, government officials and organizations, including the American Water Works Association (AWWA) and the American Bar Association (ABA).

Second, because of the extreme rarity of residential backflow incidents, the two devices described in Sections 608.13.2 and 608.13.7 of the Code must exclude residential installations because of **Florida Statute 120.52(8)(e)** which prohibits arbitrary and capricious rules. The two devices in question are:

P5064

Date Submitted	7/10/2012	**Section**	610	**Proponent**	Suzanne Davis
Chapter	6	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section 610.1 Plumbing to implement FBC approved plan for 2013 code

Rationale

Consistent with State agencies regulations and to implement the FBC process for the 2013 FBC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

Consistent with State agencies regulations and to implement the FBC process for the 2013 FBC.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The proposal clarifies the authority having jurisdiction with regard to disinfection of potable water systems.

P5064-G1

General Comment - 08/09/2012 - 09/23/2012

P5064-G2

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

Comment:
What State Agencies and where are the specific requirements, statute, rule, or guideline?

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.

610.1 General. New or repaired potable water systems shall be purged of deleterious matter and, where required by the Administrative Authority, disinfected prior to utilization. The method to be followed shall be that prescribed by the health authority or water purveyor having jurisdiction or, in the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this section. This requirement shall apply to "on-site" or "in-plant" fabrication of a system or to a modular portion of a system.

[No change to 1 – 4 of the IPC]

P5068

Date Submitted	7/10/2012	**Section**	611	**Proponent**	Suzanne Davis
Chapter	6	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section 611.1, 611.2, 611.3 and 611.4 Plumbing to implement FBC approved plan for 2013 code.

Rationale

To be consistent with state agencies regulations and to implement the FBC process for the 2013 code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To be consistent with state agencies regulations and to implement the FBC process for the 2013 code.

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

General Comment - 08/09/2012 - 09/23/2012

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

Comment:

What State Agencies and where are the specific requirements, statute, rule, guide?

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.

P5068-G1

Section 611 Drinking Water Treatment Units. Change to read as shown.

Section 611 ~~DRINKING~~ WATER TREATMENT UNITS

611 Replace IPC language 611.1, 611.2 and 611.3 with the following:

611.1 When reduction of aesthetic contaminants, such as chlorine, taste, odor or sediment are claimed, the drinking water treatment units must meet the requirements of NSF 42, Drinking Water Treatment Units-Aesthetic Effects, or Water Quality Association Standard S-200, Household and Commercial Water Filters (In-Line). When reduction of regulated health contaminants is claimed, such as inorganic or organic chemicals or radiological substances, the drinking water treatment unit must meet the requirements of NSF 53, Drinking Water Treatment Units-Health Effects.

611.2 Reverse osmosis drinking water treatment systems shall meet the requirements of NSF 58, Reverse Osmosis Drinking Water Treatment Units, or Water Quality Association Standard S-300, Point-of-Use Low Pressure Reverse Osmosis Drinking Water Systems.

611.3 When reduction of regulated health contaminants is claimed, such as inorganic or organic chemicals, or radiological substances, the reverse osmosis drinking water treatment unit must meet the requirements of NSF 58, Reverse Osmosis Drinking Water Treatment Systems.

611.4 Waste or discharge from reverse osmosis or other types of water treatment units must enter the drainage system through an air gap or be equipped with an equivalent backflow-prevention device.

[Florida law]

P6002

Date Submitted	8/2/2012	**Section**	1003.3; 1003.5	**Proponent**	Eberhard Roeder
Chapter	10	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Consolidate gravity grease interceptor exception languages. Replace language that mirrors grease interceptor requirements for onsite sewage systems in 64E-6, Florida Administrative Code, with a simple reference to 64E-6. Editorial change to section numbering

Rationale

Consolidate base code exception languages. Florida Statutes provide that the Department of Health is the regulatory authority permitting grease interceptors as part of onsite sewage treatment and disposal systems (381.0065(2)(j). 64E-6, FAC, provides specifications for them, which are here incorporated by reference.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Proposal simplifies enforcement by consolidating exception languages and avoiding duplicating language for onsite sewage treatment and disposal systems.

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

none

Impact to industry relative to the cost of compliance with code

none

Requirements

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

Properly operating grease interceptors protect sewer systems and onsite sewage and disposal systems and their functioning, which in turn protects health, safety and welfare of the general public.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The proposed language is consistent with Florida Statutes and Administrative Code and avoids duplication.

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

yes

Does not degrade the effectiveness of the code

By making the building code and the onsite sewage treatment code more consistent with each other the code system overall will become more effective.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P6002-G1

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 provision needs to be compared to the 2012 IPC base code and that language modified or again we will be out of sync.

1003.3 Grease traps and grease interceptors for public publicly owned or investor-owned sewerage systems. Grease interceptors shall comply with the requirements of Sections 1003.3.1 through 1003.3.~~1.2~~.5.

1003.3.4 Hydromechanical grease interceptors and automatic grease removal devices. Hydromechanical grease interceptors and automatic grease removal devices shall be sized in accordance with ASME A112.14.3 Appendix A, ASME 112.14.4, CSA B481.3 or PDI G101. Hydromechanical grease interceptors and automatic grease removal devices shall be designed and tested in accordance with ASME A112.14.3 Appendix A, ASME 112.14.4, CSA B481.1, PDI G101 or PDI G102. Hydromechanical grease interceptors and automatic grease removal devices shall be installed in accordance with the manufacturer's instructions. Where manufacturer's instructions are not provided, hydromechanical grease interceptors and grease removal devices shall be installed in compliance with ASME A112.14.3, ASME 112.14.4, CSA B481.3 or PDI G101. ~~This section shall not apply to gravity grease interceptors.~~

Exception: Grease interceptors that are sized, constructed and approved in accordance with Rule 64E-6, Florida Administrative Code and that are located outside the building shall not be required to meet the requirements of this section.

1003.5 Grease interceptors for onsite sewage treatment and disposal systems. Grease interceptors are not required for a residence. However, one ore more grease interceptors are required where grease waste is produced in quantities that could otherwise cause line stoppage or hinder sewage disposal. Where a grease interceptor is required or used, only kitchen wastewater shall first pass through the interceptor and then be discharged into the first compartment of a septic tank or other approved system.Grease interceptors shall be water ~~and gas~~-tight. Each interceptor shall be engineered to withstand the load, such as from vehicular traffic, to be placed on the interceptor. Grease interceptors shall be sized, constructed and approved in accordance with Rule 64E-6, Florida Administrative Code.

~~**1003.5.1 Grease interceptor capacity. Add to read as shown.**~~

~~**1003.5.1 Grease interceptor capacity.** Sizing of grease interceptors shall be based on the equations of Table 1003.5.1. The minimum tank volume of grease interceptors shall be 750 gallons (2839 L), and the maximum volume of an individual grease interceptor chamber shall be 1,250 gallons (4731 L). When the required effective capacity of the grease interceptor is greater than 1250 gallons, installation of multi-chambered grease interceptors or grease interceptors in series is required.~~

~~**1003.5.2 Construction of interceptor. Add to read as shown.**~~

~~**1003.5.2 Construction of interceptor.** Each interceptor shall be constructed and approved in accordance with Rule 64E-6, Florida Administrative Code. Minimum depth of the liquid shall be 40 inches (1016 mm). Each compartment shall be accessible with a manhole having a minimum area of 225 square inches. Intereceptors must be located so as to provide easy access for routine inspection, cleaning and maintenance. Manholes shall be provided over the inlet and outlet of each interceptor and be brought to finished grade.~~

~~**1003.5.3 Inlet and outlet piping. Add to read as shown.**~~

~~**1003.5.3 Inlet and outlet piping.** The inlet invert shall discharge a minimum 2 1/2 inches above the liquid level line and the outlet pipe shall have a tee with a minimum diameter of 4 inches that extends to within 8 inches of the bottom of the tank.. The tee shall be installed with the run in the vertical direction.~~

~~**Table 1003.5.1: Sizing Formulas for Grease Interceptors,**~~

~~SIZING FORMULA FOR RESTAURANTS:~~	~~OTHER ESTABLISHMENTS WITH~~

(S)x(GS)x(HR/12)x(LF)=Effective capacity of grease interceptor in gallons Where: S = Number of seats in dining area GS = Gallons of waste water per seat (Use 25 gallons for ordinary restaurants) (Use 10 gallons for single service article restaurants) HR = Number of hours establishment is open LF = Loading Factor (Use 2.00 interstate highway; 1.50 other freeways; 1.25 recreational area; 1.00 main highway; 0.75 other roads)	**COMMERCIAL KITCHENS:** (M)x(GM)x(LF) = Effective capacity of Grease interceptor in gallons Where: M = Meals prepared per day GM = Gallons of waste water per meal (Use 5 gallons) LF = Loading Factor (Use 1.00 with dishwashing and 0.75 without dishwashing)

P5661

Date Submitted	7/25/2012	**Section**	1106.7	**Proponent**	Michael Goolsby
Chapter	11	**Affects HVHZ**	No	**Attachments**	Yes
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Simplified scupper sizing table.

Rationale

This Table provides guidance regarding the proper sizing and associated hydraulic head of water for primary and secondary scuppers. Chapter 15 of the base building code provides guidance to Section P1106 and P1108 for scupper sizing; however, the Plumbing Code then refers one back to Chapter 15 for compliance. Consequently, this Table is necessary to provide minimum guidance in scupper design which is otherwise not contained in the referenced sections. The data contained in this table is based upon ASCE 7 and is in compliance with the structural drainage requirements contained in Section 1611 of the base building code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Modification does not alter minimum drainage compliance, only provides a simplified Table.

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

None. Modification does not alter minimum drainage compliance, only provides a simplified Table.

Impact to industry relative to the cost of compliance with code

None. Modification does not alter minimum drainage compliance, only provides a simplified Table.

Requirements

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

Yes. Continues an existing FBC Table, which makes compliance with complex drainage requirement easier to comply with.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. Continues an existing FBC Table, which makes compliance with complex drainage requirement easier to comply with.

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

Does not discriminate merley provides guidance for compliance.

Does not degrade the effectiveness of the code

Improves effectivness of the code by ensuring scupper sizing is compliant and structural loads are not exceeded.

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

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

General Comment - 08/09/2012 - 09/23/2012

P5661-G1

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

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.
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)

1106.7 Scupper sizing.

Scuppers shall be sized in accordance with Table 1106.7.

TABLE 1106.7

SIZING SCUPPERS FOR A 5 INCH PER HOUR RATE OF RAINFALL

HEAD IN INCHES	HORIZONTALLY PROJECTED ROOF AREA (SQUARE FEET)						
	LENGTH OF WEIR IN INCHES						
	4	6	8	12	16	20	24
1	230	346	461	692	923	1153	1384
2	641	961	1282	1923	2564	3205	3846
3	1153	1730	2307	3461	4615	5769	6923
4	1794	2692	3589	5384	7179	8974	10,769

Note:

To adjust this table for other than a 5-inch design rain fall rate, multiply the square footage on the table by 5 then divide by the local design rain fall rate.

Example:

For 4 inches of design rainfall rate, a 4-inch long scupper with a 1 inch head would accommodate 287 square feet. (230 x 5) ÷4 = 287.

This Table provides guidance regarding the proper sizing and associated hydraulic head of water for primary and secondary scuppers. Chapter 15 of the base building code provides guidance to Section P1106 and P1108 for scupper sizing; however, the Plumbing Code then refers one back to Chapter 15 for compliance. Consequently, this Table is necessary to provide minimum guidance in scupper design which is otherwise not contained in the referenced sections. The data contained in this table is based upon ASCE 7 and is in compliance with the structural drainage requirements contained in Section 1611 of the base building code.

P5892

Date Submitted	8/1/2012	**Section**	1301 and 1303	**Proponent**	Eberhard Roeder
Chapter	13	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Delete language for gray water landscape irrigation systems. Such systems are onsite sewage treatment and disposal systems in the jurisdiction of the Dept. of Health (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC, provides specifications. Keep language as in previous Appendix C.

Rationale

The Department of Health is the regulatory authority permitting onsite sewage treatment and disposal systems (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC, provides specifications for them. The boundary to the plumbing code is the building sewer. In keeping with this distinction, graywater recycling systems should be addressed in the building code, while graywater and laundry water disposal systems are addressed in the onsite sewage treatment and disposal code. The proposed language mirrors the approach in the current Appendix C. The current chapter 13 (referenced standards) needs to be renumbered into chapter 14.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Proposal simplifies enforcement by clarifying that there is only a single jurisdiction over onsite sewage treatment and disposal systems. Graywater and laundry wastewater system tanks are included in the definition of “onsite sewage treatment and disposal system” per 381.0065(2)(j) Fl. Statutes.

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

none

Impact to industry relative to the cost of compliance with code

none

Requirements

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

Graywater contains pathogens, and treatment and disposal of this water is necessary for the protection of health and safety. Application of Florida’s onsite sewage regulations provides uniformity and protection. E.g., Florida, but not the base code, requires an unsaturated zone to remove pathogens.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The proposed language is consistent with the referenced language of 64E-6, Florida Administrative Code. Instead of creating a new methodology for drainfield sizing, the reference to 64E-6 provides an established methodology and construction standards that protect groundwater better from pollution.

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

The proposed language includes the material standards of 64E-6, Florida Administrative Code. Among other aspects, this allows for alternative drainfield materials, while the base code language specifies only gravel for the drainfield.

Does not degrade the effectiveness of the code

By making the building code and the onsite sewage treatment code more consistent with each other the code system overall will become more effective.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5892-G1

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

Comment:

This needs to be reevaluated as the DOH is the regulatory authority for onsite sewage treatment and disposal systems, however this would not allow off-site sewage treatment and disposal purveyors from utilizing graywater.

We would suggest adding something into 1301.1 not allowing Subsurface Irrigations System to be utilized with onsite sewage treatment and disposal systems.

SECTION 1301 GENERAL

1301.1 Scope.

The provisions of Chapter 13 shall govern the materials, design, construction and installation of gray water systems for flushing of water closets and urinals ~~and for subsurface landscape irrigation~~. See Figure~~s~~ 1301.1(1) ~~and 1301.1(2)~~.

(Note: delete figure 1301.1(1))

~~FIGURE 1301.1(1) GRAY WATER RECYCLING SYSTEM FOR SUBSURFACE LANDSCAPE IRRIGATION~~

FIGURE 1301.1(1~~2~~) GRAY WATER RECYCLING SYSTEM FOR FLUSHING WATER CLOSETS AND URINALS

1301.2 Installation.

In addition to the provisions of Section 1301, systems for flushing of water closets and urinals shall comply with Section 1302 ~~and systems for subsurface landscape irrigation shall comply with Section 1303~~. Except as provided for in this chapter, all systems shall comply with the provisions of the other chapters of this code.

(Note: leave subsections 1301.3 through 1301.12 unchanged)

SECTION 1302 SYSTEMS FOR FLUSHING WATER CLOSETS AND URINALS

(Note: leave section 1302 as is)

~~**SECTION 1303 SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS**~~

(Note: delete section 1303 in its entirety)

~~**1303.1 Collection reservoir.**~~

~~Reservoirs shall be sized to limit the retention time of gray water to a maximum of 24 hours.~~

~~**1303.1.1 Identification.**~~

~~The reservoir shall be identified as containing nonpotable water.~~

~~**1303.2 Valves required.**~~

~~A check valve and a full open valve located on the discharge side of the check valve shall be installed on the effluent pipe of the collection reservoir.~~

~~**1303.3 Makeup water.**~~

~~Makeup water shall not be required for subsurface landscape irrigation systems. Where makeup water is provided, the installation shall be in accordance with Section 1302.3.~~

~~**1303.4 Disinfection.**~~

~~Disinfection shall not be required for gray water used for subsurface landscape irrigation systems.~~

~~**1303.5 Coloring.**~~

~~Gray water used for subsurface landscape irrigation systems shall not be required to be dyed.~~

1303.6 Estimating gray water discharge.

The system shall be sized in accordance with the gallons per day per occupant number based on the type of fixtures connected to the gray water system. The discharge shall be calculated by the following equation:

$C = A \times B$ **(Equation 13-1)**

where:

A = Number of occupants:

Residential. Number of occupants shall be determined by the actual number of occupants, but not less than two occupants for one bedroom and one occupant for each additional bedroom.

Commercial. Number of occupants shall be determined by the International Building Code®.

B = Estimated flow demands for each occupant:

Residential. 25 gallons per day (94.6 lpd) per occupant for showers, bathtubs and lavatories and 15 gallons per day (56.7 lpd) per occupant for clothes washers or laundry trays.

Commercial. Based on type of fixture or water use records minus the discharge of fixtures other than those discharging gray water.

C = Estimated gray water discharge based on the total number of occupants.

1303.7 Percolation tests.

The permeability of the soil in the proposed absorption system shall be determined by percolation tests or permeability evaluation.

1303.7.1 Percolation tests and procedures.

At least three percolation tests in each system area shall be conducted. The holes shall be spaced uniformly in relation to the bottom depth of the proposed absorption system. More percolation tests shall be made where necessary, depending on system design.

1303.7.1.1 Percolation test hole.

The test hole shall be dug or bored. The test hole shall have vertical sides and a horizontal dimension of 4 inches to 8 inches (102 mm to 203 mm). The bottom and sides of the hole shall be scratched with a sharp pointed instrument to expose the natural soil. All loose material shall be removed from the hole and the bottom shall be covered with 2 inches (51 mm) of gravel or coarse sand.

1303.7.1.2 Test procedure, sandy soils.

The hole shall be filled with clear water to a minimum of 12 inches (305 mm) above the bottom of the hole for tests in sandy soils. The time for this amount of water to seep away shall be determined, and this procedure shall be repeated if the water from the second filling of the hole seeps away in 10 minutes or less. The test shall proceed as follows: Water shall be added to a point not more than 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, water levels shall be measured at 10 minute intervals for a period of 1 hour. Where 6 inches (152 mm) of water seeps away in less than 10 minutes, a shorter interval between measurements shall be used, but in no case shall the water depth exceed 6 inches (152 mm). Where 6 inches (152 mm) of water seeps away in less than 2 minutes, the test shall be stopped and a rate of less than 3 minutes per inch (7.2 s/mm) shall be reported. The final water level drop shall be used to calculate the percolation rate. Soils not meeting the above requirements shall be tested in accordance with Section 1303.7.1.3.

1303.7.1.3 Test procedure, other soils.

The hole shall be filled with clear water, and a minimum water depth of 12 inches (305 mm) shall be maintained above the bottom of the hole for a 4 hour period by refilling whenever necessary or by use of an automatic siphon.

~~Water remaining in the hole after 4 hours shall not be removed. Thereafter, the soil shall be allowed to swell not less than 16 hours or more than 30 hours. Immediately after the soil swelling period, the measurements for determining the percolation rate shall be made as follows: any soil sloughed into the hole shall be removed and the water level shall be adjusted to 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, the water level shall be measured at 30 minute intervals for a period of 4 hours, unless two successive water level drops do not vary by more than $^{+}/_{16}$ inch (1.59 mm). At least three water level drops shall be observed and recorded. The hole shall be filled with clear water to a point not more than 6 inches (152 mm) above the gravel or coarse sand whenever it becomes nearly empty. Adjustments of the water level shall not be made during the three measurement periods except to the limits of the last measured water level drop. When the first 6 inches (152 mm) of water seeps away in less than 30 minutes, the time interval between measurements shall be 10 minutes and the test run for 1 hour. The water depth shall not exceed 5 inches (127 mm) at any time during the measurement period. The drop that occurs during the final measurement period shall be used in calculating the percolation rate.~~

~~1303.7.1.4 Mechanical test equipment.~~
~~Mechanical percolation test equipment shall be of an approved type.~~

~~1303.7.2 Permeability evaluation.~~
~~Soil shall be evaluated for estimated percolation based on structure and texture in accordance with accepted soil evaluation practices. Borings shall be made in accordance with Section 1303.7.1 for evaluating the soil.~~

~~1303.8 Subsurface landscape irrigation site location.~~
~~The surface grade of all soil absorption systems shall be located at a point lower than the surface grade of any water well or reservoir on the same or adjoining lot. Where this is not possible, the site shall be located so surface water drainage from the site is not directed toward a well or reservoir. The soil absorption system shall be located with a minimum horizontal distance between various elements as indicated in Table 1303.8. Private sewage disposal systems in compacted areas, such as parking lots and driveways, are prohibited. Surface water shall be diverted away from any soil absorption site on the same or neighboring lots.~~

~~TABLE 1303.8 LOCATION OF GRAY WATER SYSTEM~~

~~ELEMENT~~	~~MINIMUM HORIZONTAL DISTANCE~~	
	~~HOLDING TANK (feet)~~	~~IRRIGATION DISPOSAL FIELD (feet)~~
~~Buildings~~	~~5~~	~~2~~
~~Lot line adjoining private property~~	~~5~~	~~5~~
~~Water wells~~	~~50~~	~~100~~
~~Streams and lakes~~	~~50~~	~~50~~
~~Seepage pits~~	~~5~~	~~5~~
~~Septic tanks~~	~~0~~	~~5~~
~~Water service~~	~~5~~	~~5~~
~~Public water main~~	~~10~~	~~10~~

~~For SI: 1 foot = 304.8 mm.~~

~~1303.9 Installation.~~

~~Absorption systems shall be installed in accordance with Sections 1303.9.1 through 1303.9.5 to provide landscape irrigation without surfacing of gray water.~~

~~1303.9.1 Absorption area.~~

~~The total absorption area required shall be computed from the estimated daily gray water discharge and the design loading rate based on the percolation rate for the site. The required absorption area equals the estimated gray water discharge divided by the design loading rate from Table 1303.9.1.~~

~~TABLE 1303.9.1 DESIGN LOADING RATE~~

~~PERCOLATION RATE (minutes per inch)~~	~~DESIGN LOADING FACTOR (gallons per square foot per day)~~
~~0 to less than 10~~	~~1.2~~
~~10 to less than 30~~	~~0.8~~
~~30 to less than 45~~	~~0.72~~
~~45 to 60~~	~~0.4~~

~~For SI: 1 minute per inch = min/25.4 mm,~~
~~1 gallon per square foot = 40.7 L/m^2.~~

~~1303.9.2 Seepage trench excavations.~~

~~Seepage trench excavations shall be not less than 1 foot (304 mm) in width and not greater than 5 feet (1524 mm) in width. Trench excavations shall be spaced not less than 2 feet (610 mm) apart. The soil absorption area of a seepage trench shall be computed by using the bottom of the trench area (width) multiplied by the length of pipe. Individual seepage trenches shall be not greater than100 feet (30 480 mm) in developed length.~~

~~1303.9.3 Seepage bed excavations.~~

~~Seepage bed excavations shall be not less than 5 feet (1524 mm) in width and have more than one distribution pipe. The absorption area of a seepage bed shall be computed by using the bottom of the trench area. Distribution piping in a seepage bed shall be uniformly spaced not greater than 5 feet (1524 mm) and not less than 3 feet (914 mm) apart, and greater than 3 feet (914 mm) and not less than 1 foot (305 mm) from the sidewall or headwall.~~

~~1303.9.4 Excavation and construction.~~

~~The bottom of a trench or bed excavation shall be level. Seepage trenches or beds shall not be excavated where the soil is so wet that such material rolled between the hands forms a soil wire. All smeared or compacted soil surfaces in the sidewalls or bottom of seepage trench or bed excavations shall be scarified to the depth of smearing or compaction and the loose material removed. Where rain falls on an open excavation, the soil shall be left until sufficiently dry so a soil wire will not form when soil from the excavation bottom is rolled between the hands. The bottom area shall then be scarified and loose material removed.~~

~~1303.9.5 Aggregate and backfill.~~

~~Not less than 6 inches in depth of aggregate ranging in size from $\frac{1}{2}$ to 2$\frac{1}{2}$ inches (12.7 mm to 64 mm) shall be laid into the trench below the distribution piping elevation. The aggregate shall be evenly distributed not less than 2 inches (51 mm) in depth over the top of the distribution pipe. The aggregate shall be covered with approved~~

~~synthetic materials or 9 inches (229 mm) of uncompacted marsh hay or straw. Building paper shall not be used to cover the aggregate. Not less than 9 inches (229 mm) of soil backfill shall be provided above the covering.~~

~~1303.10 Distribution piping.~~

~~Distribution piping shall be not less than 3 inches (76 mm) in diameter. Materials shall comply with Table 1303.10. The top of the distribution pipe shall be not less than 8 inches (203 mm) below the original surface. The slope of the distribution pipes shall be not less than 2 inches (51 mm) and not greater than 4 inches (102 mm) per 100 feet (30 480 mm).~~

~~TABLE 1303.10 DISTRIBUTION PIPE~~

~~MATERIAL~~	~~STANDARD~~
~~Polyethylene (PE) plastic pipe~~	~~ASTM F 405~~
~~Polyvinyl chloride (PVC) plastic pipe~~	~~ASTM D 2729~~
~~Polyvinyl chloride (PVC) plastic pipe with a 3.5 inch O.D. and solid cellular core or composite wall.~~	~~ASTM F 1488~~

~~1303.11 Joints.~~

~~Joints in distribution pipe shall be made in accordance with Section 705 of this code.~~

Chapter 13~~3~~4, Referenced Standards

P5070

Date Submitted	7/10/2012	**Section**	Referenced Standards	**Proponent**	Suzanne Davis
Chapter	13	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section Referenced Standards Plumbing to implement FBC approved plan for 2013 code

Rationale

To be consistent with FS and to implement FBC approved plan for 2013 code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To be consistent with FS and to implement FBC approved plan for 2013 code.

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

General Comment - 08/09/2012 - 09/23/2012

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

Comment:
This should be in Chapter 14

P5070-G1

Florida Codes

Florida Building Commission

c/o Florida Department of Business and Professional Regulation

Building Codes and Standards

2555 Shumard Oak Boulevard

Tallahassee, Florida 32399-2100

Standard Reference Number	Title	Referenced in code section number
FBC-B	2013 Florida Building Code, Building	201.3, 305.4, 307.1, 307.2, 307.3, 308.2, 309.1, 310.1, 310.3, 315.1, 403.1, Table 403.1, 404.1, 407.3, 417.6, 502.6, 606.5.2, 1106.5
Ch. 11	Florida Building Code, Building - Accessibility	404.1.1 315.1
Ch. 553.86	Florida Statute, Public Restrooms	403.1.1
	Florida Building Code, Energy Conservation	313.1, 607.2, 607.2.1
Ch. 27	Florida Building Code, Building-Electrical (National Electrical Code, NFPA 70)	201.3, 502.1, 504.3, 1113.1.3
FEBC	—2013 Florida Existing Building Code	101.2
FBC-FG	2013 Florida Building Code, Fuel Gas	101.2, 201.3, 502.1
FBC-M	2013 Florida Building Code, Mechanical	201.3, 307.6, 310.1, 422.9, 502.1, 612.1, 1202.1
FRC	-2013 Florida Residential Code	101.2
FFPC	-2013 Florida Fire Prevention Code	201.3, 1201.1

P5074

Date Submitted	7/10/2012	**Section**		**Proponent**	Suzanne Davis
Chapter	Appendix A	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update the Apendix A Plumbing to implement FBC approved plan for 2013 code

Rationale

To be consistent with FBC policies in regard to treatment of appendices. Policy has been to reserve the majority of the appenices in the I-Code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To be consistent with FBC policies in regard to treatment of appendices. Policy has been to reserve the majority of the appenices in the I-Code.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The Commission has no authority to adopt an appendix as an option for local adoption.

P5074-G1

Appendix A: Plumbing Permit Fee Schedule. Change to read as shown.

APPENDIX A: Plumbing Fee Schedule. Reserved.

P5075

Date Submitted	7/10/2012	**Section**		**Proponent**	Suzanne Davis
Chapter	Appendix C	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section Appendix C to implement FBC approved plan for 2013 code.

Rationale

To be consistent with FBC policies in regard to treatment of appendices. Policy has been to reserve the majority of the appendices in the I-Codes.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previious field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previious field tested code. Proven to be effective.

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

Carried over from previious field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previious field tested code. Proven to be effective.

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

To be consistent with FBC policies in regard to treatment of appendices. Policy has been to reserve the majority of the appendices in the I-Codes.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The Commission has no authority to adopt an appendix as an option for local adoption.

P5075-G1

Appendix C

Vacuum Drainage System. Reserved.

P5076

Date Submitted	7/10/2012	**Section**	Appendix F	**Proponent**	Suzanne Davis
Chapter	Appendix F	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Update section Appendix F Plumbing to implement FBC approved plan for 2013 code

Rationale

To be consistent with FBC policies in regard to treatment of appendices. Policy has been to reserve the majority of the appendices in the I-Code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Currently used under the 2010 FBC. No new requirements being established.

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

No impact. Currently used under the 2010 FBC. No new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Currently used under the 2010 FBC. No new requirements being established.

Requirements

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

Carried over from previous field tested code. Proven to be effective.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous field tested code. Proven to be effective.

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

Carried over from previous field tested code. Proven to be effective.

Does not degrade the effectiveness of the code

Carried over from previous field tested code. Proven to be effective.

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

To be consistent with FBC policies in regard to treatment of appendices. Policy has been to reserve the majority of the appendices in the I-Code.

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

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The Commission has no authority to adopt an appendix as an option for local adoption.

P5076-G1

Appendix F

Structural Safety. Reserved

Date Submitted	8/2/2012	**Section**	P3009.1,P3009.2,P3009.14	**Proponent**	Eberhard Roeder
Chapter	30	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

P 5892

Summary of Modification

Delete language for gray water landscape irrigation systems. Such systems are onsite sewage treatment and disposal systems in the jurisdiction of the Dept. of Health (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC, provides specifications. Keep language as in previous Appendix O.

Rationale

The Department of Health is the regulatory authority permitting onsite sewage treatment and disposal systems (381.0065(2)(j); 381.0065(3)(a)(b)(k), Fl. Statutes). 64E-6, FAC, provides specifications for them. Graywater recycling systems for flushing of water closets and urinals should be addressed in the building code, while graywater and laundry water disposal systems are addressed in the onsite sewage treatment and disposal code. The proposed language mirrors the approach in the previous Appendix O.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Proposal simplifies enforcement by clarifying that there is only a single jurisdiction over onsite sewage treatment and disposal systems. Graywater and laundry wastewater system tanks are included in the definition of “onsite sewage treatment and disposal system” per 381.0065(2)(j) Fl. Statutes.

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

none

Impact to industry relative to the cost of compliance with code

none

Requirements

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

Graywater contains pathogens, and treatment and disposal of this water is necessary for the protection of health and safety. Application of Florida’s onsite sewage regulations provides uniformity and protection. E.g., Florida, but not the base code, requires an unsaturated zone to remove pathogens.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

The proposed language is consistent with, Florida’s onsite sewage standards. Instead of creating a new methodology for drainfield sizing in the base code, 64E-6 FAC already provides an established methodology and construction standards that protect groundwater better from pollution.

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

The standards of 64E-6, Florida Administrative Code, allow for alternative drainfield materials, while the base code language specifies only gravel for the drainfield.

Does not degrade the effectiveness of the code

By making the building code and the onsite sewage treatment code more consistent with each other the code system overall will become more effective.

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

NO

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?

NO

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

SECTION P3009 GRAY WATER RECYCLING SYSTEMS

P3009.1 Scope.
The provisions of Section P3009 shall govern the materials, design, construction and installation of gray water systems for flushing of water closets and urinals ~~and for subsurface landscape irrigation~~. See Figures P3009.1(1) ~~and P3009.1(2)~~.

FIGURE P3009.1(1) GRAY WATER RECYCLING SYSTEM FOR FLUSHING WATER CLOSETS AND URINALS

~~FIGURE P3009.1(2) GRAY WATER RECYCLING SYSTEM FOR SUBSURFACE LANDSCAPE IRRIGATION~~

(Note: delete Figure P3009.1(2))

P3009.2 Installation.
In addition to the provisions of Section P3009, systems for flushing of water closets and urinals shall comply with Section P3009.13 ~~and systems for subsurface landscape irrigation shall comply with Section P3009.14.~~ Except as provided for in Section P3009, all systems shall comply with the provisions of the other sections of this code.

(Note: P3009.3-P3009.13 unchanged)

(Note: delete P3009.14 in its entirety)

~~**P3009.14 Landscape irrigation systems.**~~
~~Subsurface landscape irrigation systems shall comply with Sections P3009.14.1 through P3009.14.11~~

~~**P3009.14.1 Collection reservoir.**~~
~~Reservoirs shall be sized to limit the retention time of gray water to a maximum of 24 hours.~~

~~**P3009.14.1.1 Identification.**~~
~~The reservoir shall be identified as containing nonpotable water.~~

~~**P3009.14.2 Valves required.**~~
~~A check valve and a full open valve located on the discharge side of the check valve shall be installed on the effluent pipe of the collection reservoir.~~

~~**P3009.14.3 Makeup water.**~~
~~Makeup water shall not be required for subsurface landscape irrigation systems. Where makeup water is provided, the installation shall be in accordance with Section 3009.13.3.~~

~~**P3009.14.4 Disinfection.**~~
~~Disinfection shall not be required for gray water used or subsurface landscape irrigation systems.~~

~~**P3009.14.5 Coloring.**~~
~~Gray water used for subsurface landscape irrigation systems shall not be required to be dyed.~~

P3009.14.6 Estimating gray water discharge.
The system shall be sized in accordance with the gallons per day per occupant number based on the type of fixtures connected to the gray water system. The discharge shall be calculated by the following equation:

C = A × B **(Equation 30-1)**

where:

A=Number of occupants:

Number of occupants shall be determined by the actual number of occupants, but not less than two occupants for one bedroom and one occupant for each additional bedroom.

B=Estimated flow demands for each occupant:

Residential – 25 gallons per day (94.6 lpd) per occupant for showers, bathtubs and lavatories and 15 gallons per day (56.7 lpd) per occupant for clothes washers or laundry trays.

C=Estimated gray water discharge based on the total number of occupants.

P3009.14.7 Percolation tests.
The permeability of the soil in the proposed absorption system shall be determined by percolation tests or permeability evaluation.

P3009.14.7.1 Percolation tests and procedures.
At least three percolation tests in each system area shall be conducted. The holes shall be spaced uniformly in relation to the bottom depth of the proposed absorption system. More percolation tests shall be made where necessary, depending on system design.

P3009.14.7.1.1 Percolation test hole.
The test hole shall be dug or bored. The test hole shall have vertical sides and a horizontal dimension of 4 inches to 8 inches (102 mm to 203 mm). The bottom and sides of the hole shall be scratched with a sharp-pointed instrument to expose the natural soil. All loose material shall be removed from the hole and the bottom shall be covered with 2 inches (51 mm) of gravel or coarse sand.

P3009.14.7.1.2 Test procedure, sandy soils.
The hole shall be filled with clear water to a minimum of 12 inches (305 mm) above the bottom of the hole for tests in sandy soils. The time for this amount of water to seep away shall be determined, and this procedure shall be repeated if the water from the second filling of the hole seeps away in 10 minutes or less. The test shall proceed as follows: Water shall be added to a point not more than 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, water levels shall be measured at 10-minute intervals for a period of 1 hour. Where 6 inches (152 mm) of water seeps away in less than 10 minutes, a shorter interval between measurements shall be used, but in no case shall the water depth exceed 6 inches (152 mm). Where 6 inches (152

~~mm) of water seeps away in less than 2 minutes, the test shall be stopped and a rate of less than 3 minutes per inch (7.2 s/mm) shall be reported. The final water level drop shall be used to calculate the percolation rate. Soils not meeting the above requirements shall be tested in accordance with Section 3009.14.7.1.3.~~

~~P3009.14.7.1.3 Test procedure, other soils.~~

~~The hole shall be filled with clear water, and a minimum water depth of 12 inches (305 mm) shall be maintained above the bottom of the hole for a 4-hour period by refilling whenever necessary or by use of an automatic siphon. Water remaining in the hole after 4 hours shall not be removed. Thereafter, the soil shall be allowed to swell not less than 16 hours or more than 30 hours. Immediately after the soil swelling period, the measurements for determining the percolation rate shall be made as follows: Any soil sloughed into the hole shall be removed and the water level shall be adjusted to 6 inches (152 mm) above the gravel or coarse sand. Thereupon, from a fixed reference point, the water level shall be measured at 30-minute intervals for a period of 4 hours, unless two successive water level drops do not vary by more than $^{1}/_{16}$ inch (1.59 mm). At least three water level drops shall be observed and recorded. The hole shall be filled with clear water to a point not more than 6 inches (152 mm) above the gravel or coarse sand whenever it becomes nearly empty. Adjustments of the water level shall not be made during the three measurement periods except to the limits of the last measured water level drop. When the first 6 inches (152 mm) of water seeps away in less than 30 minutes, the time interval between measurements shall be 10 minutes and the test run for 1 hour. The water depth shall not exceed 5 inches (127 mm) at any time during the measurement period. The drop that occurs during the final measurement period shall be used in calculating the percolation rate.~~

~~P3009.14.7.1.4 Mechanical test equipment.~~

~~Mechanical percolation test equipment shall be of an approved type.~~

~~P3009.14.7.2 Permeability evaluation.~~

~~Soil shall be evaluated for estimated percolation based on structure and texture in accordance with accepted soil evaluation practices. Borings shall be made in accordance with Section P3009.14.7.1 for evaluating the soil.~~

~~P3009.14.8 Subsurface landscape irrigation site location.~~

~~The surface grade of all soil absorption systems shall be located at a point lower than the surface grade of any water well or reservoir on the same or adjoining lot. Where this is not possible, the site shall be located so that surface water drainage from the site is not directed toward a well or reservoir. The soil absorption system shall be located with a minimum horizontal distance between various elements as indicated in Table P3009.14.8. Private sewage disposal systems in compacted areas, such as parking lots and driveways, are prohibited. Surface water shall be diverted away from any soil absorption site on the same or neighboring lots.~~

~~TABLE P3009.14.8 LOCATION OF GRAY WATER SYSTEM~~

~~ELEMENT~~	~~MINIMUM HORIZONTAL DISTANCE~~	
	~~HOLDING TANK (feet)~~	~~IRRIGATION DISPOSAL FIELD (feet)~~
~~Buildings~~	~~5~~	~~2~~
~~Property line adjoining private property~~	~~5~~	~~5~~
~~Public water main~~	~~10~~	~~10~~
~~Seepage pits~~	~~5~~	~~5~~
~~Septic tanks~~	~~0~~	~~5~~

Streams and lakes	50	50
Water service	5	5
Water wells	50	100

For SI: 1 foot = 304.8 mm.

P3009.14.9 Installation.
Absorption systems shall be installed in accordance with Sections P3009.14.9.1 through P3009.14.9.5 to provide landscape irrigation without surfacing of gray water.

P3009.14.9.1 Absorption area.
The total absorption area required shall be computed from the estimated daily gray water discharge and the design loading rate based on the percolation rate for the site. The required absorption area equals the estimated gray water discharge divided by the design loading rate from Table P3009.14.9.1.

TABLE P3009.14.9.1 DESIGN LOADING RATE

PERCOLATION RATE (minutes per inch)	DESIGN LOADING FACTOR (gallons per square foot per day)
0 to less than 10	1.2
10 to less than 30	0.8
30 to less than 45	0.72
45 to 60	0.4

For SI: 1 minute per inch = min/25.4 mm,
1 gallon per square foot = 40.7 L/m^2.

P3009.14.9.2 Seepage trench excavations.
Seepage trench excavations shall be a minimum of 1 foot (304 mm) to a maximum of 5 feet (1524 mm) wide. Trench excavations shall be spaced a minimum of 2 feet (610 mm) apart. The soil absorption area of a seepage trench shall be computed by using the bottom of the trench area (width) multiplied by the length of pipe. Individual seepage trenches shall be a maximum of 100 feet (30 480 mm) in developed length.

P3009.14.9.3 Seepage bed excavations.
Seepage bed excavations shall be a minimum of 5 feet (1524 mm) wide and have more than one distribution pipe. The absorption area of a seepage bed shall be computed by using the bottom of the trench area. Distribution piping in a seepage bed shall be uniformly spaced a maximum of 5 feet (1524 mm) and a minimum of 3 feet (914 mm) apart, and a maximum of 3 feet (914 mm) and a minimum of 1 foot (305 mm) from the sidewall or headwall.

P3009.14.9.4 Excavation and construction.
The bottom of a trench or bed excavation shall be level. Seepage trenches or beds shall not be excavated where the

~~soil is so wet that such material rolled between the hands forms a soil wire. All smeared or compacted soil surfaces in the sidewalls or bottom of seepage trench or bed excavations shall be scarified to the depth of smearing or compaction and the loose material removed. Where rain falls on an open excavation, the soil shall be left until sufficiently dry so a soil wire will not form when soil from the excavation bottom is rolled between the hands. The bottom area shall then be scarified and loose material removed.~~

~~P3009.14.9.5 Aggregate and backfill.~~

~~A minimum of 6 inches (152 mm) of aggregate ranging in size from $\frac{1}{2}$ inch to $2\frac{1}{2}$ inches (12.7 mm to 64 mm) shall be laid into the trench below the distribution piping elevation. The aggregate shall be evenly distributed a minimum of 2 inches (51 mm) over the top of the distribution pipe. The aggregate shall be covered with approved synthetic materials or 9 inches (229 mm) of uncompacted marsh hay or straw. Building paper shall not be used to cover the aggregate. A minimum of 9 inches (229 mm) of soil backfill shall be provided above the covering.~~

~~P3009.14.10 Distribution piping.~~

~~Distribution piping shall be not less than 3 inches (76 mm) in diameter. Materials shall comply with Table P3009.14.10. The top of the distribution pipe shall be not less than 8 inches (203 mm) below the original surface. The slope of the distribution pipes shall be a minimum of 2 inches (51 mm) and a maximum of 4 inches (102 mm) per 100 feet (30 480 mm).~~

~~TABLE P3009.14.10 DISTRIBUTION PIPE~~

~~MATERIAL~~	~~STANDARD~~
~~Polyethylene (PE) plastic pipe~~	~~ASTM F 405~~
~~Polyvinyl chloride (PVC) plastic pipe~~	~~ASTM D 2729~~
~~Polyvinyl chloride (PVC) plastic pipe with a 3.5 inch O.D. and solid cellular core or composite wall~~	~~ASTM F 1488~~

~~P3009.14.11 Joints.~~

~~Joints in distribution pipe shall be made in accordance with Section P3003.~~

P4985

Date Submitted	7/6/2012	**Section**	3301.1	**Proponent**	Michael Goolsby
Chapter	33	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
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

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

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.

P4985-G1

P3301.1 Scope. The provisions of this chapter shall govern the materials, design, construction and installation of storm drainage.

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

P5020

Date Submitted	7/9/2012	**Section**	4413	**Proponent**	Michael Goolsby
Chapter	44	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Eliminating unnecessary duplication of Chapter 44 HVHZ provisions

Rationale

Since the inception of the FBC, the content of Chapter 44 of the FBC, R has been a duplication of the sections contained in the FBC, Building volume. This proposed modification is intended to maintain the continuation of the current level of safety for the protection of life and property unchanged. Importantly, the proposed modification eliminates the need to unnecessarily duplicate more than one-hundred pages into the FBC, R volume, thereby reducing the size of the text contained in the FBC. Additionally, the proposed modification prevents the need to replace all of the non-wind related sections which were removed by legislative directive with dozens of individual modifications, each requiring review and approval; this process would otherwise be unavoidable in order to create a crucial integration of applicable and relevant building code sections into Chapter 44 requirements. In short, this proposed modification is a simplified approach resulting in identical code requirements but through a less time consuming, less complicated and less duplicative process.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

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

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

Impact to industry relative to the cost of compliance with code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

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 eliminating the need to unnecessarily duplicate building code provisions and affects a reduction in the number of code pages to be compiled, reviewed, edited and printed.

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

This modification does not curtail the use of any material, products, methods or systems of construction already deemed acceptable by the Florida Building Code or any alternate materials, design and methods of construction and equipment acceptable to the code official.

Does not degrade the effectiveness of the code

This modification does not degrade the effectiveness of the code; instead, it maintains the applicability of relevant base code requirements as has been the case since the first edition of the Florida Building Code.

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

NO

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?

NO

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

General Comment - 08/09/2012 - 09/23/2012

P5020-G1

Proponent Jack Glenn **Submitted** 9/23/2012 **Attachments** No

Comment:

Creates a reference to the FBC-B and FBC-P. The FBC-R was created to be a free standing document and as such should include the language if it meets the criteria for a Florida specific amendment.

SECTION R4413

HIGH-VELOCITY HURRICANE ZONES — STORM DRAINAGE

R4413.1 ~~General~~ Refer to the Florida Building Code, Building and the Florida Building Code, Plumbing.

~~**R4413.1.1 Scope**. The provisions of this section shall govern the materials, design, construction and installation of storm drainage.~~

~~**R4413.1.2 Where required**. All roofs, paved areas, yards, courts and courtyards shall drain into a separate storm sewer system, or a combined sewer system, or to an approved place of disposal. For one- and two-family dwellings, and where approved, storm water is permitted to discharge onto flat areas, such as streets or lawns, provided that the storm water flows away from the building.~~

~~**R4413.1.3 Prohibited drainage.** Storm water shall not be drained into sewers intended for sewage only.~~

~~**R4413.1.4 Tests.** The conductors and the building storm drain shall be tested in accordance with Section 312 of the Florida Building Code, Plumbing .~~

~~**R4413.1.5 Continuous flow**. The size of a drainage pipe shall not be reduced in the direction of flow.~~

~~**R4413.1.6 Fittings and connections**. All connections and changes in direction of the storm drainage system shall be made with approved drainage type fittings in accordance with Table R4413.1.6 herein. The fittings shall not obstruct or retard flow in the system.~~

~~**TABLE R4413.1.6**~~

~~**FITTINGS FOR CHANGE IN DIRECTION**~~

~~TYPE OF FITTING PATTERN CHANGE IN DIRECTION~~

~~Horizontal to vertical Vertical to horizontal Horizontal to horizontal~~

Sixteenth bend	X	X	X
Eighth bend	X	X	X
Sixth bend	X	X	X
Quarter bend	X	Xa	Xa
Short sweep	X	Xa,b	Xa,b
Long sweep	X	X	X
Sanitary tee	Xc		
Wye	X	X	X
Combination wye and eighth bend	X	X	X

For SI: 1 inch = 25.4 mm.

a. The fittings shall only be permitted for a 2-inch or smaller fixture drain.

b. Three inches and larger.

c. For a limitation on double sanitary tees, see Section 706.3 of the Florida Building Code, Plumbing.

R4413.1.7 Roof design. Roofs shall be designed for the maximum possible depth of water that will pond thereon as determined by the relative levels of roof deck and overflow weirs, scuppers, edges or serviceable drains in combination with the deflected structural elements. In determining the maximum possible depth of water, all primary roof drainage means shall be assumed to be blocked.

R4413.1.8 Cleanouts required. Cleanouts shall be installed in the storm drainage system and shall comply with the provisions of this code for sanitary drainage pipe cleanouts.

SECTION R4413.2

HIGH VELOCITY HURRICANE ZONES — MATERIALS

R4413.2.1 General. The materials and methods utilized for the construction and installation of storm drainage systems shall comply with this section.

R4413.2.2 Inside storm drainage conductors. Inside storm drainage conductors installed above ground shall conform to one of the standards listed in Table R4413.2.2 herein.

TABLE R4413.2.2

ABOVE-GROUND DRAINAGE AND VENT PIPE

MATERIAL STANDARD

Acrylonitrile-butadiene-styrene (ABS) plastic pipe ASTM D 2661; ASTM F 628; CSA B181.1

Brass pipe ASTM B 43

Cast iron pipe ASTM A 74; CISPI 301; ASTM A 888

Copper or copper-alloy pipe ASTM B 42; ASTM B 302

Copper or copper-alloy tubing (Type K, L, M or DWV) ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306

Galvanized steel pipe ASTM A 53

Glass pipe ASTM C 1053

Polyolefin pipe CSA CAN/CSA-B181.3

Polyvinyl chloride (PVC) plastic pipe (Type DWV) ASTM D 2665; ASTM D 2949; ASTM F 891; CSA CAN/CSA-B181.2

R4413.2.3 Underground building storm drain pipe. Underground building storm drain pipe shall conform to one of the standards listed in Table R4413.2.3 herein.

TABLE R4413.2.3

UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

~~MATERIAL STANDARD~~

~~Acrylonitrile butadiene styrene (ABS) plastic pipe ASTM D 2661; ASTM F 628; CSA B181.1~~

~~Asbestos cement pipe ASTM C 428~~

~~Cast iron pipe ASTM A 74; CISPI 301;~~

~~ASTM A 888~~

~~Copper or copper alloy tubing (Type K or L) ASTM B 75; ASTM B 88;~~

~~ASTM B 251~~

~~Polyolefin pipe CSA CAN/CSA B181.3~~

~~Polyvinyl chloride (PVC) plastic pipe (Type DWV) ASTM D 2665; ASTM D 2949; ASTM F 891;~~

~~CSA CAN/CSA B181.2~~

~~**R4413.2.4 Building storm sewer pipe**. Building storm sewer pipe shall conform to one of the standards listed in Table R4413.2.4.~~

~~**R4413.2.5 Subsoil drain pipe.** Subsoil drains shall be open jointed, horizontally split or perforated pipe conforming to one of the standards listed in Table R4413.2.5.~~

~~**R4413.2.6 Roof drain**s. Roof drains shall conform to ASME A112.21.2.~~

~~**R4413.2.7 Fitting**s. Pipe fittings shall be approved for installation with the piping material installed, and shall conform to the respective pipe standards or one of the standards listed in Table R4413.2.7. The fittings shall not have ledges, shoulders or reductions capable of retarding or obstructing flow in the piping. Threaded drainage pipe fittings shall be of the recessed drainage type.~~

~~**TABLE R4413.2.4**~~

~~**BUILDING STORM SEWER PIPE**~~

~~MATERIAL STANDARD~~

~~Acrylonitrile butadiene styrene (ABS) plastic pipe ASTM D 2661; ASTM D 2751; ASTM F 628~~

~~Asbestos-cement pipe ASTM C 428~~

~~Cast iron pipe ASTM A 74; CISPI 301;~~

~~ASTM A 888~~

~~Concrete pipe ASTM C 14; ASTM C 76;~~

~~CSA A257.1;~~

~~CSA CAN/CSA A257.2~~

~~Copper or copper-alloy tubing (Type K, L, M or DWV) ASTM B 75; ASTM B 88;~~

~~ASTM B 251; ASTM B 306~~

~~Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100) ASTM D 2665; ASTM D 2797; ASTM D 3034; ASTM F 891; CSA B182.2;~~

~~CSA CAN/CSA B182.4~~

~~Vitrified clay pipe ASTM C 4; ASTM C 700~~

~~TABLE R4413.2.5~~

~~SUBSOIL DRAIN PIPE~~

~~MATERIAL STANDARD~~

~~Asbestos-cement pipe ASTM C 508~~

~~Cast iron pipe ASTM A 74; CISPI 301;~~

~~ASTM A 888~~

~~Polyethylene (PE) plastic pipe ASTM F 405~~

~~Polyvinyl chloride (PVC) plastic pipe (Type Sewer Pipe, PS25, PS50 or PS100) ASTM D 2729; ASTM F 891; CSA B182.2;~~

~~CSA CAN/CSA B182.4~~

~~Vitrified clay pipe ASTM C 4; ASTM C 700~~

~~TABLE R4413.2.7~~

~~PIPE FITTINGS~~

~~MATERIAL STANDARD~~

~~Acrylonitrile-butadiene-styrene (ABS) plastic pipe ASTM D 2468~~

~~Cast iron ASME B16.4; ASME B16.12; ASTM A 888~~

~~Chlorinated polyvinyl chloride (CPVC) plastic ASTM F 437; ASTM F 438; ASTM F 439~~

~~Copper or copper alloy ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29; ASME B16.32~~

~~Gray iron and ductile iron AWWA C110~~

~~Malleable iron ASME B16.3~~

~~Plastic, general ASTM F 409~~

~~Polyethylene (PE) plastic ASTM D 2609~~

~~Polyvinyl chloride (PVC) plastic ASTM D 2464; ASTM D 2466; ASTM D 2467;~~

~~CSA CAN/CSA B137.2~~

~~Steel ASME B16.9; ASME B16.11; ASME B16.28~~

~~**SECTION R4413.3**~~

~~**RESERVED**~~

~~**SECTION R4413.4**~~

~~**HIGH-VELOCITY HURRICANE ZONES CONDUCTORS AND CONNECTIONS**~~

~~**R4413.4.1 Prohibited use**. Conductor pipes shall not be used as soil, waste or vent pipes, and soil, waste or vent pipes shall not be used as conductors.~~

~~**R4413.4.2 Combining storm with sanitary drainage.** The sanitary and storm drainage systems of a structure shall be entirely separate except where combined sewer systems are utilized. Where a combined sewer is utilized, the building storm drain shall be connected in the same horizontal plane through a single wye fitting to the combined sewer at least 10 feet (3048 mm) downstream from any soil stack.~~

~~**R4413.4.3 Floor drains**. Floor drains shall not be connected to a storm drain.~~

~~**SECTION R4413.5**~~

~~**HIGH-VELOCITY HURRICANE ZONES- ROOF DRAINS**~~

~~**R4413.5.1 Strainers.** Roof drains shall have strainers extending not less than 4 inches (102 mm) above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area, above roof level, of not less than one and one-half times the area of the conductor or leader to which the drain is connected.~~

~~**R4413.5.2 Flat decks**. Roof drain strainers for use on sun decks, parking decks and similar areas that are normally serviced and maintained shall comply with Section R4413.5.1 or shall be of the flat-surface type, installed level with the deck, with an available inlet area not less than two times the area of the conductor or leader to which the drain is connected.~~

~~**R4413.5.3 Roof drain flashings.** The connection between roofs and roof drains which pass through the roof and into the interior of the building shall be made water tight by the use of approved flashing material.~~

~~**SECTION R4413.6**~~

~~**HIGH VELOCITY HURRICANE ZONES- SIZE OF CONDUCTORS, LEADERS AND STORM DRAINS**~~

~~**R4413.6.1 General.** The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on the 100-year hourly rainfall rate indicated in Figure R4413.6.1 or on other rainfall rates determined from approved local weather data.~~

~~**R4413.6.2 Vertical conductors and leaders**. Vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Table R4413.6.2.~~

~~**R4413.6.3 Building storm drains and sewers.** The size of the building storm drain, building storm sewer and their horizontal branches having a slope of one-half unit or less vertical in 12 units horizontal (4-percent slope) shall be based on the maximum projected roof area in accordance with Table R4413.6.3. The minimum slope of horizontal branches shall be one-eighth unit vertical in 12 units horizontal (1-percent slope) unless otherwise approved.~~

R4413.6.4 Vertical walls. In sizing roof drains and storm drainage piping, one-half of the area of any vertical wall that diverts rainwater to the roof shall be added to the projected roof area for inclusion in calculating the required size of vertical conductors, leaders and horizontal storm drainage piping.

R4413.6.5 Parapet wall scupper location. Parapet wall roof drainage scupper and overflow scupper location shall comply with the requirements of the Florida Building Code, Residential .

R4413.6.6 Size of roof gutters. The size of semicircular gutters shall be based on the maximum projected roof area in accordance with Table R4413.6.6.

SECTION R4413.7

HIGH-VELOCITY HURRICANE ZONES- SECONDARY (EMERGENCY) ROOF DRAINS

R4413.7.1 Secondary drainage required. Secondary (emergency) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.

R4413.7.2 Separate systems required. Secondary roof drain systems shall have piping the end point of discharge separate from the primary system. Discharge shall be above grade, in a location which would normally be observed by the building occupants or maintenance personnel.

FIGURE R4413.6.1

100-YEAR, 1-HOUR RAINFALL (inches)

EASTERN UNITED STATES

For SI: 1 inch = 25.4 mm.

Source: National Weather Service, National Oceanic and Atmospheric Administration, Washington, D.C.

TABLE R4413.6.2

SIZE OF VERTICAL CONDUCTORS AND LEADERS

DIAMETER OF LEADER (inches)a HORIZONTALLY PROJECTED ROOF AREA (square feet)

Rainfall Rate (inches per hour)

1	2	3	4	5	6	7	8	9	10	11	12
2	2,880	1,440	960	720	575	480	410	360	320	290	260	240
3	8,800	4,400	2,930	2,200	1,760	1,470	1,260	1,100	980	880	800	730
4	18,400	9,200	6,130	4,600	3,680	3,070	2,630	2,300	2,045	1,840	1,675	1,530
5	34,600	17,300	11,530	8,650	6,920	5,765	4,945	4,325	3,845	3,460	3,145	2,880
6	54,000	27,000	17,995	13,500	10,800	9,000	7,715	6,750	6,000	5,400	4,910	4,500
8	116,000	58,000	38,660	29,000	23,200	19,315	16,570	14,500	12,890	11,600	10,545	9,660

For SI: 1 inch = 25.4 mm,1 square foot = 0.0929 m2.

a. Sizes indicated are the diameter of circular piping. This table is applicable to piping of other shapes provided the cross sectional shape fully encloses a circle of the diameter indicated in this table.

TABLE R4413.6.3

SIZE OF HORIZONTAL STORM DRAINAGE PIPING

SIZE OF HORIZONTAL PIPING (inches) HORIZONTALLY PROJECTED ROOF AREA (square feet)

Rainfall Rate (inches per hour)

1	2	3	4	5	6
1/8unit vertical in 12 units horizontal (1 percent slope)					
3	3288	1644	1096	822	657	548
4	7520	3760	2506	1800	1504	1253

~~5 13360 6680 4453 3340 2672 2227~~

~~6 21400 10700 7133 5350 4280 3566~~

~~8 46000 23000 15330 11500 9200 7600~~

~~10 82800 41400 27600 20700 16580 13800~~

~~12 133200 66600 44400 33300 26650 22200~~

~~15 218000 109000 72800 59500 47600 39650~~

~~1/4unit vertical in 12 units horizontal (2 percent slope)~~

~~3 4640 2320 1546 1160 928 773~~

~~4 10600 5300 3533 2650 2120 1766~~

~~5 18800 9440 6293 4720 3776 3146~~

~~6 30200 15100 10066 7550 6040 5033~~

~~8 65200 32600 21733 16300 13040 10866~~

~~10 116800 58400 38950 29200 23350 19450~~

~~12 188000 94000 62600 47000 37600 31350~~

~~15 336000 168000 112000 84000 67250 56000~~

~~1/2unit vertical in 12 units horizontal (4 percent slope)~~

~~3 6576 3288 2295 1644 1310 1096~~

~~4 15040 7520 5010 3760 3010 2500~~

~~5 26720 13360 8900 6680 5320 4450~~

~~6 42800 21400 13700 10700 8580 7140~~

~~8 92000 46000 30650 23000 18400 15320~~

~~10 171600 85800 55200 41400 33150 27600~~

~~12 266400 133200 88800 66600 53200 44400~~

~~15 476000 238000 158800 119000 95300 79250~~

~~For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m2.~~

~~TABLE R4416.6.6~~

~~SIZE OF SEMICIRCULAR ROOF GUTTERS~~

~~DIAMETER OF GUTTERS (inches)~~	~~HORIZONTALLY PROJECTED ROOF AREA (square feet)~~					
~~Rainfall rate (inches per hour)~~						
~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	
~~1/16 unit vertical in 12 units horizontal (0.5 percent slope)~~						
~~3~~	~~680~~	~~340~~	~~226~~	~~170~~	~~136~~	~~113~~
~~4~~	~~1440~~	~~720~~	~~480~~	~~360~~	~~288~~	~~240~~
~~5~~	~~2500~~	~~1250~~	~~834~~	~~625~~	~~500~~	~~416~~
~~6~~	~~3840~~	~~1920~~	~~1280~~	~~960~~	~~768~~	~~640~~
~~7~~	~~5520~~	~~2760~~	~~1840~~	~~1380~~	~~1100~~	~~918~~
~~8~~	~~7960~~	~~3980~~	~~2655~~	~~1990~~	~~1590~~	~~1325~~
~~10~~	~~14400~~	~~7200~~	~~4800~~	~~3600~~	~~2880~~	~~2400~~
~~1/8 unit vertical in 12 units horizontal (1 percent slope)~~						
~~3~~	~~960~~	~~480~~	~~320~~	~~240~~	~~192~~	~~160~~
~~4~~	~~2040~~	~~1020~~	~~681~~	~~510~~	~~408~~	~~340~~
~~5~~	~~3520~~	~~1760~~	~~1172~~	~~880~~	~~704~~	~~587~~
~~6~~	~~5440~~	~~2720~~	~~1815~~	~~1360~~	~~1085~~	~~905~~
~~7~~	~~7800~~	~~3900~~	~~2600~~	~~1950~~	~~1560~~	~~1300~~
~~8~~	~~11200~~	~~5600~~	~~3740~~	~~2800~~	~~2240~~	~~1870~~
~~10~~	~~20400~~	~~10200~~	~~6800~~	~~5100~~	~~4080~~	~~3400~~
~~1/4 unit vertical in 12 units horizontal (2 percent slope)~~						
~~3~~	~~1360~~	~~680~~	~~454~~	~~340~~	~~272~~	~~226~~
~~4~~	~~2880~~	~~1440~~	~~960~~	~~720~~	~~576~~	~~480~~

5 5000 2500 1668 1250 1000 834

6 7680 3840 2560 1920 1536 1280

7 11040 5520 3860 2760 2205 1840

8 15920 7960 5310 3980 3180 2655

10 28800 14400 9600 7200 5750 4800

1/2 unit vertical in 12 units horizontal (4 percent slope)

3 1920 960 640 480 384 320

4 4080 2040 1360 1020 816 680

5 7080 3540 2360 1770 1415 1180

6 11080 5540 3695 2770 2220 1850

7 15600 7800 5200 3900 3120 2600

8 22400 11200 7460 5600 4480 3730

10 40000 20000 13300 10000 8000 6660

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m2.

R4413.7.3 Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with Section R4413.6 based on the rainfall rate for which the primary system is sized in Tables R4416.6.2, R4413.6.3 and R4413.6.6. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section R4413.1.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

TABLE R4413.7

SIZING SCUPPERS FOR A 5 INCHES PER HOUR RATE OF RAINFALL

HORIZONTALLY PROJECTED ROOF AREA (SQUARE FEET)

HEAD IN INCHES	LENGTH OF WEIR IN INCHES						
4	6	8	12	16	20	24	
1	230	346	461	692	923	1153	1384
2	641	961	1282	1923	2564	3205	3846
3	1153	1730	2307	3461	4615	5769	6923
4	1794	2692	3589	5384	7179	8974	10769

For SI: 1 inch = 25.4 mm, 1 square foot = .0929 m2.

Note: to adjust this table for other than a 5-inch design rainfall rate multiply the square footage on the table by 5 then divide by the local design rainfall rate.

Example: For 4 inches of design rainfall rate a 4-inch long scupper with a 1-inch head would accommodate 287 square feet. 230 x 5.4 = 287.

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SECTION R4413
HIGH-VELOCITY HURRICANE ZONES — STORM DRAINAGE

R4413.1 ~~General~~ Refer to the Florida Building Code, Building and the Florida Building Code, Plumbing.

~~**R4413.1.1 Scope**. The provisions of this section shall govern the materials, design, construction and installation of storm drainage.~~

~~**R4413.1.2 Where required**. All roofs, paved areas, yards, courts and courtyards shall drain into a separate storm sewer system, or a combined sewer system, or to an approved place of disposal. For one- and two-family dwellings, and where approved, storm water is permitted to discharge onto flat areas, such as streets or lawns, provided that the storm water flows away from the building.~~

~~**R4413.1.3 Prohibited drainage.** Storm water shall not be drained into sewers intended for sewage only.~~

~~**R4413.1.4 Tests.** The conductors and the building storm drain shall be tested in accordance with Section 312 of the Florida Building Code, Plumbing .~~

~~**R4413.1.5 Continuous flow**. The size of a drainage pipe shall not be reduced in the direction of flow.~~

~~**R4413.1.6 Fittings and connections.** All connections and changes in direction of the storm drainage system shall be made with approved drainage type fittings in accordance with Table R4413.1.6 herein. The fittings shall not obstruct or retard flow in the system.~~

~~**TABLE R4413.1.6**~~
~~**FITTINGS FOR CHANGE IN DIRECTION**~~

~~TYPE OF FITTING PATTERN~~	~~CHANGE IN DIRECTION~~		
~~Horizontal to vertical~~	~~Vertical to horizontal~~	~~Horizontal to horizontal~~	
~~Sixteenth bend~~	~~X~~	~~X~~	~~X~~
~~Eighth bend~~	~~X~~	~~X~~	~~X~~
~~Sixth bend~~	~~X~~	~~X~~	~~X~~
~~Quarter bend~~	~~X~~	~~Xa~~	~~Xa~~
~~Short sweep~~	~~X~~	~~Xa,b~~	~~Xa,b~~
~~Long sweep~~	~~X~~	~~X~~	~~X~~
~~Sanitary tee~~	~~Xc~~		
~~Wye~~	~~X~~	~~X~~	~~X~~
~~Combination wye and eighth bend~~	~~X~~	~~X~~	~~X~~

~~For SI: 1 inch = 25.4 mm.~~
~~a. The fittings shall only be permitted for a 2 inch or smaller fixture drain.~~
~~b. Three inches and larger.~~
~~c. For a limitation on double sanitary tees, see Section 706.3 of the Florida Building Code, Plumbing.~~

R4413.1.7 Roof design. Roofs shall be designed for the maximum possible depth of water that will pond thereon as determined by the relative levels of roof deck and overflow weirs, scuppers, edges or serviceable drains in combination with the deflected structural elements. In determining the maximum possible depth of water, all primary roof drainage means shall be assumed to be blocked.

R4413.1.8 Cleanouts required. Cleanouts shall be installed in the storm drainage system and shall comply with the provisions of this code for sanitary drainage pipe cleanouts.

SECTION R4413.2
HIGH VELOCITY HURRICANE ZONES — MATERIALS

R4413.2.1 General. The materials and methods utilized for the construction and installation of storm drainage systems shall comply with this section.

R4413.2.2 Inside storm drainage conductors. Inside storm drainage conductors installed above ground shall conform to one of the standards listed in Table R4413.2.2 herein.

TABLE R4413.2.2
ABOVE-GROUND DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; CSA B181.1
Brass pipe	ASTM B 43
Cast iron pipe	ASTM A 74; CISPI 301; ASTM A 888
Copper or copper alloy pipe	ASTM B 42; ASTM B 302
Copper or copper alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Galvanized steel pipe	ASTM A 53
Glass pipe	ASTM C 1053
Polyolefin pipe	CSA CAN/CSA-B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV)	ASTM D 2665; ASTM D 2949; ASTM F 891; CSA CAN/CSA-B181.2

R4413.2.3 Underground building storm drain pipe. Underground building storm drain pipe shall conform to one of the standards listed in Table R4413.2.3 herein.

TABLE R4413.2.3
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 2661; ASTM F 628; CSA B181.1
Asbestos cement pipe	ASTM C 428
Cast-iron pipe	ASTM A 74; CISPI 301;

ASTM A 888
Copper or copper alloy tubing (Type K or L) ASTM B 75; ASTM B 88;
ASTM B 251
Polyolefin pipe CSA CAN/CSA-B181.3
Polyvinyl chloride (PVC) plastic pipe (Type DWV) ASTM D 2665; ASTM D 2949; ASTM F 891;
CSA CAN/CSA-B181.2

R4413.2.4 Building storm sewer pipe. Building storm sewer pipe shall conform to one of the standards listed in Table R4413.2.4.

R4413.2.5 Subsoil drain pipe. Subsoil drains shall be open jointed, horizontally split or perforated pipe conforming to one of the standards listed in Table R4413.2.5.

R4413.2.6 Roof drains. Roof drains shall conform to ASME A112.21.2.

R4413.2.7 Fittings. Pipe fittings shall be approved for installation with the piping material installed, and shall conform to the respective pipe standards or one of the standards listed in Table R4413.2.7. The fittings shall not have ledges, shoulders or reductions capable of retarding or obstructing flow in the piping. Threaded drainage pipe fittings shall be of the recessed drainage type.

TABLE R4413.2.4
BUILDING STORM SEWER PIPE

MATERIAL STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe ASTM D 2661; ASTM D 2751; ASTM F 628
Asbestos-cement pipe ASTM C 428
Cast-iron pipe ASTM A 74; CISPI 301;
ASTM A 888
Concrete pipe ASTM C 14; ASTM C 76;
CSA A257.1;
CSA CAN/CSA A257.2
Copper or copper alloy tubing (Type K, L, M or DWV) ASTM B 75; ASTM B 88;
ASTM B 251; ASTM B 306
Polyvinyl chloride (PVC) plastic pipe (Type DWV, SDR26, SDR35, SDR41, PS50 or PS100)
ASTM D 2665; ASTM D 2797; ASTM D 3034; ASTM F 891; CSA-B182.2;
CSA CAN/CSA-B182.1
Vitrified clay pipe ASTM C 4; ASTM C 700

TABLE R4413.2.5
SUBSOIL DRAIN PIPE

MATERIAL STANDARD
Asbestos-cement pipe ASTM C 508
Cast-iron pipe ASTM A 74; CISPI 301;
ASTM A 888
Polyethylene (PE) plastic pipe ASTM F 405
Polyvinyl chloride (PVC) plastic pipe (Type Sewer Pipe, PS25, PS50 or PS100) ASTM D
2729; ASTM F 891; CSA-B182.2;

~~CSA CAN/CSA-B182.4~~
~~Vitrified clay pipe ASTM C 4; ASTM C 700~~

~~**TABLE R4413.2.7**~~
~~**PIPE FITTINGS**~~

~~MATERIAL STANDARD~~
~~Acrylonitrile butadiene styrene (ABS) plastic pipe ASTM D 2468~~
~~Cast iron ASME B16.4; ASME B16.12; ASTM A 888~~
~~Chlorinated polyvinyl chloride (CPVC) plastic ASTM F 437; ASTM F 438; ASTM F 439~~
~~Copper or copper alloy ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29; ASME B16.32~~
~~Gray iron and ductile iron AWWA C110~~
~~Malleable iron ASME B16.3~~
~~Plastic, general ASTM F 409~~
~~Polyethylene (PE) plastic ASTM D 2609~~
~~Polyvinyl chloride (PVC) plastic ASTM D 2464; ASTM D 2466; ASTM D 2467; CSA CAN/CSA-B137.2~~
~~Steel ASME B16.9; ASME B16.11; ASME B16.28~~

~~**SECTION R4413.3**~~
~~**RESERVED**~~

~~**SECTION R4413.4**~~
~~**HIGH-VELOCITY HURRICANE ZONES CONDUCTORS AND CONNECTIONS**~~

~~**R4413.4.1 Prohibited use**. Conductor pipes shall not be used as soil, waste or vent pipes, and soil, waste or vent pipes shall not be used as conductors.~~

~~**R4413.4.2 Combining storm with sanitary drainage.** The sanitary and storm drainage systems of a structure shall be entirely separate except where combined sewer systems are utilized. Where a combined sewer is utilized, the building storm drain shall be connected in the same horizontal plane through a single wye fitting to the combined sewer at least 10 feet (3048 mm) downstream from any soil stack.~~

~~**R4413.4.3 Floor drains**. Floor drains shall not be connected to a storm drain.~~

~~**SECTION R4413.5**~~
~~**HIGH-VELOCITY HURRICANE ZONES- ROOF DRAINS**~~

~~**R4413.5.1 Strainers.** Roof drains shall have strainers extending not less than 4 inches (102 mm) above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area, above roof level, of not less than one and one-half times the area of the conductor or leader to which the drain is connected.~~

~~**R4413.5.2 Flat decks**. Roof drain strainers for use on sun decks, parking decks and similar areas that are normally serviced and maintained shall comply with Section R4413.5.1 or shall be of the flat surface type, installed level with the deck, with an available inlet area not less than two times the area of the conductor or leader to which the drain is connected.~~

R4413.5.3 Roof drain flashings. The connection between roofs and roof drains which pass through the roof and into the interior of the building shall be made water tight by the use of approved flashing material.

SECTION R4413.6
HIGH VELOCITY HURRICANE ZONES- SIZE OF CONDUCTORS, LEADERS AND STORM DRAINS

R4413.6.1 General. The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on the 100-year hourly rainfall rate indicated in Figure R4413.6.1 or on other rainfall rates determined from approved local weather data.

R4413.6.2 Vertical conductors and leaders. Vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Table R4413.6.2.

R4413.6.3 Building storm drains and sewers. The size of the building storm drain, building storm sewer and their horizontal branches having a slope of one-half unit or less vertical in 12 units horizontal (4 percent slope) shall be based on the maximum projected roof area in accordance with Table R4413.6.3. The minimum slope of horizontal branches shall be one-eighth unit vertical in 12 units horizontal (1-percent slope) unless otherwise approved.

R4413.6.4 Vertical walls. In sizing roof drains and storm drainage piping, one-half of the area of any vertical wall that diverts rainwater to the roof shall be added to the projected roof area for inclusion in calculating the required size of vertical conductors, leaders and horizontal storm drainage piping.

R4413.6.5 Parapet wall scupper location. Parapet wall roof drainage scupper and overflow scupper location shall comply with the requirements of the Florida Building Code, Residential .

R4413.6.6 Size of roof gutters. The size of semicircular gutters shall be based on the maximum projected roof area in accordance with Table R4413.6.6.

SECTION R4413.7
HIGH-VELOCITY HURRICANE ZONES- SECONDARY (EMERGENCY) ROOF DRAINS

R4413.7.1 Secondary drainage required. Secondary (emergency) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.

R4413.7.2 Separate systems required. Secondary roof drain systems shall have piping the end point of discharge separate from the primary system. Discharge shall be above grade, in a location which would normally be observed by the building occupants or maintenance personnel.

FIGURE R4413.6.1
100 YEAR, 1-HOUR RAINFALL (inches)
EASTERN UNITED STATES

For SI: 1 inch = 25.4 mm.

Source: National Weather Service, National Oceanic and Atmospheric Administration, Washington, D.C.

TABLE R4413.6.2
SIZE OF VERTICAL CONDUCTORS AND LEADERS

DIAMETER OF LEADER (inches)a	HORIZONTALLY PROJECTED ROOF AREA (square feet)											
Rainfall Rate (inches per hour)												
1	2	3	4	5	6	7	8	9	10	11	12	
2	2,880	1,440	960	720	575	480	410	360	320	290	260	240
3	8,800	4,400	2,930	2,200	1,760	1,470	1,260	1,100	980	880	800	730
4	18,400		9,200	6,130	4,600	3,680	3,070	2,630	2,300	2,045	1,840	1,675
	1,530											
5	34,600		17,300		11,530		8,650	6,920	5,765	4,945	4,325	3,845
	3,460	3,145	2,880									
6	54,000		27,000		17,995		13,500		10,800		9,000	7,715
	6,750	6,000	5,400	4,910	4,500							
8	116,000		58,000		38,660		29,000		23,200		19,315	
	16,570		14,500		12,890		11,600		10,545		9,660	

For SI: 1 inch = 25.4 mm,1 square foot = 0.0929 m2.
a. Sizes indicated are the diameter of circular piping. This table is applicable to piping of other shapes provided the cross-sectional shape fully encloses a circle of the diameter indicated in this table.

TABLE R4413.6.3
SIZE OF HORIZONTAL STORM DRAINAGE PIPING

SIZE OF HORIZONTAL PIPING (inches)	HORIZONTALLY PROJECTED ROOF AREA (square feet)					
Rainfall Rate (inches per hour)						
1	2	3	4	5	6	
1/8unit vertical in 12 units horizontal (1-percent slope)						
3	3288	1644	1096	822	657	548
4	7520	3760	2506	1800	1504	1253
5	13360	6680	4453	3340	2672	2227
6	21400	10700	7133	5350	4280	3566
8	46000	23000	15330	11500	9200	7600
10	82800	41400	27600	20700	16580	13800
12	133200		66600	44400	33300	26650	22200
15	218000		109000		72800	59500	47600	39650
1/4unit vertical in 12 units horizontal (2-percent slope)						
3	4640	2320	1546	1160	928	773
4	10600	5300	3533	2650	2120	1766
5	18800	9440	6293	4720	3776	3146
6	30200	15100	10066	7550	6040	5033
8	65200	32600	21733	16300	13040	10866

10	116800	58400	38950	29200	23350	19450
12	188000	94000	62600	47000	37600	31350
15	336000	168000	112000	84000	67250	56000
1/2unit vertical in 12 units horizontal (4-percent slope)						
3	6576	3288	2295	1644	1310	1096
4	15040	7520	5010	3760	3010	2500
5	26720	13360	8900	6680	5320	4450
6	42800	21400	13700	10700	8580	7140
8	92000	46000	30650	23000	18400	15320
10	171600	85800	55200	41400	33150	27600
12	266400	133200	88800	66600	53200	44400
15	476000	238000	158800	119000	95300	79250

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m2.

TABLE R4416.6.6
SIZE OF SEMICIRCULAR ROOF GUTTERS

DIAMETER OF GUTTERS (inches) HORIZONTALLY PROJECTED ROOF AREA (square feet)

Rainfall rate (inches per hour)					
1	2	3	4	5	6
1/16 unit vertical in 12 units horizontal (0.5 percent slope)					
3	680	340	226	170	136	113
4	1440	720	480	360	288	240
5	2500	1250	834	625	500	416
6	3840	1920	1280	960	768	640
7	5520	2760	1840	1380	1100	918
8	7960	3980	2655	1990	1590	1325
10	14400	7200	4800	3600	2880	2400
1/8 unit vertical in 12 units horizontal (1 percent slope)						
3	960	480	320	240	192	160
4	2040	1020	681	510	408	340
5	3520	1760	1172	880	704	587
6	5440	2720	1815	1360	1085	905
7	7800	3900	2600	1950	1560	1300
8	11200	5600	3740	2800	2240	1870
10	20400	10200	6800	5100	4080	3400
1/4 unit vertical in 12 units horizontal (2-percent slope)						
3	1360	680	454	340	272	226
4	2880	1440	960	720	576	480
5	5000	2500	1668	1250	1000	834
6	7680	3840	2560	1920	1536	1280
7	11040	5520	3860	2760	2205	1840
8	15920	7960	5310	3980	3180	2655
10	28800	14400	9600	7200	5750	4800
1/2 unit vertical in 12 units horizontal (4-percent slope)						
3	1920	960	640	480	384	320
4	4080	2040	1360	1020	816	680

5	7080	3540	2360	1770	1415	1180
6	11080	5540	3695	2770	2220	1850
7	15600	7800	5200	3900	3120	2600
8	22400	11200	7460	5600	4480	3730
10	40000	20000	13300	10000	8000	6660

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m2.

R4413.7.3 Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with Section R4413.6 based on the rainfall rate for which the primary system is sized in Tables R4416.6.2, R4413.6.3 and R4413.6.6. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section R4413.1.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

TABLE R4413.7
SIZING SCUPPERS FOR A 5 INCHES PER HOUR RATE OF RAINFALL

	HORIZONTALLY PROJECTED ROOF AREA (SQUARE FEET)						
HEAD IN INCHES	LENGTH OF WEIR IN INCHES						
4	6	8	12	16	20	24	
1	230	346	461	692	923	1153	1384
2	641	961	1282	1923	2564	3205	3846
3	1153	1730	2307	3461	4615	5769	6923
4	1794	2692	3589	5384	7179	8974	10769

For SI: 1 inch = 25.4 mm, 1 square foot = .0929 m2.
Note: to adjust this table for other than a 5-inch design rainfall rate multiply the square footage on the table by 5 then divide by the local design rainfall rate.
Example: For 4 inches of design rainfall rate a 4 inch long scupper with a 1 inch head would accommodate 287 square feet. 230 x 5.4 = 287.