PLUMBING

Local Technical Amendments
to the
2020 7th Edition Florida Building Code

JURISDICTION	DOCUMENT with TECHNICAL AMENDMENT	TEXT OF TECHNICAL AMENDMENT	TAC REVIEW
Pinellas County Construction Industry Licensing Board (PCCLB)	FBC – Residential/ Plumbing Sec 605.21.3 Sec 610.2 Sec 705.10.2 Sec 2903.1 Sec 2903.2.1 Sec P2906.9.1.4	PCCLB - Local Amends to Ch 6, 7, 29 - 2020 FBC (Hold control button and click hyperlink to open-file too large to insert)	Plumbing
County of Palm Beach	FBC – Plumbing Appendix F	County of Palm Beach App F 2020-FBC (Hold control button and click hyperlink to open-file too large to insert)	Plumbing
County of Miami - Dade	FBC Plumbng Ch 6 and Table 604 P2903 and Table P2903	Miami-Dade Local Amend to Ch 6, table 604, Sec P2903 and Table P2903 FBC 2020 (Hold control button and click hyperlink to open-file too large to insert)	Plumbing
County of Broward	FBC Plumbing	Broward County-Local Amend-Sec 2903 and Table 2903 -	Plumbing

	Sec 2903 and Table 2903	FBC2020 (Hold control button and click hyperlink to open-file too large to insert)	
County of Broward	Broward County FBC – Plumbing Sec M314.2.1	CHAPTER 3 GENERAL REGULATIONS SECTION 314 CONDENSATE DISPOSAL [M] 314.2.1 Condensate drainage collection, use disposal. Condensate from all cooling coils and evaporators of equipment served by an onsite cooling tower in a building or structure wherein the aggregate cooling capacity of the equipment exceeds 65,000 Btu/hr shall be collected and conveyed from the drain pan outlet and discharged to the cooling tower. Where an onsite cooling tower is not installed the condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance. Exceptions: 1. Condensate from cooling coils and evaporators is not required to be collected and conveyed to an on-site cooling tower; provided 1.1 through 1.3 are met: 1.1 The equipment comprises 10% or less of the total capacity of the cooling tower system. 1.2 The equipment is located in an isolated or remote area. 1.3 The size of the equipment is 65,000 Btu/hr. or less. 2. In existing buildings condensate may be collected and conveyed to a cooling tower or discharged to an approved place of disposal.	Plumbing

		Broward County - Ch M314 - FBC 2020 (Hold control button and click hyperlink to open-file too large to insert)	
County of Miami-Dade	FBC- Plumbing Sec 604	Miami-Dade - Ch 604 Lcal Amend 2020 FBC (Hold control button and click hyperlink to open-file too large to insert)	Plumbing
Broward County	FBC- Plumbing Sec 604	Broward County Ch 604 Local Amend 2020 FBC (Hold control button and click hyperlink to open-file too large to insert)	Plumbing
Broward County	FBC – Plumbing Appendix F	Broward County Appendix F -Local Amend 2020 FBC (Hold control button and click hyperlink to open-file too large to insert)	Plumbing
Broward County	FBC – Plumbing Sec 307	Broward County Ch 307 Local Amend FBc 2020 (Hold control button and click hyperlink to open-file too large to insert)	Plumbing

FUEL GAS

Local Technical Amendments
to the
2020 7th Edition Florida Building Code

JURISDICTION	DOCUMENT with TECHNICAL AMENDMENT	TEXT OF TECHNICAL AMENDMENT	TAC REVIEW
Pinellas County Const Industry Licensing Board PCCLB	FBC – Building/ Residential Ch G2415.15 FBC - Fuel Gas Sec 404.15	G2415.15 Outlet closures. Gas outlets that do not connect to appliances shall be capped gas tight and shall be labeled with a weatherproof label stating "Connection of a gas appliance to this outlet in the future will require a permit and inspection." Appliance shutoff valves required by G2420.5 [409.5] shall be installed only at the time of appliance connection to gas outlets. Exception: Listed and labeled flush-mounted-type quick-disconnect devices and listed and labeled gas convenience outlets shall be installed in accordance with the manufacturer's instructions. Local Conditions and Need: Adds limitations to control future connections to gas outlets PCCLB Local Amend to Ch G2415.15 - 2020 FBC Fuel Gas (Hold control button and click hyperlink to open-file too large to insert)	Fuel Gas

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

P2906.9.1.4 PVC plastic pipe. A purple primer that conforms to ASTM F656 shall be applied to PVC solvent-cemented joints. Solvent cement for PVC plastic pipe conforming to ASTM D 2564 shall be applied to all joint surfaces.

Exception: Clear Primer conforming to ASTM F656 may be used on any exposed PVC pipe or fittings on trim/finish work.

Local Conditions and Need: This amendment permits the use of clear primer instead of purple primer when used on exposed PVC pipe or fittings on trim/finish work.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

Add:

P2903.2.1 Size of water service. The minimum size water service pipe shall be ¾" (19 mm). The size of water service mains, branch mains and risers shall be as required per Table P2903.2.1.

TABLE P2903.2.1 MINIMUM WATER SERVICE SIZE[a]

TABLE P2903.2.1
MINIMUM WATER SERVICE SIZE[a]

NO. OF FIXTURE UNITS FLUSH TANK WC[b]	DIAMETER OF WATER PIPE[c]	RECOMMENDED METER SIZE (inches)[d]	APPROX. PRESSURE LOSS METER + 100' PIPE (psi)[e]	NO. OF FIXTURE UNITS FLUSH VALVE WC[b]
18	3/4	5/8	30	-
19-55	1	1	30	-
-	1	1	30	9
56-85	1 ¼	1	30	-
-	1 ¼	1	30	10-20
8-225	1 ½	1 ½	30	-
-	1 ½	1 ½	30	21-77
226-350	2	1 ½	30	-
-	2	1 ½	30	78-175
351-550	2	2	30	-
-	2	2	30	176-315
551-640	2 ½	2	30	-
-	2 ½	2	30	316-392
641-1340	3	3	22	-
-	3	3	22	393-940

ADD TABLE FOOTNOTES:

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a. Table is applicable for both copper and plastic water piping.
b. See Table P3004.1 for fixture unit values.
c. Minimum water service shall be ¾" to control valve.
d. All secondary submeters and backflow assemblies shall be at least the same size as the line in which they are installed.
e. Table based on minimum water main pressure of 50 psi.
f. Minimum sizes for fixture supply pipe from the main or from the riser shall be from the Florida Building Code 7th Edition (2020) - Plumbing Section 604.5.
g. Four (4) fixtures maximum (hot or cold) may connect to a one-half inch fixture water supply or as required by manufacturers' installation instructions.
h. Where the water main pressure falls below 50 psi the next larger pipe size shall be used.
i. Buildings above three (3) stories in height shall use the next larger pipe size.

Local Conditions and Need: Adds more limitations to control pipe sizing.

Fiscal Impact Statement: Cost per installation will be controlled due to added limitations.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th Edition (2020) – RESIDENTIAL

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AMEND EXISTING SECTION

P2903.1 Water supply system design criteria. The water service and water distribution systems shall be designed and pipe sizes shall be selected such that under conditions of peak demand, the capacities at the point of outlet discharge shall not be less than shown in Table P2903.1.

EXCEPTION: For one-family, two-family, or three-family residential dwellings, when the building owner approves in writing, one bathroom group may be added to the existing hot and cold water distribution system, not to exceed a maximum of eight drainage fixture units for any fixtures added. In no case shall the additional fixtures be connected to existing hot and/or cold piping that is less than ¾" in diameter.

P2903.1.1 Applicable Sizes. The requirements of P2903.1 in the following sizes shall apply when connected to an existing approved potable system.

1. All Building Department permitted and approved onsite potable drinking water piping two-inch (2") diameter and greater than one hundred fifty (150) lineal feet in length.
2. All Building Department permitted and approved onsite potable drinking water piping of greater than two-inch (2") diameter and greater than fifty (50) lineal feet in length.
3. All Building Department permitted and approved onsite potable drinking water piping in size(s) and length(s) adequate to contain twenty (20) gallons or more. (Volume = .0408 x diameter^2 x length in feet).
4. Any size or length water pipe that has been subjected to contamination will require disinfection.

Local Conditions and Need: This amendment will provide building owners flexibility when adding one bathroom group to an existing hot and/or cold water distribution system. It also strengthens this section by clarifying that disinfection is not required every time work is performed on a plumbing system. This makes the section more stringent because it clarifies what was a wide range of interpretations. Materials in the code and installation procedures will not change.

Fiscal Impact Statement: Implementation of this amendment will result in a cost reduction by recognizing that a plumbing system test may not be required every time work is done on a potable plumbing line.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

P2705.1 General. The installation of fixtures shall conform to the following:

1. Floor-outlet or floor-mounted fixtures shall be secured to the drainage connection and to the floor, where so designed, by screws, bolts, washers, nuts and similar fasteners of copper, copper alloy or other corrosion-resistant material.
2. Wall-hung fixtures shall be rigidly supported so that strain is not transmitted to the plumbing system.
3. Where fixtures come in contact with walls and floors, the contact area shall be water tight.
4. Plumbing fixtures shall be usable and functionally accessible.
5. Water closets, lavatories and bidets. A water closet, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition or vanity or closer than 30 inches (762 mm) center-to-center between adjacent fixtures. There shall be a clearance of not less than 21-inch (533 mm) in front of a water closet, lavatory or bidet to any wall, fixture or door in accordance with the fixture spacing requirements of Section R307.1.
6. The location of piping, fixtures or equipment shall not interfere with the operation of windows or doors.
7. In flood hazard areas as established by Table R301.2(1), plumbing fixtures shall be located or installed in accordance with Section R322.1.6.
8. Integral fixture-fitting mounting surfaces on manufactured plumbing fixtures or plumbing fixtures constructed on site, shall meet the design requirements of ASME A112.19.2/CSA B45.1 or ASME A112.19.3/CSA B45.4.

Local Conditions and Need: This amendment brings awareness to the plumbing fixture spacing requirements located in both sections of the code.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

M1411.3 Condensate disposal. Condensate from cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than 1/8 unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas where it would cause a nuisance. All primary condensate drain lines installed within unconditioned areas shall be insulated with insulation having a thermal resistivity of not less than R-3.

Local Conditions and Need: This amendment requires all horizontal primary condensate drain within unconditioned areas shall be insulated.

Fiscal Impact Statement: The cost impact associated with this amendment is minimal.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th Edition (2020) – RESIDENTIAL

AMEND EXISTING SECTION

G2415.15 Outlet closures. Gas *outlets* that do not connect to *appliances* shall be capped gas tight and shall be labeled with a weatherproof label stating "Connection of a gas appliance to this outlet in the future will require a permit and inspection." Appliance shutoff valves required by G2420.5 [409.5] shall be installed only at the time of appliance connection to gas outlets.

Exception: *Listed* and *labeled* flush-mounted-type quick-disconnect devices and *listed* and *labeled* gas convenience outlets shall be installed in accordance with the manufacturer's instructions.

Local Conditions and Need: Adds limitations to control future connections to gas outlets.

Fiscal Impact Statement: Cost increase to provide label is insignificant.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - PLUMBING

AMEND EXISTING SECTION

705.10.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F656 shall be applied. Clear Primer conforming to ASTM F656 may be used on any exposed PVC pipe or fittings on trim/finish work. Solvent cement not purple in color and conforming to ASTM D2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D2855. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where both of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D2564.
2. The solvent cement is used only for joining PVC drain, waste and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inches (102 mm) in diameter.

Local Conditions and Need: This amendment permits the use of clear primer instead of purple primer when used on exposed PVC pipe or fittings on trim/finish work.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - PLUMBING

AMEND EXISTING SECTION

SECTION 610 DISINFECTION OF POTABLE WATER SYSTEM

610.2 Applicable Sizes. The requirements of 610.1 in the following sizes shall apply when connected to an existing approved potable system.

1. All Building Department permitted and approved onsite potable drinking water piping two-inch (2") diameter and greater than one hundred fifty (150) lineal feet in length.
2. All Building Department permitted and approved onsite potable drinking water piping of greater than two-inch (2") diameter and greater than fifty (50) lineal feet in length.
3. All Building Department permitted and approved onsite potable drinking water piping in size(s) and length(s) adequate to contain twenty (20) gallons or more. (Volume = .0408 x diameter^2 x length in feet).
4. Any size or length water pipe that has been subjected to contamination will require disinfection.

Local Conditions and Need: This amendment strengthens this section by clarifying that disinfection is not required every time work is performed on a plumbing system. This makes the section more stringent because it clarifies what was a wide range of interpretations. Materials in the code and installation procedures will not change.

Fiscal Impact Statement: Implementation of this amendment will result in a cost reduction by recognizing that a plumbing system test may not be required every time work is done on a potable plumbing line.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - PLUMBING

AMEND EXISTING SECTION

605.21.3 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F656 shall be applied. Solvent cement not purple in color and conforming to ASTM D2564 or CSA B137.3 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D2855. Solvent-cement joints shall be permitted above or below ground.

Exception: Clear Primer conforming to ASTM F656 may be used on any exposed PVC pipe or fittings on trim/finish work.

Local Conditions and Need: This amendment permits the use of clear primer instead of purple primer when used on exposed PVC pipe or fittings on trim/finish work.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th Edition (2020) – FUEL GAS

AMEND EXISTING SECTION

404.15 Outlet closures. Gas *outlets* that do not connect to *appliances* shall be capped gas tight and shall be labeled with a weatherproof label stating "Connection of a gas appliance to this outlet in the future will require a permit and inspection." Appliance shutoff valves required by G2420.5 [409.5] shall be installed only at the time of appliance connection to gas outlets.

Exception: *Listed* and *labeled* flush-mounted-type quick-disconnect devices and *listed* and *labeled* gas convenience outlets shall be installed in accordance with the manufacturer's instructions.

Local Conditions and Need: Adds limitations to control future connections to gas outlets.

Fiscal Impact Statement: Cost increase to provide label is insignificant.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT

FLORIDA BUILDING CODE 7th Edition (2020) - BUILDING

AMEND EXISTING SECTION

1510.10 Mechanical Units.

Roof mounted mechanical units shall be mounted on curbs raised a minimum of 8 inches (203 mm) above the roof surface, or where roofing materials extend beneath the unit, on raised equipment supports providing a minimum clearance height in accordance with Table 1510.10.

Exception: In buildings where the existing rooftop equipment, in the opinion of the building official, provides sufficient clearance to repair, recover, replace and/or maintain the roofing system or any of its components, such existing equipment need not comply with Table 1510.10.

TABLE 1510.10	
CLEARANCE BELOW RAISED ROOF	
MOUNTED MECHANICAL UNITS	
WIDTH OF MECHANICAL UNIT (inches)	**MINIMUM CLEARANCE ABOVE SURFACES (inches)**
< 24	14
24 < 36	~~18~~ 14
36 < 48	~~24~~ 14
48 < 60	~~30~~ 14
> 60	48

For SI: 1 inch = 25.4 mm.

Exception: When removing or replacing roof mounted mechanical units for individual units and/or spaces within multi-unit buildings the individual units may be reinstalled utilizing the existing system of attachment. At such time of reroofing of the building all mechanical units must be brought into compliance with this code section.

Local Conditions and Need: This amendment strengthens this code section when dealing with replacement of individual mechanical units by requiring that all roof mounted mechanical units comply with the code section upon reroofing the building.

Fiscal Impact Statement: By providing the exemption, costs to individual unit Owners/Leaseholders would be reduced by waiving the requirements to provide attachment/wind load engineering, material and equipment to elevate the mechanical units to comply with Table 1510.10 and Building Department plan review.

By requiring all mechanical units to comply upon reroofing, engineering, material and Building Department plan review costs limited to a single instance thereby reducing the overall cost to comply with this code section and conform the intent of reducing future reroofing costs.

LOCAL TECHNICAL AMENDMENT

FLORIDA BUILDING CODE 7th Edition (2020) - BUILDING

As currently written the code section does not take into account that in the event that a building requiring reroofing prior to all mechanical units having been brought into compliance effectively has experienced no net gain or ease of reroofing by having performed compliance by piecemeal/incomplete methods.

Effective Date: Upon Board Approval and posting on the Commission Website.
This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) – BUILDING

NFPA 70 NATIONAL ELECTRICAL CODE

2701.1 Scope. The provisions of this chapter and NFPA 70 shall govern the design, construction, erection and installation of the electrical components, appliances, equipment and systems used in buildings and structures covered by this code. The Florida Fire Prevention Code and NFPA 70 shall govern the use and maintenance of electrical components, appliances, equipment and systems. The Florida Building Code, Existing Building and NFPA 70 shall govern the alteration, repair, relocation, replacement and addition of electrical components, appliances, equipment and systems.

AMEND EXISTING NEC SECTION

Article 250.96 Bonding Other Enclosures.
(A) **General.** Metal raceways, cable trays, cable armor, cable sheath, enclosures, frames, fittings, and other metal non-current-carrying parts that are to serve as equipment grounding conductors, with or without the use of supplementary equipment grounding conductors, shall be bonded where necessary to ensure electrical continuity and the capacity to conduct safely any fault current likely to be imposed on them. Any nonconductive paint, enamel, or similar coating shall be removed at threads, contact points, and contact surfaces or be connected by means of fittings designed so as to make such removal unnecessary. All raceways shall contain an equipment-grounding conductor sized in accordance with Table 250.122.

Local Conditions and Need: This amendment assures a positive return path for faults.

Fiscal Impact Statement: Minimal cost impact associated with this amendment since this requirement has been in effect in Pinellas County since 1987.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - BUILDING

AMEND EXISTING SECTION

1609.3 Ultimate design wind speed. The ultimate design wind speed V*ult*, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1), 1609.3(2), 1609.3(3) and 1609.4. The ultimate design wind speed, V*ult*, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, V*ult*, for use in the design of Risk Category III buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(3). The ultimate design wind speed, V*ult*, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(4). The ultimate design wind speed, V*ult,* for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local jurisdiction requirements. The ultimate design wind speeds, V*ult,* determined by the local jurisdiction shall be in accordance with Chapter 26 of ASCE 7.

The exact location of wind speeds are approved and adopted as follows: All incorporated and unincorporated Pinellas County, Risk Category I – 135 MPH with interpolation permitted as allowed in the Code and ASCE 7-16; Risk Category II – 145 MPH with interpolation permitted as allowed in the Code and ASCE 7-16; Risk Category III – 155 MPH with interpolation permitted as allowed in the Code and ASCE 7-16; Risk Category IV – 157 MPH with interpolation permitted as allowed in the Code and ASCE 7-16 ~~lines shall be established by local ordinance using recognized physical landmarks such as major roads, canals, rivers and lake shores wherever possible~~.

Local Conditions and Need: This amendment defines Pinellas County's basic wind speed designations.

Fiscal Impact Statement: This amendment adopts Pinellas County's minimum basic wind speeds. There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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PALM BEACH COUNTY AMENDMENTS TO THE FLORIDA BUILDING CODE, 7th EDITION (2020)

FLORIDA BUILDING CODE - BUILDING VOLUME
CHAPTER 1, ADMINISTRATION

FLORIDA BUILDING CODE – RESIDENTIAL VOLUME, APPENDIX Q
TINY HOUSES

FLORIDA BUILDING CODE - PLUMBING VOLUME, APPENDIX F
PROPOSED CONSTRUCTION BUILDING CODES FOR TURF & LANDSCAPE IRRIGATION SYSTEMS

TECHNICAL AMENDMENTS FLORIDA BUILDING CODE - BUILDING VOLUME
SECTION 1609.3 WIND LOADS & MAPS

EFFECTIVE DECEMBER 31, 2020

Palm Beach County Planning, Zoning & Building Department – Building Division
2300 North Jog Road, West Palm Beach, Florida 33411
Phone: (561) 233-5100 Fax: (561) 233–5020

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CHAPTER 1
ADMINISTRATION

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Chapter 1

Scope and Administration

PART 1—SCOPE AND APPLICATION

SECTION 101
GENERAL

101.1 Title. These regulations shall be known as the Florida Building Code, hereinafter referred to as "this code."

101.2 Scope. The provisions of this code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception:
1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures not more than three stories above grade plane in height, shall comply with the Florida Building Code, Residential.

2. Code Requirements that address snow loads and earthquake protection are pervasive; they are left in place but shall not be utilized or enforced because Florida has no snow load or earthquake threat.

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Palm Beach County has adopted Appendix "Q" in the Florida Building Code, Residential Volume: Tiny Houses and Appendix "F" in the Florida Building Code, Plumbing Volume: Proposed Construction Building Codes for Turf and Landscape Irrigation Systems.

101.2.2 Florida Building Code, Residential Construction standards or practices which are not covered by the Florida Building Code, Residential Volume shall be in accordance with the provisions of the Florida Building Code, Building.

101.3 Intent. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters, code officials, and emergency responders during emergency operations.

101.3.1 Quality control. Quality control of materials and workmanship is not within the purview of this code, except as it relates to the purposes stated herein.

101.3.2 Warranty and Liability. The permitting, plan review or inspection of any building, system or plan by this jurisdiction, under the requirements of this code, shall not be construed

in any court as a warranty of the physical condition of such building, system or plan or their adequacy. This jurisdiction shall not be liable in tort for damages or hazardous or illegal condition or inadequacy in such building, system or plan, nor for any failure of any component of such, which may occur subsequent to such inspection or permitting. Further, no Building Division employee shall be liable in tort for damage from such conditions, in accordance with Section 768.28 Florida Statutes, as may be amended or replaced.

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.11 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

101.4.1 Gas. The provisions of the Florida Building Code, Fuel Gas shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

101.4.2 Mechanical. The provisions of the Florida Building Code, Mechanical shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

101.4.3 Plumbing. The provisions of the Florida Building Code, Plumbing shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system.

101.4.4 Property maintenance. Chapter 14, Article I of the Palm Beach County Code of Ordinances (“Property Maintenance Code”) governs the maintenance of existing properties in Palm Beach County except as otherwise regulated by this code.

101.4.5 Fire prevention. For provisions related to fire prevention, refer to the Florida Fire Prevention Code. The Florida Fire Prevention Code shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression, automatic sprinkler systems and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

101.4.6 Energy. The provisions of the Florida Building Code, Energy Conservation shall apply to all matters governing the design and construction of buildings for energy efficiency.

101.4.7 Existing buildings. The provisions of the Florida Existing Building Code shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

101.4.8 Accessibility. For provisions related to accessibility, refer to the Florida Building Code, Accessibility.

101.4.9 Manufactured buildings. For additional administrative and special code requirements, see Section 458, Florida Building Code - Building, and Rule 61-41 Florida Administrative Code.

101.4.10 Electrical. The provisions of Chapter 27 of the Florida Building Code, Building Volume, and Part VIII – Electrical, of the Florida Building Code Residential Volume, 7th Edition (2020) shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

101.4.11 Article 18 Flood Damage Prevention. Palm Beach County Unified Land Development Code (ULDC) shall be considered part of the requirements of this code relative to flood control. Conflicting requirements between the Florida Building Code and Article 18 of the ULDC shall be resolved in favor of the requirement that offers the greatest degree of flood damage prevention or alternatives that would provide an equivalent degree of flood damage prevention and an equivalent method of construction.

101.5 Building Official. Whenever, the building official is mentioned in this code, it is also intended to mean the building official's designee, wherever applicable.

101.6 Department. Whenever "department" or "department of building safety" is mentioned in this code, it is also intended to mean the Palm Beach County Building Division, where applicable.

SECTION 102
APPLICABILITY

102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

102.1.1 The Florida Building Code does not apply to, and no code enforcement action shall be brought with respect to, zoning requirements, land use requirements and owner specifications or programmatic requirements which do not pertain to and govern the design, construction, erection, alteration, modification, repair or demolition of public or private buildings, structures or facilities or to programmatic requirements that do not pertain to enforcement of the Florida Building Code. Additionally, a local code enforcement agency may not administer or enforce the Florida Building Code, Building to prevent the siting of any publicly owned facility, including,

but not limited to, correctional facilities, juvenile justice facilities, or state universities, community colleges, or public education facilities, as provided by law.

102.2 Building. The provisions of the Florida Building Code shall apply to the construction, erection, alteration, modification, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every public and private building, structure or facility or floating residential structure, or any appurtenances connected or attached to such buildings, structures or facilities. Additions, alterations, repairs and changes of use or occupancy group in all buildings and structures shall comply with the provisions provided in the Florida Building Code, Existing Building. The following buildings, structures and facilities, except for those located in a Special Flood Hazard Area, are exempt from the Florida Building Code as provided by law, and any further exemptions shall be as determined by the legislature and provided by law:

(a) Building and structures specifically regulated and preempted by the federal government.

(b) Railroads and ancillary facilities associated with the railroad.

(c) Nonresidential farm buildings on farms.

(d) Temporary buildings or sheds used exclusively for construction purposes.

(e) Reserved.

(f) Those structures or facilities of electric utilities, as defined in Section 366.02, Florida Statutes, which are directly involved in the generation, transmission, or distribution of electricity.

(g) Temporary sets, assemblies, or structures used in commercial motion picture or television production, or any sound-recording equipment used in such production, on or off the premises.

(h) Chickees constructed by the Miccosukee Tribe of Indians of Florida or the Seminole Tribe of Florida. As used in this paragraph, the term “chickee” means an open-sided wooden hut that has a thatched roof of palm or palmetto or other traditional materials, and that does not incorporate any electrical, plumbing, or other non-wood features.

(i) Family mausoleums not exceeding 250 square feet (23 m^2) in area, which are prefabricated and assembled on site or preassembled and delivered on site and have walls, roofs, and a floor constructed of granite, marble, or reinforced concrete.

(j) Temporary housing provided by the Department of Corrections to any prisoner in the state correctional system.

(k) A building or structure having less than 1,000 square feet (93 m^2) which is constructed and owned by a natural person for hunting and which is repaired or reconstructed to the same dimension and condition as existed on January 1, 2011, if the building or structure:

1. Is not rented or leased or used as a principal residence;

2. Is not located within the 100-year floodplain according to the Federal Emergency Management Agency's current Flood Insurance Rate Map; and

3. Is not connected to an off-site electric power or water supply.

(l) Service providers of water, sewer, storm, gas, cable, telephone, or other similar utility systems are exempt to the point of service connection for the building or structure. Additional telecommunication exemptions may be found in Section 489.503(14), Florida Statutes.

However, these structures may be subject to local zoning and/or land development regulations.

102.2.1 In addition to the requirements of Section 553.79 and 553.80, Florida Statutes, facilities subject to the provisions of Chapter 395, Florida Statutes, and Part II of Chapter 400, Florida Statutes, shall have facility plans reviewed and construction surveyed by the state agency authorized to do so under the requirements of Chapter 395, Florida Statutes, and Part II of Chapter 400, Florida Statutes, and the certification requirements of the federal government.

102.2.2 Residential buildings or structures moved into or within a county or municipality shall not be required to be brought into compliance with the state minimum building code in force at the time the building or structure is moved, provided:

1. The building or structure is structurally sound and in occupiable condition for its intended use;

2. The occupancy use classification for the building or structure is not changed as a result of the move;

3. The building is not substantially remodeled;

4. Current fire code requirements for ingress and egress are met;

5. Electrical, gas and plumbing systems meet the codes in force at the time of construction and are operational and safe for reconnection; and

6. Foundation plans are sealed by a professional engineer or architect licensed to practice in this state, if required by the Florida Building Code, Building for all residential buildings or structures of the same occupancy class.

7. The requirements of Florida Building Code, Existing Building Volume, are also satisfied.

102.2.3 The building official shall apply the same standard to a moved residential building or structure as that applied to the remodeling of any comparable residential building or structure

to determine whether the moved structure is substantially remodeled. The cost of the foundation on which the moved building or structure is placed shall not be included in the cost of remodeling for purposes of determining whether a moved building or structure has been substantially remodeled.

102.2.4 This section does not apply to the jurisdiction and authority of the Department of Agriculture and Consumer Services to inspect amusement rides or the Department of Financial Services to inspect state-owned buildings and boilers.

102.2.5 Each enforcement district shall be governed by a board, the composition of which shall be determined by the affected localities.

1. At its own option, each enforcement district or local enforcement agency may adopt rules granting to the owner of a single-family residence one or more exemptions from the Florida Building Code relating to:

(a) Addition, alteration, or repairs performed by the property owner upon his or her own property, provided any addition or alteration shall not exceed 1,000 square feet (93 m^2) or the square footage of the primary structure, whichever is less.

(b) Addition, alteration, or repairs by a non-owner within a specific cost limitation set by rule, provided the total cost shall not exceed $5,000 within any 12-month period.

(c) Building and inspection fees.

2. The exemptions under subparagraph 1 do not apply to single-family residences that are located in mapped flood hazard areas, as defined in the code, unless the enforcement district or local enforcement agency has determined that the work, which is otherwise exempt, does not constitute a substantial improvement, including the repair of substantial damage, of such single-family residences.

3. Each code exemption, as defined in sub-subparagraphs 1a, 1b, and 1c shall be certified to the local board 10 days prior to implementation and shall only be effective in the territorial jurisdiction of the enforcement district or local enforcement agency implementing it.

4. Each enforcement district or local enforcement agency may establish an alternative permitting program for replacing nonstructural components of building systems in a residential dwelling unit. A licensed contractor performing such work for the resident shall also be exempt from individual permits and inspections if either the owner or the licensed contractor obtains a valid Annual Permit per Section 105.1.1 of this code and all such work is reported as required in Section 105.1.2 of this code for compliance evaluation. No added capacity, system expansion or new building work of any type shall be excluded from individual permit and inspection by this provision.

102.2.6 This section does not apply to traditional swings and other standard playground equipment accessory to a one- or two-family dwelling, as determined by the building official. Exempt structures covered under this section may still be subject to zoning permits.

Exception: Electrical service to such playground equipment shall be in accordance with Chapter 27 of this code or Part VIII, Electrical, of the Florida Building Code Residential Volume, 7th Edition (2020), as applicable.

102.3 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2 of this code.

102.4.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

102.4.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code or the Florida Codes listed in Section101.4, the provisions of this code or the Florida Codes listed in Section 101.4, as applicable, shall take precedence over the provisions in the referenced code or standard.

102.5 Partial invalidity. In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions of this code.

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically provided in this code, the *Florida Building Code, Existing Building,* the *Florida Fire Prevention Code, or* the *Property Maintenance Code*.

102.6.1 Buildings not previously occupied. A building or portion of a building that has not been previously occupied or used for its intended purpose in accordance with the laws in existence at the time of its completion shall comply with the provisions of the Florida Building Code or Florida Residential Code, as applicable, for new construction or with any current permit for such occupancy.

102.6.2 Buildings previously occupied. The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, the Florida Building Code, Existing Building Volume; Florida Fire Prevention Code; the Palm Beach County Property Maintenance Code; the codes referenced in Section 101.4 of this code; or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

102.7 Relocation of manufactured buildings.

1. Relocation of an existing manufactured building does not constitute an alteration.

2. A relocated building shall comply with wind speed requirements of the new location, using the appropriate wind speed map. If the existing building was manufactured in compliance with the Standard Building Code (prior to March 1, 2002), the wind speed map of the Standard Building Code shall be applicable. If the existing building was manufactured in compliance with the Florida Building Code (after March 1, 2002), the wind speed map of the Florida Building Code shall be applicable.

3. A relocated building shall comply with the flood hazard area requirements of the new location, if applicable.

102.8 Existing mechanical equipment. An agency or local government may not require that existing mechanical equipment located on or above the surface of a roof be installed in compliance with the requirements of the Florida Building Code except during reroofing when the equipment is being replaced or moved during reroofing and is not in compliance with the provisions of the Florida Building Code relating to roof-mounted mechanical units.

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 103
BUILDING DIVISION

103.1 Creation of enforcement agency. The Building Division is hereby created and the official in charge thereof shall be known as the building official. All building code enforcement officials employed by the division shall be certified in accordance with Chapter 468, Florida Statutes.

103.2 Appointment. The building official shall be appointed by the appointing authority of the jurisdiction.

103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the building official shall have the authority to appoint a deputy building official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the building official.

103.4 Restrictions on employees. An employee connected with the division shall not be financially interested in the furnishing of labor, material, or appliances for the construction, alteration, or maintenance of a building, structure, service, system, or in the making of plans or of specifications thereof, unless he/she is the owner of such. An employee shall not engage in any other work, which is inconsistent with his/her duties, or conflicts with the interests of the division, or which violates Florida Statutes Section 112.313(7)(a) or the Palm Beach County Code of Ethics.

SECTION 104
DUTIES AND POWERS OF THE BUILDING OFFICIAL

104.1 General. The building official is hereby authorized and directed to enforce the provisions of this code. The building official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

104.2 Applications and permits. The building official shall receive applications, review construction documents and issue permits for the erection, and alteration, demolition and moving of buildings and structures, and service systems, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

104.2.1 Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas. For applications for reconstruction, rehabilitation, repair, alteration, addition or other improvement of existing buildings or structures located in flood hazard areas, the building official shall determine if the proposed work constitutes substantial improvement or repair of substantial damage. Where the building official determines that the proposed work constitutes substantial improvement or repair of substantial damage, and where required by this code, the building official shall require the building to meet the requirements of Sections 1612 or R322 of this code, and ULDC Article 18, Flood Damage Prevention.

104.3 Notices and orders. The building official shall issue all necessary notices or orders to ensure compliance with this code.

104.4 Inspections. The building official shall make all of the required inspections, or the building official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The building official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

104.5 Identification. The building official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

104.6 Right of entry.

104.6.1 Where it is necessary to make an inspection to enforce the provisions of this code, or where the building official has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the building official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed

by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the building official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the building official shall have recourse to the remedies provided by law to secure entry.

104.6.2 When the building official obtains a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other persons having charge, care or control of any building, structure, or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the building official for the purpose of inspection and examination pursuant to this code.

104.7 Department records. The building official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records per FS 119.

104.8 Liability. The building official, any board member or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be civilly or criminally rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

104.8.1 Legal defense. Any suit or criminal complaint instituted against an officer, employee or board member because of an act performed by that officer, employee or board member in the lawful discharge and within the scope of duties and under the provisions of this code shall be defended by legal representatives of the jurisdiction until the final termination of the proceedings. The building official or any subordinate, when acting within the scope of their employment, shall not be liable for costs or attorneys' fees in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

104.9 Approved materials and equipment. Materials, equipment and devices approved by the building official shall be constructed and installed in accordance with such approval.

104.9.1 Used materials and equipment. The use of used materials, which meet the requirements of this code for new materials, is permitted. Used equipment and devices shall not be reused unless approved by the building official.

104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the building official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the building official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements.

The details of action granting modifications shall be recorded and entered in the files of the department.

104.10.1 Flood hazard areas. Modifications in flood hazard areas may only be granted by the Flood Damage Prevention Board, pursuant to Article 18 of the Palm Beach County ULDC.

104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, level of sanitation, and safety. The building official shall require that sufficient evidence or proof be submitted to substantiate any claim made regarding the alternative. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved.

104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

104.11.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for the period required for retention of public records.

104.12 Requirements not covered by this code. Any requirements necessary for the strength, stability or proper operation of an existing or proposed building, structure, electrical, gas, mechanical or plumbing system, or for the public safety, health and general welfare, not specifically covered by this or other technical codes, shall be determined by the building official.

SECTION 105
PERMITS

105.1 Required. Any contractor, owner or owner's authorized agent in accordance with Florida Statute Chapter 489 who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building, tenancy or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any impact-resistant coverings, electrical, gas, mechanical or plumbing, fire protection systems, accessible elements, flood resistant elements, site drainage elements, the

installation of which is regulated by this code or Article 18 of the ULDC, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

105.1.1 Annual facility permit. In lieu of an individual permit for each alteration to an existing electrical, gas, mechanical or plumbing or interior nonstructural office system(s), the building official is authorized to issue an annual permit for any occupancy to facilitate routine or emergency service, repair, refurbishing, or minor renovations of service systems or manufacturing equipment installations/relocations. The building official shall be notified of major changes and shall retain the right to make inspections at the facility site as deemed necessary. An annual facility permit shall be assessed with an annual fee and shall be valid for one year from date of issuance. A separate permit shall be obtained for each facility and for each construction trade, as applicable. The permit application shall contain a general description of the parameters of work intended to be performed during the year.

105.1.2 Annual facility permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The building official shall have access to such records at all times or such records shall be filed with the building official as designated. The building official is authorized to revoke such permit, and deny future permits, if code violations are found to exist.

105.1.3 Food permit. In accordance with 500.12, Florida Statutes, a food permit from the Department of Agriculture and Consumer Services is required of any person who operates a food establishment or retail store.

105.1.4 Public swimming pool. The local enforcing agency may not issue a building permit to construct, develop, or modify a public swimming pool without proof of application, whether complete or incomplete, for an operating permit pursuant to Section 514.031, Florida Statutes. A certificate of completion or occupancy may not be issued until such operating permit is issued. The local enforcing agency shall conduct their review of the building permit application upon filing and in accordance with Chapter 553, Florida Statutes. The local enforcing agency may confer with the Department of Health, if necessary, but may not delay the building permit application review while awaiting comment from the Department of Health.

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction, to include work in any special flood hazard area. Exemptions granted under this section do not relieve the owner or contractor from their duty to comply with applicable provisions of the Florida Building Code, and requirements of Article 18 of the ULDC. As determined by the building official, permits shall not be required for the following:

Building:

1. Building permits are not required for replacement or repair work having a fair market value of less than $1,000.00 including overhead, profit, design fees, materials and labor, providing,

however, that such work will not adversely affect the structural integrity, fire rating, exit access or egress requirements.

2. Cabinets and countertops with no reconfiguration for one- and two-family dwellings, painting, papering, carpeting, and similar finish work, with no electrical or plumbing work.

3. Temporary motion picture, television and theater sets and scenery.

4. Traditional swings and other standard playground equipment accessory to detached one- and two-family dwellings, as determined by the building official, but they may be subject to zoning permits.

5. Retractable awnings supported by an exterior wall that do not require additional support or electric in Groups R-3 and U occupancies, but such permits may be subject to zoning permits.

6. Non-fixed and movable fixtures, cases, racks, and counters not over 5 feet 9 inches (1753 mm) in height.

Electrical:

Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles, or repair and replacement of like for like common household electrical fixtures, switches, and outlets on the load side of the electrical source.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas, except as exempted by Florida Statute Chapter 489.503(14).

Temporary testing systems: A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

1. Portable heating appliance.

2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

1. Portable heating appliance.

2. Portable ventilation equipment.

3. Portable cooling unit.

4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.

5. Replacement of any part that does not alter its approval or make it unsafe.

6. Portable evaporative cooler.

7. Portable self-contained refrigeration system containing 10 pounds (5 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

8. The installation, replacement, removal or metering of any electrical load management control device where installed by a utility service provider.

Plumbing:

1. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

3. The replacement of common household plumbing fixtures to existing supply lines and outlets in one- and two-family dwellings. This does not include water heaters, bathtubs, and showers.

105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next business day to the building official. Notification shall be given to the building official, including the work address, nature of emergency, and scope of work immediately, or by the next business day.

105.2.2. Minor repairs. Ordinary minor repairs may be made with the approval of the building official without a permit, provided the repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring systems or mechanical equipment or other work affecting public health or general safety, and such repairs shall not violate any of the provisions of the technical codes.

105.2.3 Public service agencies. A permit shall not be required for the installation, alteration or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.

105.3 Application for permit. To obtain a permit, the applicant shall first file an application in writing or electronically on forms furnished by the building department for that purpose.

Permit application forms shall be in the format prescribed by a local administrative board, if applicable, and must comply with the requirements of Section 713.135(5) and (6), Florida Statutes.

Each application shall be inscribed with the date of application, and the code in effect as of that date. For a building permit for which an application is submitted prior to the effective date of the Florida Building Code, the state minimum building code in effect in the permitting jurisdiction on the date of the application governs the permitted work for the life of the permit and any extension granted to the permit.

Effective October 1, 2017, a local enforcement agency shall post each type of building permit application on its website. Completed applications must be able to be submitted electronically to the appropriate building department. Accepted methods of electronic submission include, but are not limited to, e-mail submission of applications in portable document format or submission of applications through an electronic fill-in form available on the building department's website or through a third-party submission management software. Payments, attachments, or drawings required as part of the permit application may be submitted in person in a non-electronic format, at the discretion of the building official.

105.3.1 Action on application. Except for applications filed without the prerequisite fees, the building official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. No review will be performed prior to receipt of required submittal fees. If submittal fees are not paid within ten (10) days of receipt of an application, the application shall become null and void. Upon review, if the application or the construction documents do not conform to the requirements of pertinent laws, the building official shall reject such application in writing, stating the reasons therefore. If the building official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the building official shall issue a permit therefore as soon as practicable. When authorized through contractual agreement with a school board, in acting on applications for permits, the building official shall give first priority to any applications for the construction of, or addition or renovation to, any school or educational facility.

105.3.1.1 If a state university, Florida college or public school district elects to use a local government’s code enforcement offices, fees charged by counties and municipalities for enforcement of the Florida Building Code on buildings, structures, and facilities of state universities, state colleges, and public school districts shall not be more than the actual labor and administrative costs incurred for plans review and inspections to ensure compliance with the code.

105.3.1.2 No permit may be issued for any building construction, erection, alteration, modification, repair, or addition unless the applicant for such permit provides to the enforcing agency which issues the permit any of the following documents which apply to

the construction for which the permit is to be issued and which shall be prepared by or under the direction of an engineer registered under Chapter 471, Florida Statutes:

1. Plumbing documents for any new building or addition which requires a plumbing system with more than 250 fixture units or which costs more than $125,000.

2. Fire sprinkler documents for any new building or addition, which includes a fire sprinkler system that contains 50 or more sprinkler heads. Personnel as authorized by Chapter 633 Florida Statutes, may design a fire sprinkler system of 49 or fewer heads and may design the alteration of an existing fire sprinkler system if the alteration consists of the relocation, addition or deletion of not more than 49 heads, notwithstanding the size of the existing fire sprinkler system.

3. Heating, ventilation, and air-conditioning documents for any new building or addition, which requires more than a 15-ton-per-system capacity which is designed to accommodate 100 or more persons or for which the system costs more than $125,000. This paragraph does not include any document for the replacement or repair of an existing system in which the work does not require altering a structural part of the building or for work on a residential one, two, three or four-family structure.

An air-conditioning system may be designed by an installing air-conditioning contractor certified under Chapter 489, Florida Statutes, to serve any building or addition which is designed to accommodate fewer than 100 persons and requires an air-conditioning system with a value of $125,000 or less; and when a 15-ton-per system or less is designed for a singular space of a building and each 15-ton system or less has an independent duct system. Systems not complying with the above require design documents that are to be sealed by a professional engineer.

Example 1: When a space has two 10-ton systems with each having an independent duct system, the contractor may design these two systems since each unit (system) is less than 15 tons.

Example 2: Consider a small single-story office building which consists of six individual offices where each office has a single three-ton package air conditioning heat pump. The six heat pumps are connected to a single water cooling tower. The cost of the entire heating, ventilation and air-conditioning work is $47,000 and the office building accommodates fewer than 100 persons. Because the six mechanical units are connected to a common water tower this is considered to be an 18-ton system.

NOTE: It was further clarified by the Commission that the limiting criteria of 100 persons and $125,000 apply to the building occupancy load and the cost for the total air-conditioning system of the building.

4. Any specialized mechanical, electrical, or plumbing document for any new building or addition which includes a medical gas, oxygen, steam, vacuum, toxic air filtration, halon, or fire detection and alarm system which costs more than $5,000.

5. Electrical documents. See Florida Statutes 471.003(2)(h). Any electrical or plumbing or air-conditioning and refrigeration system meeting the following thresholds are required to be designed by a Florida Registered Engineer. The system requires an electrical system with a value of over $125,000; and requires an aggregate service capacity of over 600 amperes (240 volts) on a residential electrical system or over 800 amperes (240 volts) on a commercial or industrial electrical system;

   NOTE: It was further clarified by the Commission that the limiting factor of 240 volt or over is required to be designed by an Engineer.

   Documents requiring an engineer seal by this part shall not be valid unless a professional engineer who possesses a valid certificate of registration has signed, dated, and stamped such document as provided in Section 471.025, Florida Statutes.

6. All public swimming pools and public bathing places defined by and regulated under Chapter 514, Florida Statutes

105.3.2 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned becoming null and void if required application fees are not paid within 10 calendar days of filing, or six months of inactivity, abandonment, or failure to respond to requested corrections during the application process after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing prior to the abandonment date, with justifiable cause demonstrated. Abandoned applications shall be subject to destruction in accordance with state law. The fee for extension of a permit application shall be set forth by the administrative authority. There may be fees or requirements from other government agencies for permit application extensions.

105.3.3 An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: “NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, such as the requirement for Home or Property Owners Association approval, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies.”

105.3.4 A building permit for a single-family residential dwelling must be issued within 30 working days of application therefore unless unusual circumstances require a longer time for

processing the application or unless the permit application fails to satisfy the Florida Building Code or the enforcing agency's laws or ordinances.

105.3.5 Identification of minimum premium policy. Except as otherwise provided in Chapter 440, Florida Statutes, Workers' Compensation, every employer shall, as a condition to receiving a building permit, show proof that it has secured compensation for its employees as provided in Section 440.10 and 440.38, Florida Statutes.

105.3.6 Asbestos removal contractor exemption. Refer to Section 105.9 of this code for additional requirements. A licensed asbestos removal contractor is not required when moving, removal or disposal of asbestos-containing materials on a residential building where the owner occupies the building, the building is not for sale or lease, and the work is performed according to the owner-builder limitations provided in this paragraph and Florida Statutes Chapter 489.103(7). To qualify for exemption under this paragraph, an owner must personally appear and sign the building permit application. The permitting agency shall provide the person with a disclosure statement in substantially the following form:

> **Disclosure Statement:** State law requires asbestos abatement to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own asbestos abatement contractor even though you do not have a license. You must supervise the construction yourself. You may move, remove or dispose of asbestos-containing materials on a residential building where you occupy the building and the building is not for sale or lease, or the building is a farm outbuilding on your property. If you sell or lease such building within 1 year after the asbestos abatement is complete, the law will presume that you intended to sell or lease the property at the time the work was done, which is a violation of this exemption. You may not hire an unlicensed person as your contractor. Your work must be done according to all local, state and federal laws and regulations, which apply to asbestos abatement projects. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances.

105.3.7 Applicable Code for Manufactured Buildings. Manufacturers should be permitted to complete all buildings designed and approved prior to the effective date of a new code edition, provided a clear signed contract is in place. The contract shall provide specific data mirroring that required by an application for permit, specifically, without limitation, date of execution, building owner or dealer, and anticipated date of completion. However, the construction activity must commence within 6 months of the contract's execution. The contract is subject to verification by the Department of Business and Professional Regulation.

105.3.8 Public right of way. A permit shall not be issued by the building official for the construction, alteration, or relocation of any building, structure, equipment or system impacting any street, alley or public lane, unless the applicant has received a right of way permit from the authority having jurisdiction over the right of way.

105.4 Conditions of the permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other federal, state, or local law, or any applicable ordinance, code, or regulation. Permits presuming to give authority to violate or cancel the provisions of this code or of any other federal, state, or local law, or any applicable ordinance, code, or regulation shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the building official from requiring the correction of errors in the construction documents and other data, requiring corrections to work already performed, or revoking the permit. No deviations from the permit may be made without written authorization. The building official is also authorized to prevent occupancy or use of a structure that is in violation of this code or of any other federal, state or local law or any applicable, ordinance, code or regulation.

105.4.1 Permit intent. A permit issued shall be construed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the building official from thereafter requiring a correction of errors in plans, construction or violations of this code. Every permit issued shall become invalid (inactive or expired) unless the work authorized by such permit is commenced within six months after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of six months after the time the work is commenced.

105.4.1.1 If work has commenced and the permit is revoked, becomes null and void, or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

105.4.1.2 If a new permit, or revalidation (renewal) of the original permit, is not obtained within six months from the date the initial permit became null and void, the building official is authorized to require that any work, which has been commenced or completed, be removed from the building site. Alternately, a new permit may be issued on application, providing the work in place and required to complete the structure meets all applicable regulations in effect at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date of issuance of the new permit.

105.4.1.3 Work shall be considered to be in active progress when the permit has received an approved inspection within six months. This provision shall not be applicable in case of civil commotion or strike; or when the building work is halted due directly to judicial injunction, order or similar process; or due to action by an environmental or archeological agency having jurisdiction. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 3 months each. The extension shall be requested in writing and justifiable cause demonstrated, prior to expiration.

105.4.1.4 The fee for renewal, reissuance and extension of a permit shall be set forth by the administrative authority. There may be fees or requirements from other government agencies for permit extensions and renewals.

105.5 Expiration. Every permit issued that becomes inactive or expired, pursuant to Section 105.4.1 of this code, shall be renewed pursuant to Section 105.4.1.1 of this code before the work may resume. Permits that remain inactive or expired for more than six months shall lose all rights vested in the permit pursuant to Section 105.4.1.2 of this code. In order to complete the work authorized under a permit that has lost all vested rights, the permit holder and property owner shall be responsible to either remove the work from the site or obtain a new permit to complete all work in accordance with the current code requirements and approved permitted plans. Inspections performed and accepted prior to expiration may be accepted subject to the discretion of the building official.

105.5.1 Additional options for closing a permit. Pursuant to Section 553.79(15), Florida Statutes, a property owner, regardless of whether the property owner is the one listed on the application for the building permit, may close a building permit by complying with the following requirements:

1. The property owner may retain the original contractor listed on the permit or hire a different contractor appropriately licensed in this state to perform the work necessary to satisfy the conditions of the permit and to obtain any necessary inspection in order to close the permit. If a contractor other than the original contractor listed on the permit is hired by the property owner to close the permit, such contractor is not liable for any defects in the work performed by the original contractor and is only liable for the work that he or she performs.

2. The property owner may assume the role of an owner-builder, in accordance with Sections 489.103(7) and 489.503(6), Florida Statutes.

3. If a building permit is inactive or expired and its requirements have been substantially completed and no life safety issues exist, as determined by the local enforcement agency, the permit may be closed without having to obtain a new building permit, and the work required to close the permit may be done pursuant to the building code in effect at the time the local enforcement agency received the application for the permit, unless the contractor has sought and received approval from the local enforcement agency for an alternative material, design or method of construction.

4. A local enforcement agency may close a building permit 6 years after the issuance of the permit, even in the absence of a final inspection, if the local enforcement agency determines that no apparent safety hazard exists.

105.5.1.1 For purposes of this section, the term “close” means that the requirements of the permit have been satisfied.

105.5.1.2 For the purposes of this subsection, an open permit shall mean a permit that has not satisfied all requirements for completion as listed in Section 110.

105.5.2 Responsibility to close permits. Closing out or resolving open, inactive or expired permits shall be the responsibility of the permit applicant and the property owner. Failure to

close out or resolve open permits may result in a referral of the matter to the Palm Beach County Construction Industry Licensing Board (CILB) or Local Construction Regulation Board (LCRB), as applicable, and the Palm Beach County Code Enforcement Division.

105.6 Denial or revocation. Whenever a permit required under this section is denied or revoked because the plan, or the construction, erection, alteration, modification, repair, or demolition of a building, is found by the local enforcing agency to be not in compliance with the Florida Building Code, the local enforcing agency shall identify the specific plan or project features that do not comply with the applicable codes, identify the specific code chapters and sections upon which the finding is based, and provide this information to the permit applicant. If the local building code administrator or inspector finds that the plans are not in compliance with the Florida Building Code, the local building code administrator or inspector shall identify the specific plan features that do not comply with the applicable codes, identify the specific code chapters and sections upon which the finding is based, and provide this information to the local enforcing agency. The local enforcing agency shall provide this information to the permit applicant.

105.6.1 Arm's-length purchasers. Pursuant to Section 553.79(16), Florida Statutes, a local enforcement agency may not deny issuance of a building permit to; issue a notice of violation to; or fine, penalize sanction or assess fees against an arm's-length purchaser of a property for value solely because a building permit applied for by a previous owner of the property was not closed. The local enforcement agency shall maintain all rights and remedies against the property owner and contractor listed on the permit.

105.6.2 Discipline. Pursuant to Section 553.79(16), Florida Statutes, a local enforcement agency may not deny issuance of a building permit to a contractor solely because the contractor is listed on other building permits that were not closed. However, the local enforcement agency shall maintain all other rights and remedies against the contractor listed on the permit(s), including, but not limited to, potential referral to the appropriate licensing authority for potential discipline.

105.6.3 Misrepresentation of application. The building official may revoke a permit or approval, issued under the provisions of this code, when there has been any false statement or misrepresentation as to the material fact in the application or plans on which the permit or approval was based.

105.6.4 Violation of code provisions. The building official may require correction or revoke a permit upon determination by the building official that the construction, erection, alteration, repair, moving, demolition, installation, or replacement of the building, structure, electrical, gas, mechanical or plumbing systems for which the permit was issued is in violation of, or not in conformity with, the provisions of this code.

105.7 Placement of permit. The building permit or copy shall be kept on the site of the work until the completion of the project.

105.8 Notice of commencement. In accordance with Section 713.135, Florida Statutes, when any person applies for a building permit, the authority issuing such permit shall print on the face

of each permit card in no less than 14-point, capitalized, boldfaced type: "WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

105.9 Asbestos. The enforcing agency shall require each building permit for the demolition or renovation of an existing structure to contain an asbestos notification statement which indicates the owner's or operator's responsibility to comply with the provisions of Section 469.003, Florida Statutes, and to notify the Department of Environmental Protection of his or her intentions to remove asbestos, when applicable, in accordance with state and federal law. Refer to Section 105.3.6 "Asbestos Removal Contractor Exemption" of this code for additional requirements.

105.10 Certificate of protective treatment for prevention of termites. A weather-resistant job-site posting board shall be provided to receive duplicate treatment certificates as each required protective treatment is completed, providing a copy for the person the permit is issued to and another copy for the building permit files. The treatment certificate shall provide the product used, identity of the applicator, time and date of the treatment, site location, area treated, chemical used, percent concentration and number of gallons used, to establish a verifiable record of protective treatment. If the soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval. For a bait system, see Section 1816.1.7 of the Florida Building Code for contract document requirements.

105.11 Notice of termite protection. A permanent sign that identifies the termite treatment provider and need for reinspection and treatment contract renewal shall be provided. The sign shall be posted near the water heater or electric panel.

105.12 Work starting before permit issuance. Upon written request and approval of the building official, the scope of work delineated in the building permit application and plan may be started prior to the final approval and issuance of the permit, provided any work completed is entirely at risk of the permit applicant and the work does not proceed past the first required inspection. This provision only applies to the Florida Building Code; all other agency approvals necessary for construction must be secured prior to this provision being applied.

105.13 Phased permit approval. After submittal of the appropriate construction documents, the building official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's and owner's own risk with the building operation and without assurance that a permit for the entire structure will be granted. Corrections may be required to meet the requirements of the technical codes. This provision only applies to the Florida Building Code; all other agency approvals necessary for construction must be secured prior to this provision being applied.

105.14 Permit issued on basis of an affidavit. The building official may accept a sworn affidavit from a registered architect or engineer stating that the plans submitted conform to the technical codes. For buildings and structures, the affidavit shall state that the plans conform to the laws as to egress, type of construction and general arrangement and, if accompanied by drawings, show the structural design and that the plans and design conform to the requirements of the technical codes as to strength, stresses, strains, loads and stability. Whenever a permit is issued in reliance upon an affidavit or whenever the work to be covered by a permit involves installation under conditions which, in the opinion of the building official, are hazardous or complex, the building official shall require that the architect or engineer who signed the affidavit or prepared the drawings or computations shall supervise such work. In addition, they shall be responsible for conformity to the permit, provide copies of inspection reports as inspections are performed, and upon completion make and file with the building official written affidavit that the work has been done in conformity to the reviewed plans and with the structural provisions of the technical codes. In the event such architect or engineer is not available, the owner shall employ in his stead a competent person or agency whose qualifications are reviewed by the building official. The building official shall ensure that any person conducting plans review is qualified as a plans examiner under Part XII of Chapter 468, Florida Statutes, and that any person conducting inspections is qualified as a building inspector under Part XII of Chapter 468, Florida Statutes. Nothing hereof shall preclude plan review or inspections by the building official (See also Section 107.6 of this code.)

Exception: Permit issued on basis of an affidavit shall not extend to the flood load and flood resistance requirements of the Florida Building Code.

105.15 Opening protection. When any activity requiring a building permit, not including roof covering replacement or repair work associated with the prevention of degradation of the residence, that is applied for on or after July 1, 2008, and for which the estimated cost is $50,000 or more for a site built single-family detached residential structure that is located in the wind borne debris region as defined in this Code and that has an insured value of $750,000 or more, or, if the site built single-family detached residential structure is uninsured or for which documentation of insured value is not presented, has a just valuation for the structure for purposes of ad valorem taxation of $750,000 or more; opening protections as required within this Code or Florida Building Code, Residential for new construction shall be provided.

Exception: Single-family residential structures permitted subject to the Florida Building Code are not required to comply with this section, unless constructed as a partially enclosed structure without opening protection.

105.16 Inspection of existing residential building not impacted by construction.

(a) A local enforcing agency, and any local building code administrator, inspector, or other official or entity, may not require as a condition of issuance of a one- or two-family residential building permit the inspection of any portion of a building, structure, or real property that is not directly impacted by the construction, erection, alteration, modification, repair, or demolition of the building, structure, or real property for which the permit is sought.

(b) This subsection does not apply to a building permit sought for:

1. A substantial improvement as defined in Section 161.54, Florida Statutes or as defined in the Florida Building Code.

2. A change of occupancy as defined in the Florida Building Code.

3. A conversion from residential to nonresidential or mixed use pursuant to Section 553.507(2)(a), Florida Statutes or as defined in the Florida Building Code.

4. A historic building as defined in the Florida Building Code.

(c) This subsection does not prohibit a local enforcing agency, or any local building code administrator, inspector, or other official or entity, from:

1. Citing any violation inadvertently observed in plain view during the ordinary course of an inspection conducted in accordance with the prohibition in paragraph (a).

2. Inspecting a physically nonadjacent portion of a building, structure, or real property that is directly impacted by the construction, erection, alteration, modification, repair, or demolition of the building, structure, or real property for which the permit is sought in accordance with the prohibition in paragraph (a).

3. Inspecting any portion of a building, structure, or real property for which the owner or other person having control of the building, structure, or real property has voluntarily consented to the inspection of that portion of the building, structure, or real property in accordance with the prohibition in paragraph (a).

4. Inspecting any portion of a building, structure, or real property pursuant to an inspection warrant issued in accordance with Sections 933.20-933.30, Florida Statutes.

105.17 Streamlined low-voltage alarm system installation permitting.

1. As used in this section, the term:

(a) "Contractor" means a person who is qualified to engage in the business of electrical or alarm system contracting pursuant to a certificate or registration issued by the Florida Department of Business and Professional Regulation under part II of Chapter 489, Florida Statutes or by the Palm Beach County Construction Industry Licensing Board under Chapter 67-1876, Laws of Florida.

(b) "Low-voltage alarm system project" means a project related to the installation, maintenance, inspection, replacement, or service of a new or existing alarm system, as

defined in Section 489.505, Florida Statutes, that is hardwired and operating at low voltage, as defined in the National Electrical Code Standard 70, Current Edition, or a new or existing low-voltage electric fence, and ancillary components or equipment attached to such a system, or fence, including, but not limited to, home-automation equipment, thermostats, closed-circuit television systems, access controls, battery recharging devices and video cameras.

(c) "Low-voltage electric fence" means an alarm system, as defined in s. 489.505, that consists of a fence structure and an energizer powered by a commercial storage battery not exceeding 12 volts, which produces an electric charge upon contact with the fence structure.

(d) "Wireless alarm system" means a burglar alarm system or smoke detector that is not hardwired.

2. Notwithstanding any provision of this Code, this section applies to all low-voltage alarm system projects for which a permit is required by a local enforcement agency. However, a permit is not required to install, maintain, inspect, replace, or service a wireless alarm system, including any ancillary components or equipment attached to the system.

3. A low-voltage electric fence must meet all of the following requirements to be permitted as a low-voltage alarm system project and no further permit shall be required for the low-voltage alarm system project other than as provided in this section:

(a) The electric charge produced by the fence upon contact must not exceed energizer characteristics set forth in paragraph 22.108 and depicted in Figure 102 of International Electrotechnical Commission Standard No. 60335-2-76, Current Edition.

(b) A nonelectric fence or wall must completely enclose the low-voltage electric fence. The low-voltage electric fence may be up to 2 feet higher than the perimeter nonelectric fence or wall.

(c) The low-voltage electric fence must be identified using warning signs attached to the fence at intervals of not more than 60 feet.

(d) The low-voltage electric fence shall not be installed in an area zoned exclusively for single-family or multi-family residential use.

(e) The low-voltage electric fence shall not enclose the portions of a property, which are used for residential purposes.

4. This section does not apply to the installation or replacement of a fire alarm, or access control system affecting required means of egress as required by Florida Building Code Chapter 10, if a plan review is required.

5. A local enforcement agency shall make uniform basic permit labels available for purchase by a contractor to be used for the installation or replacement of a new or existing alarm system at a cost as indicated in Section 553.793, Florida Statutes. The local enforcement agency may not require the payment of any additional fees, charges, or expenses associated with the installation or replacement of a new or existing alarm.

(a) A local enforcement agency may not require a contractor, as a condition of purchasing a label, to submit information other than identification information of the licensee and proof of registration or certification as a contractor.

(b) A label is valid for 1 year after the date of purchase and may only be used within the jurisdiction of the local enforcement agency that issued the label. A contractor may purchase labels in bulk for one or more unspecified current or future projects.

6. A contractor shall post an unused uniform basic permit label in a conspicuous place on the premises of the low-voltage alarm system project site before commencing work on the project.

7. A contractor is not required to notify the local enforcement agency before commencing work on a low-voltage alarm system project. However, a contractor must submit a Uniform Notice of a Low-Voltage Alarm System Project as provided under subsection (7) to the local enforcement agency within 14 days after completing the project. A local enforcement agency may take disciplinary action against a contractor who fails to timely submit a Uniform Notice of a Low-Voltage Alarm System Project.

8. The Uniform Notice of a Low-Voltage Alarm System Project may be submitted electronically or by facsimile if all submissions are signed by the owner, tenant, contractor, or authorized representative of such persons. The Uniform Notice of a Low-Voltage Alarm System Project shall be in the format prescribed by the local enforcement agency and must comply with the requirements of Section 553.793(7) and (8), Florida Statutes.

9. A local enforcement agency may coordinate directly with the owner or customer to inspect a low-voltage alarm system to ensure compliance with applicable codes and standards. If a low-voltage alarm system project fails an inspection, the contractor must take corrective action as necessary to pass inspection.

10. A municipality, county, district, or other entity of local government may not adopt or maintain in effect any ordinance or rule regarding a low-voltage alarm system project that is inconsistent with this section.

11. A uniform basic permit label shall not be required for the subsequent maintenance, inspection, or service of an alarm system that was permitted in accordance with this section.

The provisions of this act are not intended to impose new or additional licensure requirements on persons licensed in accordance with the applicable provisions of Chapter 489, Florida Statutes.

SECTION 106
FLOOR AND ROOF DESIGN LOADS

106.1 Live loads posted. Where the live loads for which each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 50 psf (2.40 kN/m2), such design live loads shall be conspicuously posted by the owner or the owner's authorized agent in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices. For residential construction where roof trusses have been designed for 30 psf for light attic storage, a durable sign shall be posted in the attic area at final building inspection.

106.2 Issuance of certificate of occupancy. A certificate of occupancy required by Section 111 of this code shall not be issued until the floor and attic load signs, required by Section 106.1 of this code, have been installed.

106.3 Restrictions on loading. It shall be unlawful to place, or cause or permit to be placed, on any floor or roof of a building, structure or portion thereof, a load greater than is permitted by this code.

SECTION 107
SUBMITTAL DOCUMENTS

107.1 General. Submittal documents consisting of construction documents, statement of special inspections, geotechnical report and other data shall be submitted in two or more sets with each permit application. The construction documents shall be prepared by a registered design professional where required by Chapter 471, Florida Statutes & 61G15 Florida Administrative Code (FAC) or Chapter 481, Florida Statutes & 61G1 FAC. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional. Electronic media documents shall be submitted when required by the building official, in a format acceptable to the building official, and may require only one set of submittals.

Exception: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this code.

If the design professional is an architect, interior designer, or engineer legally registered under the laws of the State of Florida regulating the practice of architecture or interior design as provided

for in Chapter 481, Florida Statutes, Part I, or landscape architecture as provided for in Chapter 481, Florida Statutes, Part II, or engineering as provided for in Chapter 471, Florida Statutes, then he or she shall affix his or her official seal to said drawings, specifications and accompanying data, as required by Florida Statute.

107.2 Construction documents. Construction documents shall be in accordance with Sections 107.2.1 through 107.2.6 of this code.

107.2.1 Information on construction documents.
Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official. Such drawings and specifications shall contain information, in the form of notes or otherwise, as to the quality of materials, where quality is essential to conformity with the technical codes. Such information shall be specific, and the technical codes shall not be cited as a whole or in part, nor shall the term "legal" or its equivalent be used as a substitute for specific information. All information, drawings, specifications and accompanying data shall bear the name and signature of the person responsible for the design. (See also Section 107.1 of this code.)

107.2.1.1 For roof assemblies required by this code, the construction documents shall illustrate, describe and delineate the type of roofing system, materials, fastening requirements, flashing requirements and wind resistance rating that are required to be installed. Product evaluation and installation shall indicate compliance with the wind criteria required for the specific site or a statement by an architect or engineer certifying suitability for the specific site must be submitted with the construction documents.

107.2.1.2 Additional data. The building official may require details, computations, stress diagrams, and other data necessary to describe the construction or installation and the basis of calculations. All drawings, specifications and accompanying data required by the building official to be prepared by an architect or engineer shall be affixed with their official seal, signature and date, as state law requires.

107.2.1.3 Quality of building plans. Building plans shall be drawn to a minimum 1/8 inch scale upon substantial paper, cloth or other acceptable medium. The building official may establish, through Division policy, other standards for plans and specifications, including electronic format, in order to provide conformity to its electronic permit review and record retention program. This policy may include such things as minimum size, shape, contrast, clarity, or other items related to records management. Electronic media must be compatible with the archive requirements.

107.2.2 Fire protection system shop drawings. Shop drawings for the fire protection system(s) shall be submitted to indicate conformance to this code and the construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.

107.2.3 Means of egress. The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress including the exit, the exit access, and the path of the exit discharge to the public way in compliance with the provisions of this code. In other than occupancies in Groups R-2, R-3, and I-1, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

107.2.4 Exterior wall envelope. Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system that was tested, where applicable, as well as the test procedure used.

107.2.5 Exterior balcony and elevated walking surfaces. Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, snow or irrigation, and the structural framing is protected by an impervious moisture barrier the construction documents shall include details for all element of the impervious moisture barrier system. The construction documents shall include manufacturer's installation instructions.

107.2.6 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines and between buildings, the established street grades and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The site plan shall include accessible parking and accessible routes as required by the FBC Accessibility when applicable. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

107.2.6.1 Design flood elevations. Where design flood elevations are not specified, they shall be established in accordance with Section 1612.3.1 of this code. Design flood elevations shall be uniformly specified utilizing the currently effective NAVD 88.

107.2.6.2 For the purpose of inspection and record retention, site plans for a building may be maintained in the form of an electronic copy at the worksite. These plans must be open

to inspection by the building official or a duly authorized representative, as required by the Florida Building Code.

107.2.7 Structural information. The construction documents shall provide the information specified in Section 1603 of this code and include shoring details, where applicable, for new construction and alterations. Where construction includes excavation, shoring details shall demonstrate protection of the angle of repose for foundation systems of existing adjacent structures.

107.3 Examination of documents. The building official shall examine or cause to be examined the accompanying submittal documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

Exceptions:

1. Building plans approved pursuant to Section 553.77(3), Florida Statutes, and state-approved manufactured buildings are exempt from local codes enforcing agency plan reviews except for provisions of the code relating to erection, assembly or construction at the site. Erection, assembly (including utility crossover connections) and construction at the site are subject to local permitting and inspections. Photocopies of plans approved according to 61-41.009, FAC, shall be sufficient for local permit application documents of record for the modular building portion of the permitted project.

2. Industrial construction on sites where design, construction and fire safety are supervised by appropriately licensed design and inspection professionals and which contain adequate in-house fire departments and rescue squads is exempt, subject to approval by the building official, from review of plans and inspections, providing the appropriate licensed design and inspection professionals certify that applicable codes and standards have been met and supply appropriate approved drawings to local building and fire-safety inspectors.

107.3.1 Approval of construction documents. When the building official issues a permit, the construction document shall be approved, in writing or by stamp, as “Reviewed for Code Compliance.” One set of construction documents so reviewed shall be retained by the building official. The other set shall be returned to the applicant, shall be kept at the site of work and shall be open to inspection by the building official or a duly authorized representative.

107.3.2 Previous approvals. This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within six months after the effective date of this code and has not been abandoned.

107.3.3 Phased approval. (See also Section 105.13 of this code.) The building official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been

submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's and owner's own risk with the building operation and without assurance that a permit for the entire structure will be granted. This provision only applies to the Florida Building Code; all other agency approvals necessary for construction must be secured prior to this provision being applied.

107.3.4 Design professional in responsible charge. Where it is required that documents be prepared by a registered design professional, the building official shall be authorized to require the owner or the owner's authorized agent to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner or the owner's authorized agent shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The building official shall be notified in writing by the owner or the owner's authorized agent if the registered design professional in responsible charge is changed or is unable to continue to perform the duties.

The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building. Those products which are regulated by FAC Rule 61G20 shall be reviewed and approved in writing by the designer of record prior to submittal for jurisdictional approval.

107.3.4.1 Deferred submittals. For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the application and that are to be submitted to the building official. The building official may specify the timing of deferred submittals.

Deferral of any submittal items shall have the prior approval of the building official. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by the building official.

Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by the building official.

107.3.4.2 Certifications by contractors authorized under the provisions of Section 489.115(4)(b), Florida Statutes, shall be considered equivalent to sealed plans and specifications by a person licensed under Chapter 471, Florida Statutes, or Chapter 481 Florida Statutes, by local enforcement agencies for plans review for permitting purposes relating to compliance with the wind-resistance provisions of the code or alternate methodologies approved by the Florida Building Commission for one- and two-family

dwellings. Local enforcement agencies may rely upon such certification by contractors that the plans and specifications submitted conform to the requirements of the code for wind resistance. Upon good cause shown, local government code enforcement agencies may accept or reject plans sealed by persons licensed under Chapters 471, 481 or 489, Florida Statutes.

107.3.5 Minimum plan review criteria for buildings. The examination of the documents by the building official shall include the following minimum criteria and documents: a floor plan; site plan; foundation plan; floor/roof framing plan or truss layout; all fenestration penetrations; flashing; and rough opening dimensions; and all exterior elevations:

Commercial Buildings:

Building

1. Site requirements:
Parking
Fire access
Vehicle loading
Driving/turning radius
Fire hydrant/water supply/post indicator valve (PIV)
Set back/separation (assumed property lines)
Location of specific tanks, water lines and sewer lines
Flood hazard areas, flood zones, and design flood elevations

2. Occupancy group and special occupancy requirements shall be determined (with cross check with the energy code submittal).

3. Minimum type of construction shall be determined (see Table 503).

4. Fire-resistant construction requirements shall include the following components:
Fire-resistant separations
Fire-resistant protection for type of construction
Protection of openings and penetrations of rated walls
Fire blocking and draftstopping and calculated fire resistance

5. Fire suppression systems shall include:
Early warning smoke evacuation systems
Schematic fire sprinklers
Standpipes
Pre-engineered systems
Riser diagram

6. Life safety systems shall be determined and shall include the following requirements:
Occupant load and egress capacities
Early warning

Smoke control
Stair pressurization
Systems schematic
Safeguards during construction, as applicable

7. Occupancy load/egress requirements shall include:
Occupancy load
Gross
Net
Means of egress
Exit access
Exit
Exit discharge
Stairs construction/geometry and protection
Doors
Emergency lighting and exit signs
Specific occupancy requirements
Construction requirements
Horizontal exits/exit passageways

8. Structural requirements shall include:
Soil conditions/analysis
Termite protection
Design loads
Wind requirements
Building envelope (including Section 107.2.4 of this code)
Impact resistant coverings or systems
Structural calculations (if requested)
Foundation
Flood requirements in accordance with Section 1612 of this code, including lowest floor elevations, enclosures, and flood damage-resistant materials
Wall systems
Floor systems
Roof systems
Threshold inspection plan
Stair systems

9. Materials shall be reviewed and shall at a minimum include the following:
Wood
Steel
Aluminum
Concrete
Plastic
Glass
Masonry
Gypsum board and plaster

Insulating (mechanical)
Roofing
Deck coatings
Insulation
Building envelope portions of the Energy Code (including calculation and mandatory requirements)

10. Accessibility requirements shall include the following:
Site requirements
Accessible route
Vertical accessibility
Toilet and bathing facilities
Drinking fountains
Equipment
Special occupancy requirements
Fair housing requirements

11. Interior requirements shall include the following:
Interior finishes (flame spread/smoke development)
Light and ventilation (including corresponding portion of the energy code)
Sanitation

12. Special systems:
Elevators
Escalators
Lifts

13. Energy Code submittal

14. Swimming pools:
Barrier requirements
Spas
Wading pools

15. Location and installation details. The specific location and installation details of each fire door, fire damper, ceiling damper and smoke damper shall be shown and properly identified on the building plans by the designer.

Electrical

1. Electrical:
Wiring
Services
Feeders and branch circuits
Overcurrent protection
Grounding

Wiring methods and materials
GFCIs
Electrical portions of the Energy Code (including calculation and mandatory requirements)

2. Equipment

3. Special occupancies

4. Emergency systems

5. Communication systems

6. Low voltage

7. Load calculations

8. Design flood elevation

Plumbing

1. Minimum plumbing facilities

2. Fixture requirements

3. Water supply piping

4. Sanitary drainage

5. Water heaters

6. Vents

7. Roof drainage

8. Back flow prevention

9. Irrigation

10. Location of water supply line

11. Grease traps

12. Environmental requirements

13. Plumbing riser

14. Design flood elevation

15. Water/plumbing portions of the Energy Code (including calculation and mandatory requirements)

Mechanical

1. Mechanical portions of the Energy calculations

2. Exhaust systems:
Clothes dryer exhaust
Kitchen equipment exhaust
Specialty exhaust systems

3. Equipment

4. Equipment location

5. Make-up air

6. Roof-mounted equipment

7. Duct systems

8. Ventilation

9. Combustion air

10. Chimneys, fireplaces and vents

11. Appliances

12. Boilers

13. Refrigeration

14. Bathroom ventilation

15. Laboratory

16. Design flood elevation

Gas

1. Gas piping

2. Venting

3. Combustion air

4. Chimneys and vents

5. Appliances

6. Type of gas

7. Fireplaces

8. LP tank location

9. Riser diagram/shutoffs

10. Design flood elevation

11. Gas portions of the Energy Code (including calculation and mandatory requirements)

Demolition

1. Asbestos removal

Residential (one- and two-family)

1. Site requirements:
Set back/separation (assumed property lines)
Location of septic tanks

2. Fire-resistant construction (if required)

3. Fire protection systems, when required

4. Smoke detector locations

5. Egress
Egress window size and location, stairs construction requirements

6. Structural requirements shall include:
Wall section from foundation through roof, including assembly and materials, connector tables, wind requirements
Termite protection
Design loads
Wind requirements
Building envelope (including Section 107.2.4 of this code)
Structural calculations (if requested)

Foundation
Wall systems
Floor systems
Roof systems

7. Flood hazard areas, flood zones, design flood elevations, lowest floor elevations, enclosures, equipment, and flood damage-resistant materials

8. Accessibility requirements: show/identify accessible bath

9. Impact resistant coverings or systems

10. Residential Energy Code submittal (including calculation and mandatory requirements)

11. Electrical**:**
Electric service riser with wire sizes, conduit detail and grounding detail
Complete load calculations, Panel schedules

12. Mechanical:
Equipment and location, Duct systems

13. Plumbing:
Plumbing riser

14. Gas:
Gas piping
Venting
Combustion air
Chimneys and vents
Appliances
Type of gas
Fireplaces
LP tank location
Riser diagram/shutoffs

15. Swimming Pools
Barrier requirements
Spas
Wading pools

Manufactured buildings/housing

1. Site requirements

Setback/separation (assumed property lines)
Location of septic tanks (if applicable)

2. Structural
Wind zone
Anchoring
Blocking

3. Plumbing
List potable water source and meter size (if applicable)

4. Mechanical
Exhaust systems
Clothes dryer exhaust
Kitchen equipment exhaust

5. Electrical exterior disconnect location

Exemptions

Plans examination by the building official shall not be required for the following work:

1. Replacing existing equipment such as mechanical units, water heaters, etc.;

2. Reroofs (as determined by the building official);

3. Minor electrical, plumbing and mechanical repairs;

4. Annual maintenance permits;

5. Prototype plans:
Except for local site adaptions, siding, foundations and/or modifications.
Except for structures that require waiver; and

6. Manufactured buildings plan except for foundations and modifications of buildings on site and as listed below in manufactured buildings/housing.

107.4 Amended construction documents. Work shall be installed in accordance with the approved construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended/revised set of construction documents.

107.5 Retention of construction documents. One set of approved construction documents shall be retained by the building official for a period of not less than six months from date of completion of the permitted work, or as required by state or local laws.

107.6 Affidavits. The building official may accept a sworn affidavit from a registered architect or engineer stating that the plans submitted conform to the technical codes. For buildings and structures, the affidavit shall state that the plans conform to the laws as to egress, type of construction and general arrangement and, if accompanied by drawings, show the structural design and that the plans and design conform to the requirements of the technical codes as to strength, stresses, strains, loads and stability. The building official may, without any examination or inspection, accept such affidavit provided the architect or engineer who made such affidavit agrees to submit to the building official copies of inspection reports as inspections are performed, and upon completion of the structure, electrical, gas, mechanical or plumbing systems, a certification that the structure, electrical, gas, mechanical or plumbing system has been erected in accordance with the requirements of the technical codes. Where the building official relies upon such affidavit, the architect or engineer shall assume full responsibility for compliance with all provisions of the technical codes and other pertinent laws or ordinances. The building official shall ensure that any person conducting plans review is qualified as a plans examiner under Part XII of Chapter 468, Florida Statutes, and that any person conducting inspections is qualified as a building inspector under Part XII of Chapter 468, Florida Statutes. Nothing shall preclude plan review or inspections by the building official (See also Section 105.14 of this code.)

107.6.1 Building permits issued on the basis of an affidavit in special flood hazard areas. Pursuant to the requirements of federal regulation for participation in the National Flood Insurance Program (44 C.F.R. Parts 59 and 60), the authority granted to the building official to issue permits, to rely on inspections, and to accept plans and construction documents on the basis of affidavits and plans submitted pursuant to Sections 105.14 and 107.6 of this code, shall not extend to the flood load and flood-resistant construction requirements of the Florida Building Code.

SECTION 108
TEMPORARY STRUCTURES AND USES

108.1 General. The building official is authorized to require a permit for temporary structures and temporary uses. Such permits shall be limited as to time of service, but shall not be permitted for more than six months. The building official is authorized to grant extensions for demonstrated cause.

108.2 Conformance. Temporary structures and uses shall comply with the requirements in Section 3103 of this code.

108.3 Temporary power. The building official is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in NFPA 70 (National Electrical Code [NEC]).

108.4 Termination of approval. The building official is authorized to terminate a permit for a temporary structure or use and to order the temporary structure to be removed and/or the use be discontinued.

SECTION 109
FEES

109.1 Payment of fees. An application shall not be valid and shall not be reviewed until the applicable fees have been paid. A permit shall not be valid until the fees prescribed by law have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

109.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.

109.3 Building permit valuations. The applicant for a permit shall provide an estimated permit value at time of application. For permitting purposes, permit valuations shall include total replacement value of work, including materials and labor, for which the permit is being issued, such as structural, electrical, gas, mechanical, plumbing equipment, interior finish, related site work, architectural and design fees, marketing costs, overhead, and profit, excluding only land value. Valuation references may include the latest published data of national construction cost analysis services, such as Marshall-Swift, Means, etc., or as published by International Code Council. If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed quantity estimates, or bona fide signed contracts, acceptable to the building official. Final building permit valuation shall be set by the building official.

109.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits or without prior approval from the building official as permitted in Section 105.2.2 or 105.12 of this code shall be subject to a penalty fee established by the building official that shall be in addition to the required permit fees or as provided by local ordinance. This provision shall not apply to emergency work when delay would clearly have placed life or property in imminent danger. But in all such cases the required permit(s) must be applied for in accordance with 105.2.1 and any unreasonable delay in applying for those permit(s) shall result in the charge of a penalty fee. The payment of a penalty fee shall not preclude or be deemed a substitute for prosecution for commencing work without first obtaining a permit. The building official may grant extensions of time or waive fees when justifiable cause has been demonstrated in writing.

109.5 Related fees. The payment of the fee for the construction, alteration, removal or demolition for work done in connection to or concurrently with the work authorized by a building permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

109.6 Refunds. The Executive Director of Planning, Zoning & Building Department is authorized to establish a refund policy.

SECTION 110
INSPECTIONS

110.1 General. Construction or work for which a permit is required shall be subject to inspection by the building official and such construction or work shall remain exposed and provided with access for inspection purposes until approved.

Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of any other federal, state, or local law, or any applicable ordinance, code, or regulation. Inspections presuming to give authority to violate or cancel the provisions of this code or of any other federal, state, or local law, or any applicable ordinance, code, or regulation shall not be valid. It shall be the duty of the owner or the owner's authorized agent to cause the work to remain exposed and provided with access for inspection purposes. The building official shall be permitted to require a boundary line survey prepared by a qualified surveyor whenever the boundary lines cannot be readily determined in the field. Neither the building official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

110.1.1 Manufacturers and fabricators. When deemed necessary by the building official, he/she shall make, or cause to be made, an inspection of materials or assemblies at the point of manufacture or fabrication. A record shall be made of every such examination and inspection and of all violations of the technical codes.

110.1.2 Inspection service. The building official may make, or cause to be made, the inspections required by Section 110 of this code. He or she may accept reports of department inspectors, independent inspectors, or of recognized inspection services, provided that after investigation he/she is satisfied as to their licensure, qualifications and reliability. A certificate required by any provision of this code shall not be based on such reports unless the same are certified by the building code inspector or the architect or engineer performing building code inspections in a manner specified by the building official. The building official shall ensure that all persons making such inspections shall be certified in accordance to Chapter 468 Florida Statues.

The building official may require the owner to employ an inspection service in the following instances:

1. For buildings or additions of Type I construction;

2. For all major structural alterations;

3. Where the concrete design is based on compressive strength in excess of 3000 pounds per square inch;

4. For pile driving;

5. For buildings with an area greater than 20,000 square feet;

6. For buildings more than two stories in height; or

7. For buildings and structures of unusual design or methods of construction.

Such inspectors shall be present when work is underway on the structural elements of the building to adequately attest to its compliance**.** Such inspectors shall be a registered architect or engineer. An employee of the architect or engineer licensed under Chapter 468, Part XII, Florida Statutes may perform the inspections under the direction of and with final certification from the architect or engineer. Such inspectors shall submit weekly progress reports including the daily inspections to the building official, and including a code compliance opinion of the resident inspector.

At the completion of the construction work or project, the architect or engineer shall submit a certificate of compliance to the building official, stating that the work was done in compliance with this code and in accordance with the permitted drawing. Final inspection shall be made by the building official before a Certificate of Occupancy or Certificate of Completion is issued; and confirmation inspections may be made at any time to monitor activities and resident inspectors.

110.1.3 Affidavit for inspection. With specific prior approval of, and in a format acceptable to the building official, an affidavit for certification of inspection may be accepted from the permit qualifier when accompanied by extensive photographic evidence of sufficient detail to demonstrate code compliance. The photographic evidence shall be comprehensive in the display of the installation and/or construction and job location identifiers. The affidavit and accompanying photographs shall be provided to the inspector onsite, at the next scheduled inspection. If the photographs are found to be insufficient by the building official to demonstrate compliance with this code and/or the permitted document, or clearly display location identifiers, or are missing, the inspector shall require the contractor to obtain the services of a registered Florida professional engineer to inspect and certify the installation and/or construction.

110.1.3.1 Exception: Affidavits may not be accepted for inspection of elements of construction, which require inspection, by the local jurisdiction under the requirements of Title 44, Code of Federal Regulations, Parts 59 and 60, and the local flood damage prevention ordinance.

110.2 Preliminary inspection. Subject to the limitations of Florida Statutes Chapter 553.79(20), before issuing a permit, the building official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

110.2.1 Existing building inspections. Before issuing a permit, the building official may examine or cause to be examined any building, electrical, gas, mechanical, or plumbing systems for which an application has been received for a permit to enlarge, alter, repair, move, demolish, install, or change the occupancy. The building official may inspect the buildings, structures, electrical, gas, mechanical and plumbing systems, from time to time, before, during and upon completion of the work for which a permit was issued. The building official shall

make a record of every such examination and inspection and of all observed violations of the technical codes. Additional regulations in the Florida Building Code, Existing Building Volume, may apply.

110.3 Required inspections. The building official upon notification from the permit holder or his or her agent shall make the following inspections, or any other such inspection as deemed necessary and shall either release that portion of the construction or shall notify the permit holder or his or her agent of any violations which must be corrected in order to comply with the technical codes. The building official shall determine the timing and sequencing of when inspections occur and what elements are inspected at each inspection. A complete survey or special purpose survey may be required before an inspection is approved.

A. Building

1. **Foundation inspection**. To be made after trenches are excavated, any required reinforcing steel is in place, forms erected and shall at a minimum include the following building components:

   - Stem-wall
   - Monolithic slab-on-grade
   - Piling/pile caps
   - Footers/grade beams

   1.1 Slab Inspection. Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.

   A foundation/Form board survey prepared and certified by a registered surveyor may be required, prior to approval of the slab inspection. The survey shall certify placement of the building on the site, illustrate all surrounding setback dimensions and shall be available at the job site for review by the building inspector. In lieu of providing a survey, the contractor may elect to uncover all property line markers and string-up all property lines in preparation for inspection.

   1.2 In flood hazard areas, upon placement of the lowest floor, including basement, and prior to further vertical construction, the elevation certification, as required in Section 1612.5 of this code, shall be submitted to the building official.

2. **Shell Inspections**

   2.1 Lintel/tie beams/columns/masonry units. To be made after masonry units, forms, reinforcing steel, shoring, conduit, piping accessories, and other ancillary equipment items are in place, but before any concrete is placed.

2.2 Sheathing inspection. To be made either as part of a dry-in inspection or done separately at the request of the contractor after all roof and wall sheathing and fasteners are complete and shall at a minimum include the following building components:

- Roof sheathing
- Wall sheathing
- Continuous air barrier
- Floor sheathing
- Sheathing fasteners
- Roof/wall dry-in.
- Gypsum board, as required
- Sheathing/cladding inspection

NOTE: Sheathing fasteners installed and found to be missing the structural member (shiners) shall be corrected prior to installation of the dry-in material.

2.3 Roofing inspection. Shall at a minimum be made in at least two inspections and include the following building components:

- Dry-in
- Insulation
- Roof coverings (including In Progress as necessary)
- Insulation on roof deck (according to submitted energy calculation)
- Flashing

2.3.1 Re-Roof sheathing inspection. An affidavit with a notarized signature of a state or locally licensed roofing contractor for the installation of additional sheathing fasteners as required by the Existing Building Code may be accepted at the discretion of the building official.

2.4 Framing inspection. To be made after the roof deck or sheathing, all framing, fire blocking and bracing is in place; all concealed wiring, all pipes, chimneys, ducts and vents are complete and are approved; and shall at a minimum include the following building components:

- Window/door framing and installation
- Window U-factor/SHGC as indicated on approved calculations
- Vertical cells/columns complete, if applicable
- Lintel/tie beams complete, if applicable
- Framing/trusses/bracing/connectors (including truss layout and engineered drawings)
- Draft stopping/fire blocking
- Fire resistant assemblies, joints, and penetrations, as required
- Curtain wall/ bearing wall framing
- Accessibility.

- Verify rough opening dimensions are within tolerances.
- Window/door buck attachment

2.5 Insulation Inspection: To be made after the framing inspection is approved and the insulation is in place, according to approved energy calculation submittal. Includes wall and ceiling insulation, thermal and ignition barriers.

2.6 Lath and gypsum board inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.

Exception: Gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly in a single-family dwelling, unless otherwise determined by the building official.

3. **Final inspection**. To be made after the building is completed, all sub-trade inspections have passed, and the structure is ready for occupancy.

   3.1. In flood hazard areas, as part of the final inspection, a final certification of the lowest floor elevation shall be submitted to the authority having jurisdiction.

B. Swimming Pools

1. First inspection to be made after excavation and installation of reinforcing steel, bonding and main drain and prior to placing of concrete shell.

2. Steel reinforcement inspection

3. Underground electric inspection.

4. Underground piping inspection including a pressure test.

5. Underground electric inspection under deck area (including the equipotential bonding)

6. Underground piping inspection under deck area.

7. Deck inspection: to be made prior to installation of the deck material (with forms, deck drains, and any reinforcement in place

8. Safety Inspection: Made prior to filling the pool with the bonding connections made, the proper drain covers installed and the final barriers installed.

9. Final pool piping.

10. Final Electrical inspection.

11. Final inspection to be made when the swimming pool is complete and all required enclosure requirements are in place.

In order to pass final inspection and receive a certificate of completion, a residential swimming pool must meet the requirements relating to pool safety features as described in Section 454.2.17 of this code

C. Demolition Inspections

1. First inspection (pre-demolition) to be made after all utility connections have been disconnected and secured in such manner that no unsafe or unsanitary conditions shall exist during or after demolition operations.

2. Final inspection (post-demolition) to be made after all demolition work is completed.

D. Manufactured Building Inspections

1. The building department shall inspect construction of foundations; connecting buildings to foundations; installation of parts identified on plans as site installed items, joining the modules, including utility crossovers; utility connections from the building to utility lines on site; and any other work done on site, which requires compliance with the Florida Building Code. (See also Section 107.3.5 Manufactured/Modular Buildings of this code.) Additional inspections may be required for public educational facilities (see Section 453.27.20 of this code).

E. Impact Resistant Coverings

Where impact resistant coverings or impact resistant systems are installed, the building official shall perform inspections, at the request of the applicant, on all impact resistant coverings or impact resistant systems to determine the following:

The system indicated on the plans was installed.

The system is installed in accordance with the manufacturer's installation instructions and the product approval.

F. Electrical

1. Underground inspection. To be made after trenches or ditches are excavated, conduit or cable is installed, and before any backfill is put in place.

2. Rough-in inspection. To be made after the roof, framing, fireblocking and bracing is in place and prior to the installation of wall or ceiling membranes.

3. Power release inspection. To be made after the building electrical system is substantially complete, or completed in phases, with all circuitry installed and electrical fixtures and devices in place, or properly tagged and safed-off.

4. Final inspection. To be made after the building electrical system is complete, all required electrical fixtures are in place and properly connected, tested, and the structure is ready for occupancy.

5. Existing Swimming Pools. To be made after all repairs or alterations are complete, all required electrical equipment, GFCI protection, and equipotential bonding are in place on said alterations or repairs.

G. Plumbing

1. Underground inspection. To be made after trenches or ditches are excavated, piping is installed, and before backfill is put in place.

2. Rough-in inspection. To be made after the roof, framing, fireblocking and bracing is in place and all soil, waste, vent, water, and other piping is complete, and prior to this installation of wall or ceiling membranes.

3. Final inspection. To be made after the building plumbing system is complete, all plumbing fixtures are in place and properly connected, and the structure is ready for occupancy.

NOTE: See Section 312 of the Florida Building Code, Plumbing for required tests.

H. Mechanical

1. Underground inspection. To be made after trenches or ditches are excavated, underground duct and fuel piping is installed, and before backfill is put in place.

2. Rough-in inspection. To be made after the roof, framing, fire blocking and bracing are in place and all ducting, and other concealed components are complete, and prior to the installation of wall or ceiling membranes.

Includes mechanical provisions of the energy code and approved calculation provisions.

3. Final inspection. To be made after the building mechanical system is complete, the mechanical system is in place and properly connected, and the structure is ready for occupancy.

I. Gas

1. Underground piping and tanks. To be made after trenches or ditches are excavated, underground gas piping is installed, and before backfill is put in place.

2. Rough piping inspection. To be made after all new piping authorized by the permit has been installed, and before any such piping has been covered or concealed or any fixtures or gas appliances have been connected.

Includes gas provisions of the energy code and approved calculations provisions.

3. Final piping inspection. To be made after all piping authorized by the permit has been installed and after all portions which are to be concealed by plastering or otherwise have been so concealed, and before any fixtures or gas appliances have been connected. This inspection shall include a pressure test.

4. Final inspection. To be made on all new gas work authorized by the permit and such portions of existing systems as may be affected by new work or any changes, to ensure compliance with all the requirements of this code and to assure that the installation and construction of the gas system is in accordance with reviewed plans.

J. Site Debris

1. The contractor and/or owner of any active or inactive construction project shall be responsible for the cleanup and removal of all construction debris or any other miscellaneous discarded articles during the course of the construction project and prior to receiving final inspection approval. Construction job sites must be kept clean and in a safe condition at all times. (See also Section 110.9 of this code)

2. All debris shall be kept in such a manner as to prevent it from being spread by any means.

110.3.1 Footing and foundation inspection. Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94, the concrete need not be on the job. (See also Section 110.3 of this code)

110.3.2 Concrete slab and under-floor inspection. (Reserved). (See Section 110.3, Building 1.1 of this code.)

110.3.3 Lowest floor elevation. (Reserved). (See Section 110.3, Building 1.2 of this code.)

110.3.4 Frame inspection. (Reserved). (See Section 110.3, Shell 2.4 of this code.)

110.3.5 Lath, gypsum board and gypsum panel product inspection. (Reserved). (See Section 110.3, Shell 2.6 of this code.)

110.3.6 Weather-exposed balcony and walking surface waterproofing. Where balcony or other elevated walking surfaces are exposed to water from direct or blowing rain, snow or

irrigation, and the structural framing is protected by an impervious moisture barrier, all elements of the impervious-moisture-barrier system shall not be concealed until inspected and approved.

110.3.7 Fire- and smoke-resistant penetrations.
Protection of joints and penetrations in fire-resistance rated assemblies, smoke barriers and smoke partition shall not be concealed from view until inspected and approved by the building official.

110.3.8 Energy efficiency inspections. Inspections shall be made to determine compliance with FBC, Energy Conservation and confirm with the approved energy code submittal (by appropriate trade) and corresponding mandatory requirements and shall include, but not be limited to, inspections for: corresponding envelope insulation R- and U-values, fenestration U-value and Solar Heat Gain Coefficient, duct system R-value, and HVAC, lighting, electrical and water-heating equipment efficiency.

110.3.9 Other inspections. In addition to the inspections specified in Sections 110.3 through 110.3.7 of this code, the building official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the Building Division.

110.3.10 Special inspections. Reserved.

110.3.11 Final inspection. The final inspection shall be made after all work required by the building permit is completed.

110.3.11.1 Flood hazard documentation. For properties located in a flood hazard area, all required documentation shall be submitted to the building official at the time of the final inspection.

110.3.11.2 Energy Code documentation. As required by Section C408.2.4.1 of the Energy Conservation Volume, confirmation that the preliminary commissioning report has been received by building owner shall be provided at the time of final mechanical inspection.

110.3.12 Termites. Building components and building surroundings required to be protected from termite damage in accordance with Section 1503.7, Section 2304.12.9 or Section 2304.12.4 of this code, specifically required to be inspected for termites in accordance with Section 2114 of this code, or required to have chemical soil treatment in accordance with Section 1816 of this code shall not be covered or concealed until the release from the building official has been received. (See also 105.10 and 105.11 of this code.)

110.3.13 Impact resistant coverings or systems. Where impact resistant coverings or systems are installed to meet requirements of this code, the building official shall schedule adequate inspections of impact resistant coverings or systems to determine the following:

1. The system indicated on the plans was installed.

2. The system is installed in accordance with the manufacturer's installation instructions and the product approval.

110.3.14 Reinforcing steel and structural frames. Reinforcing steel or structural framework of any part of any building or structure shall not be covered or concealed without first obtaining a release from the building official. Certification that field welding and structural bolted connections meet design requirements shall be submitted to the building official, upon request.

110.4 Inspection agencies. The building official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

110.5 Inspection requests. It shall be the duty of the holder of the building permit or their duly authorized agent to notify the building official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

110.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the building official. The building official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the building official.

110.7 Shoring. For threshold buildings, shoring and associated formwork or falsework shall be designed and inspected by a Florida licensed professional engineer, prior to any required mandatory inspections by the threshold building inspector.

110.7.1 Other shoring. The building official may require engineered shoring drawings and procedures for reshoring for temporary support of vertical and horizontal loads and stabilization of foundation soils when applicable. Inspections are required to ensure the shoring is installed in accordance with the approved engineered shoring drawings. The building official may require the inspections to be made by qualified third parties when deemed necessary. (See also Section 110.1.2 Inspection Services of this code.)

110.8 Threshold building.

110.8.1 During new construction or during repair or restoration projects in which the structural system or structural loading of a building is being modified, the enforcing agency shall require a special inspector to perform structural inspections on a threshold building pursuant to a structural inspection plan prepared by the engineer or architect of record. The structural inspection plan must be submitted to the enforcing agency prior to the issuance of a building permit for the construction of a threshold building. The purpose of the structural inspection plans is to provide specific inspection procedures and schedules so that the building can be adequately inspected for compliance with the permitted documents. The special inspector may

not serve as a surrogate in carrying out the responsibilities of the building official, the architect, or the engineer of record. The contractor's contractual or statutory obligations are not relieved by any action of the special inspector.

110.8.2 The special inspector shall determine that a professional engineer who specializes in shoring design has inspected the shoring and reshoring for conformance with the shoring and reshoring plans submitted to the enforcing agency. A fee simple title owner of a building, which does not meet the minimum size, height, occupancy, occupancy classification, or number-of-stories criteria, which would result in classification as a threshold building under Section 553.71(7), Florida Statutes, may designate such building as a threshold building, subject to more than the minimum number of inspections required by the Florida Building Code.

110.8.3 The fee owner of a threshold building shall select and pay all costs of employing a special inspector, but the special inspector shall be responsible to the enforcement agency. The inspector shall be a person certified, licensed or registered under Chapter 471, Florida Statutes, as an engineer or under Chapter 481, Florida Statutes, as an architect.

110.8.4 Each enforcement agency shall require that, on every threshold building:

110.8.4.1 The special inspector, upon completion of the building and prior to the issuance of a certificate of occupancy, file a signed and sealed statement with the enforcement agency in substantially the following form: “To the best of my knowledge and belief, the above described construction of all structural load-bearing components complies with the permitted documents, and the shoring and reshoring conforms to the shoring and reshoring plans submitted to the enforcement agency.”

110.8.4.2 Any proposal to install an alternate structural product or system to which building codes apply shall be submitted to the enforcement agency for review for compliance with the codes and made part of the enforcement agency’s recorded set of permit documents.

110.8.4.3 All shoring and reshoring procedures, plans and details be submitted to the enforcement agency for recordkeeping. Each shoring and reshoring installation shall be supervised, inspected and certified to be in compliance with the shoring documents by the contractor.

110.8.4.4 All plans for the building which are required to be signed and sealed by the architect or engineer of record contain a statement that, to the best of the architect’s or engineer’s knowledge, the plans and specifications comply with the applicable minimum building codes and the applicable fire-safety standards as determined by the local authority in accordance with this Section and Chapter 633, Florida Statutes.

110.8.5 No enforcing agency may issue a building permit for construction of any threshold building except to a licensed general contractor, as defined in Section 489.105(3)(a), Florida Statutes, or to a licensed building contractor, as defined in Section 489.105(3)(b), Florida Statutes, within the scope of her or his license. The named contractor to whom the building

permit is issued shall have the responsibility for supervision, direction, management and control of the construction activities on the project for which the building permit was issued.

110.8.6 The building department may allow a special inspector to conduct the minimum structural inspection of threshold buildings required by this code, Section 553.73, Florida Statutes, without duplicative inspection by the building department. The building official is responsible for ensuring that any person conducting inspections is qualified as a building inspector under Part XII of Chapter 468, Florida Statutes, or certified as a special inspector under Chapter 471 or 481, Florida Statutes. Inspections of threshold buildings required by Section 553.79(5), Florida Statutes, are in addition to the minimum inspections required by Section 110.3 of this code.

110.9 Impact of construction. All construction activity regulated by this code shall be performed in a manner so as not to adversely impact the condition of adjacent property, unless such activity is permitted to affect said property pursuant to a consent granted by the applicable property owner, under terms or conditions agreeable to the applicable property owner. This includes, but is not limited to, the control of dust, noise, water or drainage runoffs, debris, and the storage of construction materials. New construction activity shall not adversely impact legal historic surface water drainage flows serving adjacent properties, and may require special drainage design complying with engineering standards to preserve the positive drainage patterns of the affected sites. Accordingly, developers, contractors and owners of all new residential development, including additions, pools, patios, driveways, decks or similar items, on existing properties resulting in a significant decrease of permeable land area on any parcel or has altered the drainage flow on the developed property shall, as a permit condition, provide a professionally prepared drainage plan clearly indicating compliance with this paragraph. Upon completion of the improvement, a certification from a licensed professional, as appropriate under Florida law, shall be submitted to the inspector in order to receive approval of the final inspection.

SECTION 111
CERTIFICATE OF OCCUPANCY

111.1 Use and occupancy. A building or structure shall not be used or occupied, and a change in the existing use or occupancy classification of a building or structure or portion thereof shall not be made, until the building official has issued a certificate of occupancy therefore as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of any other federal, state, or local law, or any applicable ordinance, code, or regulation. Said certificate shall not be issued until all required electrical, gas, mechanical, plumbing and fire protection systems have been inspected for compliance with the technical codes and other applicable laws and ordinances and released by the building official.

Exception: Certificates of occupancy are not required for work exempt from permits under Section 105.2 of this code.

111.2 Certificate issued. After the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department of

building safety or other agency whose approval is inherent in the building permitting process, the building official shall issue a certificate of occupancy that contains the following:

1. The building permit number;

2. The address of the structure;

3. The name and address of the owner or the owner's authorized agent;

4. A description of that portion of the structure for which the certificate is issued;

5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified;

6. For buildings and structures in flood hazard areas, a statement that documentation of the as-built lowest floor elevation has been provided and is retained in the records of the Building Division;

7. The name of the building official;

8. The edition of the code under which the permit was issued;

9. The use and occupancy, in accordance with the provisions of Chapter 3 of this code;

10. The type of construction as defined in Chapter 6 of this code;

11. The design occupant load;

12. If an automatic sprinkler system is provided, whether the sprinkler system is required; and

13. Any special stipulations and conditions of the building permit.

111.3 Temporary occupancy. The building official is authorized to issue a temporary certificate of occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely. The building official shall set a time period during which the temporary certificate of occupancy is valid. A temporary/partial Certificate of Occupancy or Certificate of Completion may be issued for a portion or portions of a building that may safely be occupied prior to final completion of the building. The building official may require, once all life safety issues have been complied with, an applicant to provide adequate cash surety for unfinished work or revision of plans until a permanent Certificate of Occupancy or Certificate of Completion is granted. The purpose of the cash surety is to insure completion of work under the permit. Such cash surety shall be equal to one hundred ten percent (110%) of the estimated value of the remaining work, including labor and material, as determined by the design professional. The design professional shall submit a signed and sealed document attesting to the amount required to cover the cash surety. If work has not been completed and all finals requested within

90 days of issuance of the initial Temporary/Partial Certificate of Occupancy or Certificate of Completion, the building official retains the right to have the applicant surrender the cash surety. The building official then may use the surety to finish the remaining work. The surety shall be in the form of cash money, certified check, or cashier's check. The surety shall be returned upon approval of all final inspections and upon written request that has been approved by the building official. This provision is only for the Florida Building Code; all other Agency approvals necessary for construction must be secured prior to this provision being applied.

111.4 Revocation. The building official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of the provisions of this code or of any other federal, state, or local law, or any applicable ordinance, code, or regulation..

111.5 Certificate of Completion. Upon satisfactory completion of a building, structure, electrical, gas, mechanical or plumbing system, a Certificate of Completion may be issued. A Certificate of Completion is proof that a structure or system is complete and for certain types of permits is released for use and may be connected to a utility system. This certificate does not grant authority to occupy a building, such as shell building, prior to the issuance of a Certificate of Occupancy.

111.6 Fixturing and Stocking. The building official is authorized to issue approval for fixturing, stocking, training, or decorating, when appropriate, to allow the builder to prepare the structure for permanent occupancy. The building may not be open to the general public or be used for the transaction of any commerce. Such approval must be conditioned upon the approval of the Fire Marshal, when applicable.

111.7 Digital Submittal Requirements for New Construction.

111.7.1 Building Footprints. The building official is authorized to require the submittal of digital shape (CAD) files, in a specific format, depicting a geo-referenced footprint with elevation for all new structures as a condition of the issuance of a Certificate of Occupancy.

111.7.2 Subdivision Topography. The building official is authorized to require the developer to submit electronic topographical data and re-delineated 100-year floodplain boundaries to the Federal Emergency Management Agency (FEMA) for all new subdivisions or lots of record for the purposes of updating and maintaining the community's flood maps through the Letter of Map Revision process.

SECTION 112
SERVICE UTILITIES

112.1 Connection of service utilities. No person shall make connections from a utility, source of energy, fuel or power to any building or system that is regulated by this code for which a permit is required, until released by the building official and a Certificate of Occupancy or Certificate of

Completion is issued. The servicing utility company shall not connect the power supply until notified by the building official.

112.2 Temporary connection. The building official shall have the authority to authorize the temporary connection of the building or system to the utility source of energy, fuel or power for the purpose of testing building service systems or for use under a temporary or partial Certificate of Occupancy.

112.3 Authority to disconnect service utilities. The building official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards set forth in Section 101.4 of this code in case of emergency where necessary to eliminate an immediate hazard to life or property, unsafe condition, or when such utility connection has been made without the approval required by Section 112.1 or 112.2 of this code. The building official shall notify the serving utility, and wherever possible the owner and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

SECTION 113
CONSTRUCTION BOARD OF ADJUSTMENT AND APPEALS

113.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, or to consider variances of this code, there shall be a board of appeals. The board of appeals shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.

113.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.

113.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.

113.4 Membership and Terms.

113.4.1 Membership. The Construction Board of Adjustment and Appeals shall consist of nine regular members plus two alternate members. Regular board members shall be composed of individuals with knowledge and experience in the technical codes to include**,** to the greatest extent possible, an architect, engineer, two Division I contractors (GC, BC, or RC), electrical contractor, HVAC contractor, plumbing contractor, a member at large from the public, and any other contractor licensed category. In addition to the regular members, there should be two alternate members, one member with the qualifications referenced above and one member at

large from the public. A board member shall not act in a case in which he or she has a personal or financial interest.

113.4.2 Terms. The terms of office of the regular board members shall be for three (3) years and staggered so no more than one-third of the board is appointed or replaced in any 12-month period. The two alternates shall serve three-year terms. Vacancies shall be filled for an unexpired term in the manner in which original appointments are required to be made. No board member shall be appointed or re-appointed to this board for more than three (3) consecutive, three (3) year terms.

113.4.3 Quorum and voting. A simple majority of the occupied seats of the board shall constitute a quorum. In varying any provision of this code, the affirmative votes of the majority present, but not less than three affirmative votes, shall be required. In modifying a decision of the building official, not less than four affirmative votes, but not less than a majority of the board members present, shall be required. In the event that regular members are unable to attend a meeting, the alternate members shall vote.

113.4.4 Secretary of board. The building official or his/her authorized representative shall act as secretary of the board and shall make a record of all of its proceedings, which shall set forth the reasons for its decision, the vote of each member, the absence of a member, and any failure of a member to vote.

113.4.5 Removal from office. Members shall be automatically removed for lack of attendance. Lack of attendance is defined as a failure to attend three (3) consecutive meetings or a failure to attend more than one-half of the meetings scheduled during a calendar year. Participation for less than three-fourths of a meeting shall be the same as a failure to attend a meeting. Members removed pursuant to this provision shall not continue to serve on the board and such removal shall create a vacancy.

113.5 Powers. The Construction Board of Adjustments and Appeals shall have the power, as further defined in 113.6 of this code, to hear appeals of decisions and interpretations of the building official and consider variances of the technical codes.

113.6 Appeals.

113.6.1 Decision of the building official. The owner of a building, structure or service system, or duly authorized agent, may appeal a decision of the building official to the Construction Board of Adjustment and Appeals whenever any one of the following conditions are claimed to exist:

1. The building official rejected or refused to approve the mode or manner of construction proposed to be followed or materials to be used in the installation or alteration of a building, structure or service system.
2. The provisions of this code do not apply to this specific case.
3. That an equally good or more desirable form of installation can be employed in any specific case, which the building official has rejected or refused.

4. The true intent and meaning of this code or any of the regulations hereunder have been misconstrued or incorrectly interpreted.

113.6.2 Variances. The Construction Board of Adjustments and Appeals, when upon written request, has been so appealed to and after a hearing, may vary the application of any provision of this code to any particular case when, in its opinion, the enforcement thereof would do manifest injustice and would be contrary to the spirit and purpose of this or the technical codes or public interest, and also finds all of the following:

1. That special conditions and circumstances exist which are peculiar to the building, structure or service system involved and which are not applicable to others.

2. That the special conditions and circumstances do not result from the action or inaction of the applicant.

3. That granting the variance requested will not confer on the applicant any special privilege that is denied by this code to other buildings, structures or service system.

4. That the variance granted is the minimum variance that will make possible the reasonable use of the building, structure or service system.

5. That the grant of the variance will be in harmony with the general intent and purpose of this code and will not be detrimental to the public health, safety and general welfare.

113.6.2.1 Conditions of the variance. In granting the variance, the board may prescribe a reasonable time limit within which the action for which the variance is required shall be commenced or completed or both. In addition, the board may prescribe appropriate conditions and safeguards in conformity with this code. Violation of the conditions of a variance shall be deemed a violation of this code.

113.6.3 Notice of appeal. Notice of appeal shall be in writing and filed within 30 calendar days after the building official renders the decision. Appeals shall be in a form acceptable to the building official.

113.6.4 Unsafe or dangerous buildings, structures, equipment or service systems. In the case of a building, structure, equipment or service system, which in the opinion of the building official, is unsafe, unsanitary or dangerous, the building official may, in the order, limit the time for such appeals to a shorter period.

113.7 Procedures of the board.

113.7.1 Rules and regulations. The board shall establish rules and regulations for its own procedure not inconsistent with the provisions of this code. The board shall meet on the second Thursday of each month, as needed, or at the call of the chairperson, subsequent to a request to call a meeting by the secretary. The board shall meet at the second regular meeting if a notice of appeal has been received fewer than 15 business days before a regular meeting.

113.7.1.1 Rules of Evidence. Formal rules of evidence shall not apply, but fundamental due process should be observed and govern the proceedings. Upon determination by the chairperson, irrelevant, immaterial, or unduly repetitious evidence may be excluded, but all other evidence of a type commonly relied upon by reasonable, prudent persons in the conduct of their affairs shall be admissible, whether or not such evidence would be admissible in a trial in the courts of Florida. Any part of the evidence may be received in written form. The Board may request certain evidence from the appellant to be provided by an architect or engineer registered in the State of Florida, in which case, said evidence shall be signed, sealed, and dated.

113.7.1.2 Testimony. Any member of the Board or the attorney representing the Board may inquire of, or question, any witness before the Board. Any member of the Board, the appellant or his/her attorney, and/or the building official shall be permitted to inquire of any witness before the Board. The Board may consider testimony presented by the building official, the appellant, or any other witness.

113.7.2 Decisions. The Construction Board of Adjustment and Appeals shall, in every case, reach a decision without unreasonable or unnecessary delay. Each decision of the board shall also include the reasons for the decision. If a decision of the board reverses or modifies a refusal, order, or disallowance of the building official or varies the application of any provision of this code, the building official shall immediately take action in accordance with such decision. Every decision shall be promptly filed in writing in the office of the building official and shall be open to public inspection. A certified copy of the decision shall be sent by mail or otherwise to the appellant and a copy shall be kept in the office of the building official for two weeks after filing. Every decision of the board shall be final; subject however to such remedy as any aggrieved party might have at law or in equity.

113.8 Local Construction Regulation Board. The local government may also utilize this Board to convene as the Local Construction Regulation Board (LCRB), as provided in Florida Statute 489.113. The LCRB may deny, suspend, revoke or limit the authority of a certified contractor to obtain a building permit or permit with specific conditions, if the LCRB has found such contractor, through a public hearing, to be guilty of fraud or a willful building code violation within the county or municipality that the LCRB represents. The LCRB may also, deny, suspend, revoke or limit the authority of a certified contractor to obtain a building permit or permit with specific conditions, if it has proof through the public hearing process, that a contractor has been found guilty in another county or municipality within the past 12 months, of fraud or a willful building code violation and, after providing notice of an opportunity to be heard to the contractor, finds that such fraud or violation would have been fraud or a violation if committed in the county or municipality that the LCRB represents. Notification of and information concerning such permit denial shall be submitted to the division within 15 days after the LCRB decides to deny the permit.

SECTION 114
VIOLATIONS

114.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, extend, repair, move, remove, demolish or occupy any building, structure, system, site, or equipment regulated by this code, or any applicable law, ordinance, rule, or regulation; or cause same to be done, in conflict with or in violation of any of the provisions of this code or any applicable law, ordinance, rule, or regulation. Such violation shall be a misdemeanor and shall be subject to penalties as prescribed by law. Each day or portion thereof shall be considered a separate offense.

114.2 Notice of violation. The building official is authorized to serve a notice of violation or stop work order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the unlawful action or condition and the abatement of the violation. (See also Section 115 of this code.)

114.3 Prosecution of violation. If the notice of violation is not complied with promptly, the building official is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or any applicable law, ordinance, rule, or regulation, or of the order or direction made pursuant thereto.

114.3.1 Nothing in this section shall prevent the County from imposing fines, liens, or seek injunctive relief, or exercising other enforcement powers as permitted by law.

114.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

114.4.1 Code enforcement and penalties of Chapter 162 Florida Statutes Part I shall be authorized if building work begins without payment of all required fees, and for the purposes of enforcing this code, building code enforcement officials licensed under Florida Statute 468 Part XII are deemed “Code Inspectors,” as defined in Florida Statute 162.04.

SECTION 115
STOP WORK ORDER

115.1 Authority. Whenever the building official finds any work regulated by this code being performed in a manner either contrary to the provisions of this code or dangerous or unsafe, the building official is authorized to issue a stop work order.

115.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, the owner's authorized agent, the person performing the work, or posted at the site. Upon delivery of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work will be permitted to resume. Where an emergency exists, as determined by the building official, the building official shall not be required to give a written notice prior to stopping the work.

115.3 Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

SECTION 116
UNSAFE BUILDINGS, STRUCTURES, EQUIPMENT AND SERVICE SYSTEMS

116.1 Unsafe buildings, structures, equipment or service systems. Buildings, structures, existing equipment, or service systems that are or hereafter become unsafe, insanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe buildings, structures, equipment or service systems shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.

116.1.1 When the building official determines a building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof is unsafe, as set forth in this code the building official shall provide the record owner(s) of the real property upon which the unsafe building, structure, equipment or system is located, a written notice stating the defects thereof, by certified mail, return receipt requested. This notice shall require the owner within thirty (30) business days of delivery of this notice to complete specified repairs or improvements, or to demolish and remove the building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof.

116.1.1.1 In addition to the written notice being sent by certified mail, return receipt requested to the record owner(s) of the real property upon which the unsafe building, structure, equipment or system is located, the building official shall post a copy of the notice in a conspicuous place in the county courthouse, and upon the building, structure, equipment or system, and a copy shall be recorded in the public records of Palm Beach County.

116.1.1.2 In addition, a copy of the notice, as outlined in this sub-section, shall be published simultaneously for two consecutive weekends in a newspaper of local circulation. Such notice shall be substantially in the following form:

NOTICE OF INTENT TO DEMOLISH OR SUBSTANTIALLY REPAIR AND INSPECT

(Insert Date of Notice)

The owner or other interested parties for the structure located at (address), are hereby notified that Palm Beach County, Florida, will proceed to have the building, structure, equipment or system repaired, demolished or removed thirty (30) calendar days after the date of this Notice, if said building, structure, equipment or system is not substantially repaired, demolished or removed by that date. All costs incurred by the County in connection with the repair, demolition or removal will be assessed against the property.

If, as a result of this Notice, the building, structure, equipment or system is substantially repaired, demolished, or removed by the owner, notice is hereby given that work to abate the unsafe condition requires building permits and inspections for code compliance, and all related fees are required to be paid prior to performing the work or receiving certification of code compliance.

To request an extension of time, the owner should contact (Contact Person and Phone Number) within ten (10) business days of the date of this Notice. Said request for extension must be made in writing to the building official.

An affected owner or duly authorized agent has the right to appeal this action to the Construction Board of Adjustment and Appeals. An application of appeal should be filed in writing and hearing costs paid by the affected owner or duly authorized agent, at the Palm Beach County Building Division Main Office, within thirty (30) calendar days of the date of this Notice. The fee to cover hearing costs shall be established by ordinance.

116.1.1.3 Evidence that an attempt has been made to hand deliver or mail the Notice, as provided herein, together with a copy of the recorded "Notice of Intent to Demolish or Substantially Repair and Inspect" at the Clerk of the Court Office, and proof of publication, shall be sufficient to show that the notice requirements of this section have been met, without regard to whether or not the owner actually received said notice.

116.1.2 If necessary, the notice shall also require the building, structure, electrical, gas, mechanical, plumbing equipment or service systems or portion thereof to be vacated and/or disconnected, and not reoccupied and/or reconnected until the specified repairs and improvements are completed, inspected and approved by the building official. The building official shall post at each entrance to the building a placard stating: THIS BUILDING IS UNSAFE AND ITS USE OR OCCUPANCY HAS BEEN PROHIBITED BY THE BUILDING OFFICIAL. This placard shall remain posted until the required repairs are made or demolition is completed. It shall be unlawful for any person, firm or corporation or its officers, agents, or other servants, to remove the posting without written permission of the building official, or for any person to enter the building, or use the building, structure, equipment or system except for the purpose of making the required repairs or of demolishing same.

116.1.3 If such owner, agent, or person in control shall fail, neglect, or refuse to comply with notice to repair, rehabilitate, or to demolish, and remove said building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof, within thirty (30) calendar days of delivery of notification by the County building official and pursuant to the procedures stated in this section, the County is authorized and empowered, and the building official shall take action to achieve enforcement of the code and/or abatement of the unsafe condition by substantial repair, demolition, or removal of the building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof, or in a manner as dictated by the degree of threat posed by the unsafe condition.

116.1.3.1 The cost of vacating, substantially repairing, demolishing, removing, and/or otherwise abating the unsafe condition incurred by the County, including the actual work of vacating, substantially repairing, demolishing, removing, and/or otherwise abating the unsafe condition, title work costs and expenses, all administrative and legal expenses, publication costs, postal expenses, and other identifiable costs incurred by the County, shall be assessed against the property.

116.1.3.1.1 All assessments shall be paid in full to the County no less than the close of County business on the twentieth (20) business day after the Notice of Assessment is delivered to the property owner. If the property owner fails to pay the assessment within this time period, the building official or designee shall file with the Clerk of the Circuit Court a lien to be recorded in the County's Official Record Book showing the nature of such lien, the amount thereof and an accurate legal description of the property, including the street address, which lien shall be effective from the date of filing and recite the names of all persons notified and interested persons.

116.1.3.1.2 Thereafter, the unpaid amount of the assessment will accrue interest at the maximum rate allowed by Chapter 55, Florida Statutes.

116.1.3.1.3 If the assessment is not paid by the following September 1, the County will declare the assessment delinquent and place the assessment on the tax roll as a non-ad valorem assessment.

116.1.3.1.4 If the non-ad valorem assessment is not paid as part of the tax bill on the property, the property may be subject to the sale of a tax certificate, bearing interest by law at a rate as high as 18% per annum.

116.1.3.1.5 If the tax certificate is not redeemed by payment of the non-ad valorem assessment in full, plus interest, as required by Florida law, the property may be sold and conveyed by tax deed.

116.1.3.1.6 Nothing in this section shall prevent the County from imposing fines or liens, seeking injunctive relief, pursuing foreclosure or exercising other enforcement powers as permitted by law.

116.1.4 The thirty (30) day time period contained in Section 116.1.1 of this code may be enlarged by the building official, in a decision, which is rendered in writing, upon receipt of the owner's written request for an enlargement of time. In the written request, the owner must show cause as to why the enlargement of time should be granted. In the event that the building official denies the owner's request for an enlargement of time, said decision shall be rendered in writing, and delivered to the owner by certified mail, return receipt requested.

116.1.5 Determinations. Decisions of the building official required by this section shall be in writing. The date of the determination shall be the date it is reduced to writing and signed by the building official.

116.1.6 Relief from the Notice of Intent to Demolish or Substantially Repair and Inspect. An affected owner or duly authorized agent has the right to appeal the notice to the Construction Board of Adjustment and Appeals. An application of appeal shall be filed in writing and hearing costs paid by the affected owner or duly authorized agent, at the Palm Beach County Building Division Main Office, within thirty (30) business days of the date of delivery of the notice, as required in this section. If notice is not successfully delivered to the record owner, the application of appeal should be filed in writing and hearing costs paid by the affected owner within thirty (30) business days following the second consecutive week of publication of notice in a newspaper of local circulation. No action shall be taken by the County in connection with a building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof, which is the subject of any appeals procedure relating to demolition, except in cases of emergencies as, described in Section 116.2.2 of this code. Every decision of the Construction Board of Adjustment and Appeals shall be final; subject however to such remedy as any aggrieved party might have at law. Such judicial relief shall be sought by the affected party or authorized agent by filing the appropriate petition in the court of jurisdiction within thirty (30) business days of the execution of the board order to be appealed. Such an appeal shall not be a hearing de novo but shall be limited to appellate review of the record created before the Construction Board of Adjustment and Appeals.

116.1.7 An affected owner or duly authorized agent has the right to appeal a decision of the building official to deny an extension of time, to the Construction Board of Adjustment and Appeals. An application of appeal should be filed in writing and hearing costs paid by the affected owner or duly authorized agent, at the Palm Beach County Building Division Main Office, within ten (10) business days of the date that decision is reduced to writing. The fee to cover hearing costs shall be established by ordinance.

116.1.8 Notice of Assessment. Upon completion of the actions undertaken by the County, the building official shall notify in writing the owner that a special assessment has been imposed on the property. The notice shall be delivered by certified mail, return receipt requested. The notice of assessment shall set forth the following:

(a) A description of the unsafe structure, a description of the actions taken by the County to substantially repair or demolish the building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof, and the fact that the property has been assessed for the costs incurred by the County to substantially repair or

demolish the building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof.

(b) The aggregate amount of such costs, and an itemized list of such costs.

(c) The intent of the County to record the assessment as a lien against the property, if not paid within twenty (20) business days of delivery.

(d) The intent of the County to charge interest at the maximum rate allowed by Chapter 55, Florida Statutes if the assessment is not paid within twenty (20) business days.

(e) The intent of the County to declare the assessment delinquent and to place the assessment on the tax roll as a non-ad valorem assessment if not paid by the following September 1.

(f) The potential for the property to be subject to the sale of a tax certificate, bearing interest by law at a rate as high as 18% per annum, if the non-ad valorem assessment is not paid as part of the tax bill on the property.

(g) The potential for the property to be sold and conveyed by tax deed if the tax certificate is not redeemed by payment of the non-ad valorem assessment in full, plus interest, as required by Florida law.

116.1.9 The decision of the building official shall be final in cases of emergency, which, in the opinion of the building official, involve imminent danger to human life or health, or the property of others. The building official shall promptly cause such building, structure, electrical, gas, mechanical or plumbing equipment or system or portion thereof to be made safe, secured, or cause its removal. For this purpose, the building official may at once enter such structure or land on which it stands, or abutting land or structures, with such assistance and at such cost as the building official may deem necessary. The building official may order the vacating of adjacent structures and may require the protection of the public by appropriate fence or such other means as may be necessary, and for this purpose may close a public or private way. Taking such action does not create a continuing obligation on the part of the building official to continue with maintaining such building, structure, equipment or system; or create liability for any damage to the property.

SECTION 117
VARIANCES IN FLOOD HAZARD AREAS

117.1 Flood hazard areas. Pursuant to Section 553.73(5), Florida Statutes, the variance procedures adopted in Article 18 of the ULDC shall apply to requests submitted to the building official for variances to the provisions of Section 1612.4 of the Florida Building Code, Building or, as applicable, the provisions of R322 of the Florida Building Code, Residential. This section shall not apply to Section 3109 of the Florida Building Code, Building.

SECTION 118
(RESERVED)

SECTION 119
SEVERABILITY

If any section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

APPENDIX Q
TINY HOUSES

Contents

SECTION AQ101

GENERAL

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AQ101.1 Scope. This appendix shall be applicable to tiny houses used as single dwelling units. Tiny houses shall comply with this code except as otherwise stated in this appendix.

SECTION AQ102

DEFINITIONS

AQ102.1 General. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions.

EGRESS ROOF ACCESS WINDOW. A skylight or roof window designed and installed to satisfy the emergency escape and rescue opening requirements of Section R310.2.

LANDING PLATFORM. A landing provided as the top step of a stairway accessing a loft.

LOFT. A floor level located more than 30 inches (762 mm) above the main floor, open to the main floor on one or more sides with a ceiling height of less than 6 feet 8 inches (2032mm) and used as a living or sleeping space.

TINY HOUSE. A dwelling that is 400 square feet (37 m2) or less in floor area excluding lofts.

SECTION AQ103

CEILING HEIGHT

AQ103.1 Minimum ceiling height. Habitable space and hallways in tiny houses shall have a ceiling height of not less than 6 feet 8 inches (2032 mm). Bathrooms, toilet rooms and kitchens shall have a ceiling height of not less than 6 feet 4 inches (1930 mm). Obstructions including, but not limited to, beams, girders, ducts and lighting shall not extend below these minimum ceiling heights.

Exception: Ceiling heights in lofts are permitted to be less than 6 feet 8 inches (2032 mm).

SECTION AQ104

LOFTS

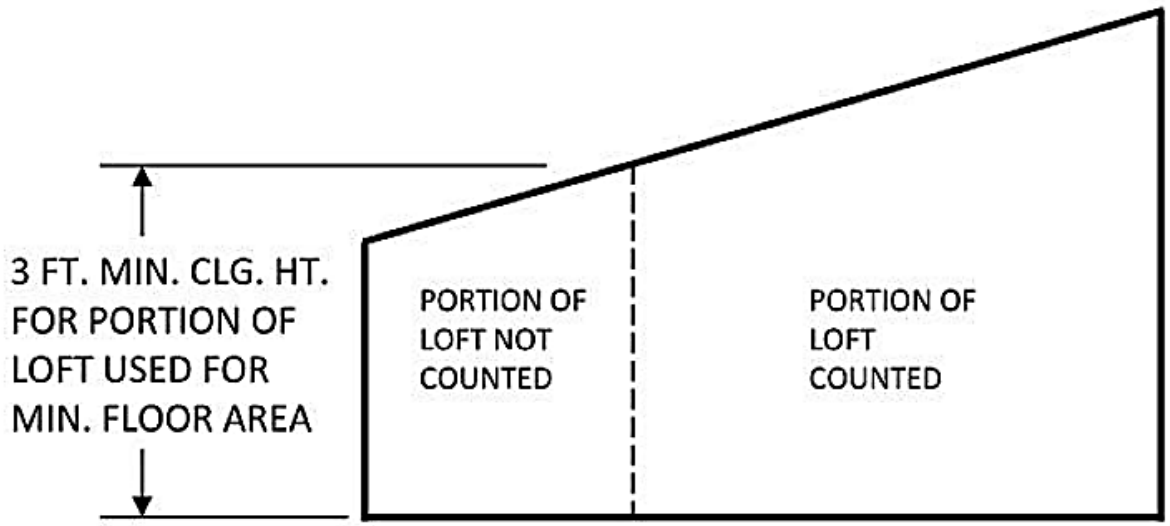
AQ104.1 Minimum loft area and dimensions. Lofts used as a sleeping or living space shall meet the minimum area and dimension requirements of Sections AQ104.1.1 through AQ104.1.3.

AQ104.1.1 Minimum area. Lofts shall have a floor area of not less than 35 square feet (3.25 m^2).

AQ104.1.2 Minimum horizontal dimensions. Lofts shall be not less than 5 feet (1524 mm) in any horizontal dimension.

AQ104.1.3 Height effect on loft area. Portions of a loft with a sloped ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft. See Figure AQ104.1.3.

Exception: Under gable roofs with a minimum slope of 6 units vertical in 12 units horizontal (50-percent slope), portions of a loft with a sloped ceiling measuring less than 16 inches (406 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft. See Figure AQ104.1.3.



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm

Figure AQ104.1.3
Loft Ceiling Height

AQ104.2 Loft access and egress. The access to and primary egress from lofts shall be of any type described in Sections AQ104.2.1 through AQ104.2.4. The loft access and egress element along its required minimum width shall meet the loft where its ceiling height is not less than 3 feet (914 mm).

AQ104.2.1 Stairways. Stairways accessing lofts shall comply with this code or with Sections AQ104.2.1.1 through AQ104.2.1.7.

AQ104.2.1.1 Width. Stairways accessing a loft shall not be less than 17 inches (432 mm) in clear width at or above the handrail. The width below the handrail shall be not less than 20 inches (508 mm).

AQ104.2.1.2 Headroom. The headroom above stairways accessing a loft shall be not less than 6 feet 2 inches (1880 mm), as measured vertically from a sloped line connecting the tread, landing or platform nosings in the center of their width, and vertically from the landing platform along the center of its width.

AQ104.2.1.3 Treads and risers. Risers for stairs accessing a loft shall be not less than 7 inches (178 mm) and not more than 12 inches (305 mm) in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas:

1. The tread depth shall be 20 inches (508 mm) minus four-thirds of the riser height.
2. The riser height shall be 15 inches (381 mm) minus three-fourths of the tread depth.

AQ104.2.1.4 Landings. Intermediate landings and landings at the bottom of stairways shall comply with Section R311.7.6, except that the depth in the direction of travel shall be not less than 24 inches (610 mm).

AQ104.2.1.5 Landing platforms. The top tread and riser of stairways accessing lofts shall be constructed as a landing platform where the loft ceiling height is less than 6 feet 2 inches (1880 mm) where the stairway meets the loft. The landing platform shall be not less than 20 inches (508 mm) in width and depth measured horizontally from and perpendicular to the nosing of the landing platform. The landing platform riser height to the loft floor shall be not less than 16 inches (406 mm) and not greater than 18 inches (457 mm).

AQ104.2.1.6 Handrails. Handrails shall comply with Section R311.7.8.

AQ104.2.1.7 Stairway guards. Guards at open sides of stairways, landings and landing platforms shall comply with Section R312.1.

AQ104.2.2 Ladders. Ladders accessing lofts shall comply with Sections AQ104.2.1 and AQ104.2.2.

AQ104.2.2.1 Size and capacity. Ladders accessing lofts shall have a rung width of not less than 12 inches (305 mm), and 10-inch (254 mm) to 14-inch (356 mm) spacing between rungs. Ladders shall be capable of supporting a 300-pound (136 kg) load on any rung. Rung spacing shall be uniform within 3/8 inch (9.5 mm).

AQ104.2.2.2 Incline. Ladders shall be installed at 70 to 80 degrees from horizontal.

AQ104.2.3 Alternating tread devices. Alternating tread devices accessing lofts shall comply with Sections R311.7.11.1 and R311.7.11.2. The clear width at and below the handrails shall be not less than 20 inches (508mm).

AQ104.2.4 Ships ladders. Ships ladders accessing lofts shall comply with Sections R311.7.12.1 and R311.7.12.2. The clear width at and below handrails shall be not less than 20 inches (508 mm).

AQ104.2.5 Loft Guards. Loft guards shall be located along the open side(s) of lofts. Loft guards shall be not less than 36 inches (914 mm) in height or one-half of the clear height to the ceiling, whichever is less. Loft guards shall comply with Section R312.1.3 and Table R301.5 for their components.

SECTION AQ105

EMERGENCY ESCAPE AND RESCUE OPENINGS

AQ105.1 General. Tiny houses shall meet the requirements of Section R310 for emergency escape and rescue openings.

> **Exception:** Egress roof access windows in lofts used as sleeping rooms shall be deemed to meet the requirements of Section R310 where installed such that the bottom of the opening is not more than 44 inches (1118 mm) above the loft floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1.

APPENDIX F

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PROPOSED CONSTRUCTION BUILDING CODES FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS

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PART I: GENERAL

A. Description.

1. **Purpose.** To establish uniform minimum standards and requirements for the design and installation of safe, cost effective, reliable irrigation systems for turf and landscape areas which promote the efficient use and protection of water and other natural resources.

2. **Definition.** Turf and landscape irrigation systems apply water by means of permanent above-ground or subsurface sprinkler or microsprinkler equipment under pressure.

3. **Scope.** These construction codes shall apply to all irrigation systems used on residential and commercial landscape areas. They address the design requirements, water quality, materials, installation, inspection, and testing for such systems. These construction codes do not apply to irrigation systems for reclaimed waters systems under the regulation of the water utility service, irrigation systems within a right of way maintained by a government entity, golf courses, fairways, tees, roughs, and greens and other athletic play surfaces, including, football, baseball, soccer, polo, tennis and lawn bowling fields, and rodeo, equestrian and livestock arenas, nurseries, greenhouses, or agricultural production systems.

4. **Application.** All new irrigation systems and any new work to existing irrigation systems shall conform to the requirements of this code. All electrical equipment, components, and wiring shall be installed in conformance with the Florida Building Code, Chapter 27 (NFPA 70).

5. **Application to existing irrigation installations.** Nothing contained in this code shall be deemed to require any irrigation system or part thereof, which existed prior to the establishment of this code, to be changed, altered or modified to meet the standards of this code.

B. Permits.

1. **Permits required.** It shall be unlawful to construct, enlarge, alter, modify, repair, or move any irrigation system or part thereof, or to install or alter any equipment for which provision is made or the installation of which is regulated by this code without first having filed application and obtained a permit therefore from the building official. A permit shall be deemed issued when signed by the building official and impressed with the seal of the governmental agency issuing said permit. Electrical and other work outside the scope of work allowed by a Palm Beach County licensed Irrigation Sprinkler Contractor, must be subcontracted to, and performed by a contractor licensed for competency in the specific are of the work per Chapter 489, Florida Statutes, Chapter 67-1876, and Palm Beach County Ordinance 97-56, as may be amended or replaced.

2. **Exceptions.** All work where exempt from permit shall still be required to comply with the code. No permit shall be required for general maintenance or repairs which do not change the structure or alter the system and the value of which does not exceed $600.00 in labor and material based on invoice value.

C. Preconstruction submittals.

1. Plans or drawings.

a. Single-family residence. Provide design drawings or shop drawings, where required, for the installation prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, and include all improvements. Drawings can be prepared by a properly licensed qualified contractor.

b. Commercial, industrial, municipal and multiple-family. Provide professionally designed drawings prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, including all improvements, and shall include but not be limited to: date, scale, revisions, legend, specifications which list all aspects of equipment and assembly thereof, water source, water meter and/or point of connection, backflow prevention devices, pump station size, pump station location, design operating pressure and flow rate per zone, precipitation rate per zone, locations of pipe, controllers, valves, sprinklers, sleeves, gate valves, etc. The plans and specifications shall be prepared in accordance with Section 107 of the Florida Building Code, Building.

c. The sprinkler layout may be modified to adjust for field conditions, provided it complies with Part VI, Section B, Subsection 1 Sprinkler layout and spacing. Prior to final inspection, the contractor shall submit a letter or as-built drawing that reflects the modifications to the authority with jurisdiction.

D. Definitions.

ABS Pipe. Acrylonitrile-butadiene-styrene black, semi-rigid, plastic pipe extruded to IPS. ABS pipe is in limited use in present day irrigation systems. Solvent weld fittings are used with this pipe (see ASTM
D1788).

Air Release Valve. A valve which will automatically release to the atmosphere accumulated small pockets of air from a pressurized pipeline. A small orifice is used to release air at low flow rates. Air release valves are normally required at all summits of mainline and sub-main pipelines in an irrigation system.

Anti-Siphon Device. A safety device used to prevent back-flow of irrigation water to the water source by back-siphonage.

Application Rate. The average rate at which water is applied by an irrigation system, sometimes also called precipitation rate. Units are typically inches/hr or mm/hr.

Application Uniformity. Irrigation application uniformity (also known as distribution uniformity) describes how evenly water is distributed within an irrigation zone.

Arc. The angle of coverage of a sprinkler in degrees from one side of throw to the other. A 90-degree arc would be a quarter-circle sprinkler.

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Atmospheric Vacuum Breaker. An anti-siphon device which uses a floating seat to direct water flow. Water draining back from irrigation lines is directed to the atmosphere to protect the potable water supply.

Automatic Control Valve. A valve in a sprinkler system which is activated by an automatic controller by way of hydraulic or electrical control lines and controls a single device or multiple devices.

Automatic System. An irrigation system which operates following a preset program entered into an automatic controller.

Backflow Prevention Device. An approved safety device used to prevent pollution or contamination of the irrigation water supply due to backflow from the irrigation system.

Belled (Pipe). Pipe which is enlarged at one end so that the spigot end of another length of pipe can be inserted into it during the assembly of a pipeline.

Block (of sprinklers). A group of sprinklers controlled by one valve. Also called zones or subunits.

Block System. An irrigation system in which several groups of sprinklers are controlled by one valve for each group.

Bubbler Irrigation. The application of water to the soil surface or a container as a small stream or fountain. Bubbler emitter discharge rates are greater than the 0.5 to 2 gph characteristic of drip emitters, but generally less than 60 gph.

Check Valve. A valve which permits water to flow in one direction only.

Chemical Water Treatment. The addition of chemicals to water to make it acceptable for use in irrigation systems

Chemigation. The application of water soluble chemicals by mixing or injecting with the water applied through an irrigation system.

Contractor. Any person who engages in the fabrication and installation of any type of irrigation system on a contractual basis in accordance with all stipulations receiving his compensation.

Control Lines. Hydraulic or electrical lines which carry signals (to open and close the valves) from the controller to the automatic valves.

Controller. The timing mechanism and its mounting box. The controller signals the automatic valves to open and close on a pre-set program or based on sensor readings.

Coverage. Refers to the way water is applied to an area.

Cycle. Refers to one complete run of a controller through all programmed controller stations.

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Demand (or irrigation demand). Refers to the irrigation requirements of the irrigated area. Demand primarily depends on the type of crop, stage of growth, and climatic factors.

Design Area. The specific land area to which water is to be applied by an irrigation system.

Design Emission Uniformity. An estimate of the uniformity of water application with an irrigation system.

Design Pressure. The pressure at which the irrigation system or certain components are designed to operate. The irrigation system design pressure is that measured at the pump discharge or entrance to the system if there is no pump, and a zone design pressure is the average operating pressure of all emitters within that zone.

Direct Burial Wire. Plastic-coated single-strand copper wire for use as control line for electric valves.

Discharge Rate. The instantaneous flow rate of an individual sprinkler, emitter, or other water emitting device, or a unit length of line-source microirrigation tubing. Also, the flow rate from a pumping system.

Double Check Valve. An approved assembly of two single, independently-acting check valves with test ports to permit independent testing of each check valve.

Drain Valve. A valve used to drain water from a line. The valve may be manually or automatically operated.

Drip Irrigation. The precise low-rate application of water to or beneath the soil surface near or directly into the plant root zone. Applications normally occur as small streams, discrete or continuous drops, in the range of 0.5 to 2.0 gph.

Effluent water. Also referred to as reclaimed or gray water is wastewater which has been treated per Florida
Statute, §403.086 and is suitable for use as a water supply for irrigation systems.

Emitters. Devices which are used to control the discharge of irrigation water from lateral pipes. This term is primarily used to refer to the low flow rate devices used in microirrigation systems.

Fertigation. The application of soluble fertilizers with the water applied through an irrigation system.

Filtration System. The assembly of physical components used to remove suspended solids from irrigation water. These include both pressure and gravity type devices, such as settling basins, screens, media filters, and centrifugal force units (vortex sand separators).

Flexible Swing Joint. A flexible connection between the lateral pipe and the sprinkler which allows the sprinkler to move when force is applied to it.

Flow Meters. Devices used to measure the volume of flow of water (typically in gallons), or flow rates (typically in gpm), and to provide data on system usage.

Gauge (Wire). Standard specification for wire size. The larger the gauge number, the smaller the wire diameter.

Head. A sprinkler head. Sometimes used interchangeably with and in conjunction with "Sprinkler."

Infiltration Rate. The rate of water flow across the surface of the soil and into the soil profile. Units are usually inches/hr.

Irrigation. Application of water by artificial means, that is, means other than natural precipitation. Irrigation is practiced to supply crop water requirements, leach salts, apply chemicals, and for environmental control including crop cooling and freeze protection.

Irrigation Water Requirement or Irrigation Requirement. The quantity of water that is required for crop production, exclusive of effective rainfall.

Landscape. Refers to any and all areas which are ornamentally planted, including but not limited to turf, ground covers, flowers, shrubs, trees, and similar plant materials as opposed to agricultural crops grown and harvested for monetary return.

Lateral. The water delivery pipeline that supplies water to the emitters or sprinklers from a manifold or header pipeline downstream of the control valve.

Line-Source Emitters. Lateral pipelines which are porous or contain closely-spaced perforations so that water is discharged as a continuous band or in overlapping patterns rather than discrete widely-spaced points along the pipeline length.

Looped System. A piping system which allows more than one path for water to flow from the supply to the emitters or sprinklers.

Low Volume Sprinklers. Sprinkler heads that emit less than 0.5 gallons per minute.

Mainline. A pipeline which carries water from the control station to submains or to manifolds or header pipelines of the water distribution system.

Manifold. The water delivery pipeline that conveys water from the main or submain pipelines to the laterals.
Also sometimes called a header pipeline.

Manual System. A system in which control valves are manually operated rather than operated by automatic controls.

Matched Precipitation. An equal distribution of water over a given area or zone.

Meter Box. A concrete or plastic box buried flush to grade which houses flow (water) meters or other components.

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Microirrigation. The frequent application of small quantities of water directly on or below the soil surface, usually as discrete drops, tiny streams, or miniature sprays through emitters placed along the water delivery pipes (laterals). Microirrigation encompasses a number of methods or concepts, including drip, subsurface, bubbler, and spray irrigation. Previously known as trickle irrigation.

Overlap. The amount one sprinkler pattern overlaps another one when installed in a pattern. Expressed as a percentage of the diameter of coverage.

PE Pipe. Flexible polyethylene pipe for use in irrigation systems, normally manufactured with carbon black for resistance to degradation by ultraviolet radiation.

Potable Water. Water which is suitable in quality for human consumption and meets the requirements of the
Health Authority having jurisdiction.

Pressure Relief Valve. A valve which will open and discharge to atmosphere when the pressure in a pipeline or pressure vessel exceeds a pre-set point to relieve the high-pressure condition.

Pressure Vacuum Breaker. A backflow prevention device which includes a spring-loaded check valve and a spring-loaded vacuum breaker to prevent the backflow of irrigation system water to the water source.

Pumping Station. The pump or pumps that provide water to an irrigation system, together with all of the necessary accessories such as bases or foundations, sumps, screens, valves, motor controls, safety devices, shelters and fences.

PVC Pipe. Polyvinyl chloride plastic pipe made in standard thermoplastic pipe dimension ratios and pressure rated for water. Manufactured in accordance with AWWA C-900 or ASTM D2241.

Rain Shut off Device. A calibrated device that is designed to detect rainfall and override the irrigation cycle of the sprinkler system when a predetermined amount of rainfall has occurred.

Riser. A threaded pipe to which sprinklers or other emitters are attached for above-ground placement.

Sleeve. A pipe used to enclose other pipes, wire, or tubing; usually under pavement, sidewalks, or planters.

Spacing. The distance between sprinklers or other emitters.

Spray Irrigation. The microirrigation application of water to the soil or plant surface by low flow rate sprays or mists.

Sprinkler. The sprinkler head. Sometimes called “Head.”

Supply (Water Source). The origin of the water used in the irrigation system.

Swing Joint. A ridged connection between the lateral pipe and the sprinkler, utilizing multiple ells and nipples, which allows the sprinkler to move when force is applied to it.

Tubing. Generally used to refer to flexible plastic hydraulic control lines which are usually constructed of PE or PVC.

PART II DESIGN CRITERIA

A. Design defined. Within the scope of this code, irrigation system design is defined as the science and art of properly selecting and applying all components within the system. The irrigation system shall be designed and installed to achieve the highest possible efficiency by providing operating pressures, sprinkler placement and nozzle selection that are within the manufacturer's recommendations, and maintained to keep the system at or within those ranges.

B. Water supply.

1. The water source shall be adequate from the standpoint of volume, flow rate, pressure, and quality to meet the irrigation requirements of the area to be irrigated, as well as other demands, if any, both at the time the system is designed and for the expected life of the system. The irrigation system shall use the lowest quality water source available on site.

2. If the water source is effluent, it shall meet the advanced waste treatment standard as set forth in Section 403.086(4), Florida Statutes, as well as any other standard as set forth by the controlling governmental agency.

C. Application uniformity.

1. Sprinkler irrigation systems should be designed with the appropriate uniformity for the type of plants being grown and the type of soil found in that area. The general watering of different types of plants as one group without regard to their individual water requirements is to be avoided.

2. Use sprinkler head spacing, type and nozzle selection to achieve the highest application uniformity.

3. Use application rates which avoid runoff and permit uniform water infiltration into the soil. Land slope, soil hydraulic properties, vegetative ground cover, and prevailing winds and sun exposure will be considered when application rates are specified. Different types of sprinklers with different application rates, i.e., spray heads vs. rotor heads, bubbler heads vs. rotor heads, shall not be combined on the same zone or circuit.

D. System zoning. The irrigation system should be divided into zones based on consideration of the following hydrozoning practices.

1. Available flow rate. Back to top

2. Cultural use of the area.

3. Type of vegetation irrigated, i.e., turf, shrubs, native plants, etc.

4. Type of sprinkler, i.e., sprinklers with matching precipitation rates.

5. Soil characteristics and slope.

6. Sun exposure.

E. Sprinkler/emitter spacing and selection.

1. Sprinkler/Emitter spacing will be determined considering the irrigation requirements, hydraulic characteristics of the soil and device, and water quality with its effect on plant growth, sidewalks, buildings, and public access areas.

2. All pop-up spray head bodies in turf areas shall be no less than 6 inches in height for St. Augustine, Zoysia and Bahia and no less than 4 inches in height for Bermuda, Centapede and Seashore Paspalum.

3. Sprinklers should be located in all corners and on the perimeter of each irrigated zone area for a matched precipitation rate objective.

4. Single row head spacing should only occur when an additional row will cause saturated soils at the toe of a slope or other inefficiencies.

5. All heads shall not exceed 50 percent of manufacturer's specified diameters of coverage.

6. Water conservation will be emphasized by minimizing irrigation of nonvegetated areas.

7. Microirrigation systems should be designed using the Emission Uniformity concept. Space microirrigation emitters to wet 100 percent of the root zone in turf areas and 50 percent of the root zone for shrubs and trees.

8. Microirrigation or low volume heads shall be required in all areas less than 4 feet in either direction.

9. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PD main or lateral break.

10. Each plant shall have an adequate number and size (gph) of microirrigation devices, properly placed, to meet the plant water requirements for no rainfall.

F. Pipelines. Pipelines will be sized to limit pressure variations so that the working pressure at all points in the irrigation system will be in the range required for uniform water application. Velocities will be kept to 5 feet (1524 mm) per second.

G. Wells.

1. Well diameters and depths are to be sized to correspond to the irrigation system demand. Refer to SCS Code FL-642 and local water management district regulations.

2. Well location and depth shall be in compliance with applicable state, water management district and local codes.

H. Pumps.

1. Pump and motor combinations shall be capable of satisfying the total system demand without invading the service factor of the motor except during start-up and between zones.

2. Pumps shall be positioned with respect to the water surface in order to ensure that the net positive suction head required (NPSHr) for proper pump operation is achieved.

3. The pumping system shall be protected against the effects of the interruption of water flow.

I. Control valves.

1. Control valve size shall be based on the flow rate through the valve. Friction loss through the valve, an approved air gap separation, or a reduced pressure should not exceed 10 percent of the static mainline head.

2. Control systems using hydraulic communication between controller and valve(s) shall comply with the manufacturer's recommendations for maximum distance between controller and valve, both horizontally and vertically (elevation change).

3. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications; based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except individual, single lot residential systems.

4. Locate manually operated control valves so that they can be operated without wetting the operator.

5. Locate in-ground valves away from large tree and palm root zones.

6. A manual shut-off valve shall be required to be installed close to the point of connection but downstream from any backflow device to minimize water loss when the system is shut off for repairs or emergencies.

7. An automatic shut-off valve (normally closed) is required on all systems with a constantly pressurized mainline to confine the water loss from minor main line leaks, weeping valves, or stuck on valves to just the time the system is operating automatically.

J. Automatic irrigation controller. Automatic irrigation controllers must be UL approved and have an adequate number of stations and power output per station to accommodate the irrigation system design. The controller shall be capable of incorporating a rain shut-off device or other sensors to override the irrigation cycle when adequate rainfall has occurred as required by Section 373.62, Florida Statutes.

K. Chemical injection.

1. Chemical injection systems for the injection of fertilizer, pesticides, rust inhibitors, or any other injected substance will be located and sized according to the manufacturers' recommendations.

2. Injection systems will be located downstream of the applicable backflow prevention devices as required by Sections 608.13 and 608.16, Florida Building Code, Plumbing Volume; Sections 487.021, Florida Statutes the Environmental Protection Agency (EPA); Pesticide Regulation Notice 87-1; or other applicable codes.

3. If an irrigation water supply is also used for human consumption, an air gap separation or an approved reduced pressure principal backflow prevention device is required.

L. Backflow prevention methods. Provide backflow prevention assemblies at all cross connections with all water supplies in accordance with county, municipal or other applicable codes to determine acceptable backflow prevention assembly types and installation procedures for a given application. In the event of conflicting regulation provide the assembly type which gives the highest degree of protection.

1. Irrigation systems into which chemicals are injected shall conform to Florida state law (including Section 487.021, Florida Statutes) and Environmental Protection Agency Pesticide Regulation Notice 87-1, which requires backflow prevention regulations to be printed on the chemical label.

2. For municipal water supplies, chemical injection equipment must be separated from the water supply by an approved air gap separation or a reduced pressure principle assembly that is approved by the Foundation for CCC and the Hydraulic Research Institute. The equipment must also comply with ASSE 1013 to protect the water supply from back-siphonage and back-pressure.

3. For other water supplies, Florida State law, EPA regulations, or other applicable local codes must be followed. In the absence of legal guidelines at least a PVB should be used.

PART III STANDARDS

1. American Society of Agricultural Engineers (ASAE) Standards:

ASAE S330.1: Procedure for sprinkler distribution testing for research purposes.

ASAE S376.1: Design, installation, and performance of underground thermoplastic irrigation pipelines.

ASAE S397.1: Electrical service and equipment for irrigation.

ASAE S435: Drip/Trickle Polyethylene Pipe used for irrigation laterals.

ASAE S398.1: Procedure for sprinkler testing and performance reporting.

ASAE S339: Uniform classification for water hardness.

ASAE S394: Specifications for irrigation hose and couplings used with self-propelled, hose-drag agricultural irrigation system.

ASAE EP400.1: Designing and constructing irrigation wells.

ASAE EP405: Design, installation, and performance of trickle irrigation systems.

ASAE EP409: Safety devices for applying liquid chemicals through irrigation systems.

2. ASTM International Standards:

ASTM D2241: Poly (Vinyl Chloride) (PVC) Plastic pipe (SDR-PR).

ASTM D2239: Specification for polyethylene (PE) plastic pipe (SDR-PR).

ASTM D2466: Specification for socket-type poly (vinyl chloride) (PVC) and chlorinated poly (vinyl chloride) (CPVC) plastic pipe fittings, Schedule 40.

ASTM D2855: Standard recommended practice for making solvent cemented joints with polyvinyl chloride pipe and fittings.

ASTM D3139: Specification for joints for plastic pressure pipes using flexible elastomeric seals.

ASTM F477: Specification for elastomeric seals (gaskets for joining plastic pipe).

3. American Water Works Association (AWWA) standards:

AWWA C-900: PVC pipe standards and specifications.

4. American Society of Sanitary Engineers (ASSE) Standards:

ASSE 1001: Pipe applied atmospheric type vacuum breakers.

ASSE 1013: Reduced pressure principle backflow preventers.

ASSE 1015: Double check valve-type back pressure backflow preventers.

ASSE 1020: Vacuum breakers, anti-siphon, pressure type.

ASSE 1024: Dual check valve-type backflow preventers.

5. Hydraulic Institute Standards, 14th Edition.

6. Standards and Specifications For Turf and Landscape Irrigation Systems Florida Irrigation Society (FIS) Standards.

7. Soil Conservation Service (SCS) Field Office Technical Guide, Section IV-A — Cropland Codes:

SCS Code 430-DD: Irrigation water conveyance, underground, plastic pipeline.

SCS Code 430-EE: Irrigation water conveyance. Low pressure, underground, plastic pipeline.

SCS Code 430-FF: Irrigation water conveyance, steel pipeline.

SOS Code 441-1: Irrigation system, trickle.

SCS Code 442: Irrigation system sprinkler.

SCS Code 449: Irrigation water management.

SCS Code 533: Pumping plant for water control.

SCS Code 642: Well.

PART IV: MATERIALS

A. PVC pipe and fittings.

1. PVC pipe should comply with one of the following standards: ASTM D1785, ASTM D2241, AWWA C-900, or AWWA C-905. SDR-PR pipe shall have a minimum wall thickness as required by SDR-26. All pipe used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.

2. All solvent-weld PVC fittings shall, at a minimum, meet the requirements of Schedule 40 as set forth in ASTM D2466.

3. Threaded PVC pipe firings shall meet the requirements of Schedule 40 as set forth in ASTM D2464.

4. PVC gasketed fittings shall conform to ASTM D3139. Gaskets shall conform to ASTM F477.

5. PVC flexible pipe should be pressure rated as described in ASTM D2740 with standard outside diameters compatible with PVC IPS solvent-weld fittings.

6. PVC cement should meet ASTM D2564. PVC cleaner-type should meet ASTM F656.

B. Ductile iron pipe and fittings.

1. Gasket fittings for iron pipe should be of materials and type compatible with the piping material being used.

C. Steel pipe and fittings.

1. All steel pipe shall be rated Schedule 40 or greater and be hot-dipped galvanized or black in accordance with ASTM A53/A53M.

2. Threaded fittings for steel pipe should be Schedule 40 Malleable Iron.

D. Polyethylene pipe.

1. Flexible swing joints shall be thick-walled with a minimum pressure rating of 75 psi (517 kPa) in accordance with ASTM D2239.

2. Low pressure polyethylene pipe for microirrigation systems shall conform with ASAE S-435.

3. Use fittings manufactured specifically for the type and dimensions of polyethylene pipe used.

E. Sprinklers, spray heads, and emitters.

1. Select units and nozzles in accordance with the size of the area and the type of plant material being irrigated. Sprinklers must fit the area they are intended to water without excessive overspray onto anything but the lot individual landscaped surface. Intentional direct spray onto walkways, buildings, roadways, and drives is prohibited. All sprinklers used with effluent water systems shall be designated for non-potable use by either label or by the industry standard color purple.

2. Use equipment that is protected from contamination and damage by use of seals, screens, and springs where site conditions present a potential for damage.

3. Support riser-mounted sprinklers to minimize movement of the riser resulting from the action of the sprinkler.

4. Swing joints, either flexible or rigid, shall be constructed to provide a leak-free connection between the sprinkler and lateral pipeline to allow movement in any direction and to prevent equipment damage.

5. Check valves shall be installed on any sprinkler where low point drainage occurs.

6. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

F. Valves.

1. Valves must have a maximum working pressure rating equal to or greater than the maximum pressure of the system, but not less than 125 psi (861 kPa). This requirement may be waived for low mainline pressure systems [30 psi (207 kPa) or less]. All valves used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.

2. Only valves that are constructed of materials designed for use with the water and soil conditions of the installation shall be used. Valves that are constructed from materials that will

not be deteriorated by chemicals injected into the system shall be used on all chemical injection systems.

G. Valve boxes.

1. Valve boxes are to be constructed to withstand traffic loads common to the area in which they are installed. They should be sized to allow manual operation of the enclosed valves without excavation.

2. Each valve box should be permanently labeled to identify its contents. All valve boxes used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.

H. Low voltage wiring.

1. All low voltage wire which is directly buried must be labeled for direct burial wire. Wire not labeled for direct burial must be installed in watertight conduits, and be UL listed TWN or THHN type wire as described in the NEC. All wire traveling under any hardscape or roadway must installed within a pipe and sleeve.

2. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications, based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating, on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except single lot individual residential systems.

3. Connections are to be made using UL approved devices specifically designed for direct burial. All splices shall be enclosed within a valve box.

I. Irrigation controllers.

1. All irrigation controllers shall be UL listed, conform to the provisions of the National Electric Code (NEC), and be properly grounded in accordance with manufacturer's recommendations. Equip solid state controls with surge suppressors on the primary and secondary wiring, except single lot residential systems.

2. The controller housing or enclosure shall protect the controller from the hazards of the environment in which it is installed.

3. The rain switch shall be placed on a stationary structure minimum of 5-foot (1524 mm) clearance from other outdoor equipment, free and clear of any tree canopy or other overhead obstructions, and above the height of the sprinkler coverage. Soil moisture sensors and ET sensors shall be installed and monitored per manufacturer's guidelines per Florida Statutes, Section 373.62 requirements.

J. Pumps and wells.

1. Irrigation pump electrical control systems must conform to NEC and local building codes.

2. The pumping system shall be protected from the hazards of the environment in which it is installed.

3. Use electric motors with a nominal horsepower rating greater than the maximum horsepower requirement of the pump during normal operation. Motor shall have a service factor of at least 1.15.

4. Casings for drilled wells may be steel, reinforced plastic mortar, plastic, or fiberglass pipe. Only steel pipe casings shall be used in driven wells. Steel pipe must have a wall thickness equal to or greater than Schedule 40. See SCS code FL-642. Steel casings shall be equal to or exceed requirements of ASTM A589.

K. Chemical injection equipment.

1. Chemical injection equipment must be constructed of materials capable of withstanding the potential corrosive effects of the chemicals being used. Equipment shall be used only for those chemicals for which it was intended as stated by the injection equipment manufacturer.

L. Filters and strainers.

1. Filtration equipment and strainers constructed of materials resistant to the potential corrosive and erosive effects of the water shall be used. They shall be sized to prevent the passage of foreign material that would obstruct the sprinkler/emitter outlets in accordance with the manufacturer's recommendations.

PART V: INSTALLATION

A. Pipe installation.

1. Pipe shall be installed at sufficient depth below ground to protect it from hazards such as vehicular traffic or routine occurrences which occur in the normal use and maintenance of a property. Depths of cover shall meet or exceed SCS Code 430-DD, Water Conveyance, as follows:

   a. Vehicle traffic areas.

Pipe Size (inches)	Depth of Cover (inches)
1/2 – 2 1/2	18
3 – 5	24
6 and larger	30

   b. All areas except vehicle traffic:

Pipe Size (inches)	Depth of Cover (inches)
1/2 – 1 1/2	6
2 – 3	12

4 – 6	18
more than 6	24

2. Make all pipe joints and connections according to manufacturer's recommendations. Perform all solvent-weld connections in accordance with ASTM D2855.

3. Minimum clearances shall be maintained between irrigation lines and other utilities. In no case shall one irrigation pipe rest upon another. Comingling or mixing of different types of pipe assemblies shall be prohibited.

4. Thrust blocks must be used on all gasketed PVC systems. They must be formed against a solid, hand-excavated trench wall undamaged by mechanical equipment. They shall be constructed of concrete, and the space between the pipe and trench shall be filled to the height of the outside diameter of the pipe. Size thrust blocks in accordance with ASAE S-376.1.

5. The trench bottom must be uniform, free of debris, and of sufficient width to properly place pipe and support it over its entire length. Native excavated material may be used to backfill the pipe trench. However, the initial backfill material shall be free from rocks or stones larger than 1-inch in diameter. At the time of placement, the moisture content of the material shall be such that the required degree of compaction can be obtained with the backfill method to be used. Blocking or mounding shall not be used to bring the pipe to final grade.

6. Pipe sleeves must be used to protect pipes or wires installed under pavement or roadways. Use pipe sleeves two pipe sizes larger than the carrier pipe or twice the diameter of the wire bundle to be placed under the paving or roadway and extending a minimum of 3 feet beyond the paved area or as required by the Florida Department of Transportation (FDOT). Use sleeve pipe with wall thickness at least equal to the thickness of Schedule 40 or PR 160 pipe, whichever is thicker. Proper backfill and compaction procedures should be followed.

B. Control valve installation.

1. Valve installation shall allow enough clearance for proper operation and maintenance. Where valves are installed underground, they shall be provided with a valve box with cover extending from grade to the body of the valve. The top of the valve body should have a minimum of 6 inches (152 mm) of cover in nontraffic and noncultivated areas and 18 inches (457 mm) of cover in traffic areas. The valve box shall be installed so as to minimize the effect of soil intrusion within the valve box with the use of filter fabric, pea gravel, or other acceptable material. If an automatic valve is installed under each sprinkler, then the valve box may be omitted.

2. Install valve boxes so that they do not rest on the pipe, the box cover does not conflict with the valve stem or interfere with valve operation, they are flush with the ground surface and do not present a tripping hazard or interfere with routine maintenance of the landscape.

3. Install quick coupling valves on swing joints or flexible pipe with the top of the valve at ground level.

4. Any above-ground manually-operated valves on nonpotable water systems will be adequately identified with distinctive purple colored paint. Do not provide hose connections on irrigation systems that utilize nonpotable water supplies.

C. Sprinkler installation.

1. On flat landscaped areas, install sprinklers plumb. In areas where they are installed on slopes, sprinklers may be tilted as required to prevent erosion.

2. Sprinklers should be adjusted to avoid unnecessary discharge on pavements and structures.

   a. Adjust sprinklers so they do not water on roads.

   b. Provide a minimum separation of 4 inches (102 mm) between sprinklers and pavement.

   c. Provide a minimum separation of 12 inches (305 mm) between sprinklers and buildings and other vertical structures.

   d. Polyethylene (PE) nipples shall not be used in maintenance equipment traffic areas or alongside roadways and driveways.

3. Piping must be thoroughly flushed before installation of sprinkler nozzles.

4. Surface mounted and pop-up heads shall be installed on swing joints or flexible pipe.

5. Above-ground (riser mounted) sprinklers shall be mounted on Schedule 40 PVC or steel pipe and be effectively stabilized.

6. The pop-up height for sprays and rotator nozzles shall be adequate to prevent being obstructed by the turf grass blades: 6-inch height for St. Augustine, Zoysia and Bahia, 4-inch height for Bermuda, Centipede and Seashore Paspalum.

7. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PVC main or lateral break.

8. All microirrigation zones shall have adequate pressure regulation installed at the zone valve or at the point where the drip tubing is attached to the PVC to ensure that all emission devices meet the manufacturer's performance standards.

9. Each plant shall have a adequate number and size (gph) of microirrigation devices, properly placed to meet the plant water requirements for no rainfall.

10. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

D. Pump installation.

1. Install pumps as per the manufacturer's recommendations. Set pumps plumb and secure to a firm concrete base. There should be no strain or distortion on the pipe and fittings. Pipe and fittings should be supported to avoid placing undue strain on the pump. Steel pipe should be used on pumps 5 horsepower (hp) or larger whenever practical.

2. Pumps must be installed in a manner to avoid loss of prime. Install suction line to prevent the accumulation of air pockets. All connections and reductions in suction pipe sizes should be designed to avoid causing air pockets and cavitation.

3. Pumps must be located to facilitate service and ease of removal. Appropriate fittings should be provided to allow the pump to readily be primed, serviced, and disconnected. Provide an enclosure of adequate size and strength, with proper ventilation, to protect the pump from the elements (except residential systems).

E. Low voltage wire installation.

1. Install low voltage wire (less than 98 volts) with a minimum depth of cover of 12 inches (305 mm) where not installed directly under the mainline.

2. Provide a sufficient length of wire at each connection to allow for thermal expansion/shrinkage.

3. As a minimum, provide a 12-inch (305 mm) diameter loop at all splices and connections.

4. Terminations at valves will have 24-inches (610 mm) minimum free wire.

5. Install all above-ground wire runs and wire entries into buildings in electrical conduit.

   Exception: No conduit is required when wiring above ground manifolds from the valve to the ground immediately beneath it.

6. Provide common wires with a different color than the power wires (white shall be used for common wires).

7. Connections are to be made using UL approved devices specifically designed for direct burial.

8. All splices shall be enclosed within a valve box.

F. Hydraulic control tubing.

1. For hydraulic control systems, use a water supply that is filtered and free of deleterious materials, as defined by the hydraulic control system manufacturer. Install a backflow prevention device where the hydraulic control system is connected to potable water supplies.

2. Install tubing in trenches freely and spaced so that it will not rub against pipe, fittings, or other objects that could score the tubing, and with a minimum 12-inch (305 mm) diameter loop at all turns and connections. Provide a minimum depth of cover of 12 inches (305 mm).

3. Connect tubing with couplings and collars recommended by the tubing manufacturer. All splices shall be made in valve boxes. Prefill tubing with water, expelling entrapped air and testing for leaks prior to installation.

   Install exposed tubing in a protective conduit manufactured from Schedule 40 UV protected PVC or electrical conduit.

PART VI: TESTING & INSPECTIONS

A. Purpose. All materials and installations covered by the Irrigation Code shall be inspected by the governing agency to verify compliance with the Irrigation Code.

B. Rough inspections. Rough inspections will be performed throughout the duration of the installation. These inspections will be made by the governing agency to ensure that the installation is in compliance with the design intent, specifications, and the Irrigation Codes. Inspections will be made on the following items at the discretion of the governing agency:

1. Sprinkler layout and spacing: This inspection will verify that the irrigation system design is accurately installed in the field. It will also provide for alteration or modification of the system to meet field conditions. To pass this inspection, sprinkler/emitter spacing should be within ± 5 percent of the design spacing.

2. Pipe installation depth: All pipes in the system shall be installed to depths as previously described in this code.

3. Test all mainlines upstream of the zone valves as follows:

   a. Fill the completely installed pipeline slowly with water to expel air. Allow the pipe to sit full of water for 24 hours to dissolve remaining trapped air.

   b. Using a metering pump, elevate the water pressure to the maximum static supply pressure expected and hold there for a period of 2 hours, solvent-weld pipe connections shall have no leakage.

   c. For gasketed pipe main lines add water as needed to maintain the pressure. Record the amount of water added to the system over the 2-hour period.

   d. Use the following formulas to determine the maximum allowable leakage limit of gasketed pipe.

   DUCTILE IRON:

$$L = \frac{SDP}{133{,}200}$$

   PVC, GASKETED JOINT:

$$L = \frac{NDP}{7,400}$$

Where:

L = allowable leakage (gph),

N = number of joints,

D = nominal diameter of pipe (inches),

P = average test pressure (psi), and

S = length of pipe (fi).

e. When testing a system which contains metal-seated valves, an additional leakage per closed valve of 0.078 gph/inch of nominal valve size is allowed.

C. Final inspection. When the work is complete the contractor shall request a final inspection.

1. Cross connection control and backflow prevention.

a. Public or domestic water systems: Check that an approved backflow prevention assembly is properly installed and functioning correctly. Review the location of the assembly to check that it is not creating a hazard to pedestrians or vehicular traffic.

b. Water systems other than public or domestic water systems: Check that the proper backflow prevention assemblies are provided.

c. All assemblies that can be, will be tested by a technician certified for backflow testing by a State recognized certifying board prior to being placed into service.

2. Sprinkler coverage testing.

a. All sprinklers must be adjusted to minimize overspray onto buildings and paved areas. Minor tolerances shall be made to allow for prevailing winds.

b. All sprinkler controls must be adjusted to minimize runoff of irrigated water. Water application rates shall not exceed the absorption rate of the soil.

c. All sprinklers must operate at their design radius of throw. Nozzle sizes and types called for in the system design must have been used. All nozzles within the same zone shall have matched precipitation rates unless otherwise directed in order to increase efficiency by adjusting the nozzle selection to match site conditions.

d. Spray patterns must overlap as designed (a.k.a. head to head coverage) or placed to achieve the highest possible distribution uniformity using the manufacturer's specifications.

e. Sprinklers must be connected, as designed, to the appropriate zone.

f. Sprinkler heads must operate within 20 percent of the optimum operating pressure but not more than the maximum nor less than the minimum guidelines as specified by the manufacturer. If the dynamic water pressure at the site's water source(s) is too low to achieve this pressure range at the sprinklers, a booster pump or alternate source shall be required. If the dynamic water pressure at the site's water source(s) is too high to achieve this pressure range at the sprinklers, a pressure regulating device shall be required at either the source, the zone valve, or the sprinklers, or any combination thereof.

D. Site restoration.

1. All existing landscaping, pavement, and grade of areas affected by work must be restored to original condition or to the satisfaction of the governing authority.

Verify that the pipeline trenches have been properly compacted to the densities required by the plans and specifications.

E. Record Drawings.

1. A record drawing shall be required of all irrigation systems installed on commercial and residential developments and shall contain the following information:

a. Location, type pressure and maximum flow available of all water sources. Include limitations like days of week watering requirements.

b. Location type and size of all components including sprinklers, microirrigation, main and lateral piping, master valves, valves, moisture sensors, rain sensors, controllers, pump start relays, backflow devices, pumps, wells, etc.

c. The flow rate, application rate (inches per hour), and the operating pressure for the sprinklers and microirrigation within each zone.

d. An irrigation schedule for each zone, for each season (monthly is preferred), indicating the frequency and duration each zone should operate to meet the plant water requirements without rainfall and stay within the hydraulic capacities of the sprinkler system installed.

e. The name, address, phone, email, professional license or certification number of the installation contractor.

f. Date of installation.

g. Irrigation system maintenance schedule that shall include, but is not limited to the following:

1. routine visual inspections (at least 4 per year);

2. adjustments to components to keep sprinklers straight, at the right height;

3. aligned and unobstructed nozzles and screens cleaned;

4. filters cleaned and sensors monitored,; and

5. pressures and flows at the source and sprinklers are correct for original design.

F. Irrigation System Maintenance.

a. Repairs to all irrigation components shall be done with originally installed components, equivalent components or those with greater efficiency.

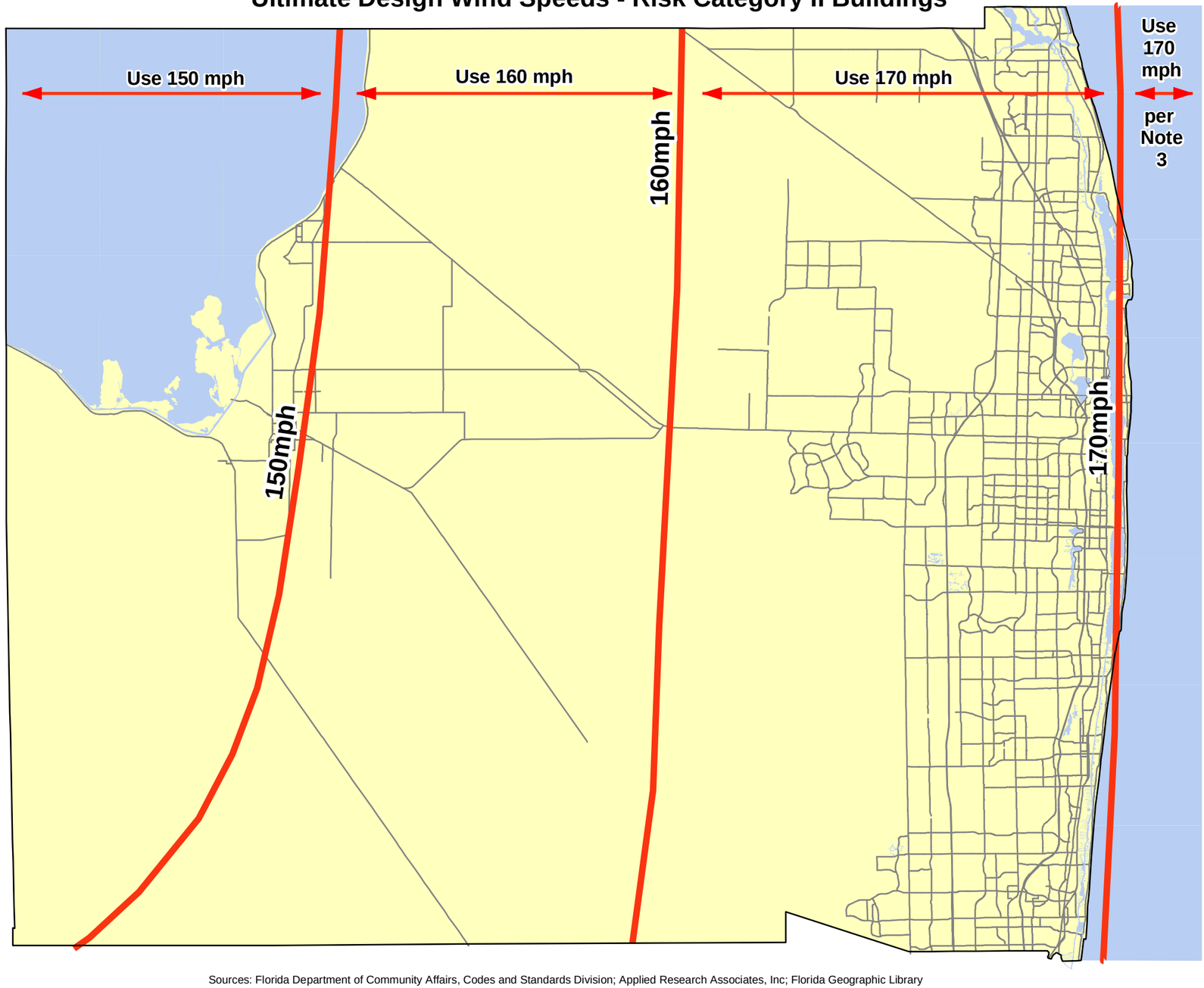
b. The operation of the irrigation system outside of the normal watering window shall be allowed for evaluating, maintaining or repairing the system or its components.

G. Irrigation system management.

a. The frequency (times per week/month) and duration (minutes/hours) of the operation of each zone shall be adjusted and operate in order to meet the water needs of the plants within each zone as a supplement to rainfall. Adjustments shall be made a minimum 4 times per year to match the seasonal changes of the plants and the operational restrictions.

b. It is recommended that the schedule be adjusted monthly or controllers be properly installed and programmed to automatically adjust to maximize water savings.

Palm Beach County - Figure 1609.3(1)
Ultimate Design Wind Speeds - Risk Category II Buildings



Sources: Florida Department of Community Affairs, Codes and Standards Division; Applied Research Associates, Inc; Florida Geographic Library

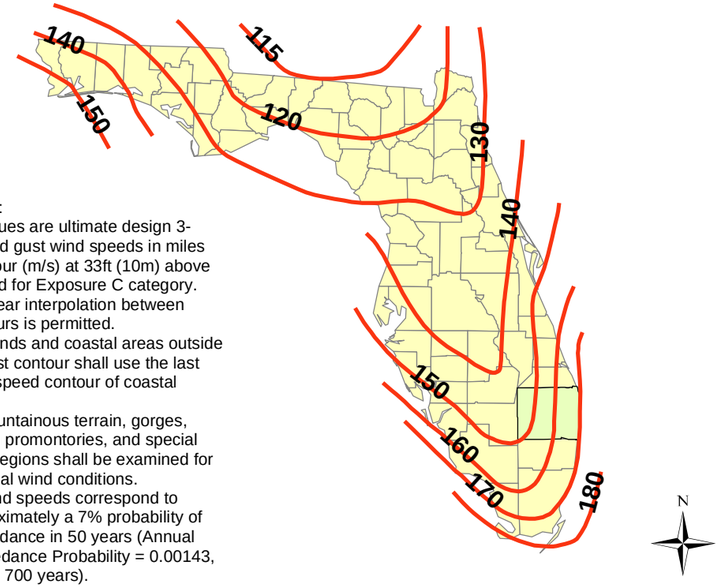
The ultimate design wind speed, Vult, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1), 1609.3(2), 1609.3(3), and 1609.3(4). The ultimate design wind speed, Vult, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, Vult, for use in the design of Risk Category III buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, Vult, for use in the design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(3). The ultimate design wind speed, Vult, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(4). The ultimate design wind speed, Vult, for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local jurisdiction requirements. The ultimate design wind speeds, Vult, determined by the local jurisdiction shall be in accordance with Chapter 26 of ASCE 7. The exact location of wind speed lines shall be established by local ordinance using recognized physical landmarks such as major roads, canals, rivers and lake shores wherever possible. To determine the applicable wind speed of a particular parcel, Palm Beach County has developed separate Geographic Information Systems (GIS) tools for each of the Risk Categories, available on the Building Division website at http://discover.pbcgov.org/pzb/Maps/Wind-Speeds.aspx

WIND-BORNE DEBRIS REGION. Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the coastal mean high water line where the ultimate design wind speed, Vult, is 130 mph (58 m/s) or greater; or
2. In areas where the ultimate design wind speed is 140 mph (63.6 m/s) or greater. Linear interpolation between contours may not be utilized in the determination of the Wind-Borne Debris Region. All of Unincorporated Palm Beach County is within the Wind-Borne Debris Region.

For Risk Category II buildings and other structures and Risk Category III buildings and other structures, except health care facilities, the wind-borne debris region shall be based on Figure 1609.3(1). For Risk Category III health care facilities, the wind-borne debris region shall be based on Figure 1609.3(2). For Risk Category IV buildings and other structures, the wind-borne debris region shall be based upon Figure 1609.3(3).

Figure 1609.3(1) Ultimate Design Wind Speeds, for Risk Category II Buildings and Other Structures



Notes:
1. Values are ultimate design 3-second gust wind speeds in miles per hour (m/s) at 33ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (Annual Exceedance Probability = 0.00143, MRI = 700 years).

PALM BEACH COUNTY AMENDMENTS TO THE FLORIDA BUILDING CODE - BUILDING, 7th EDITION (2020)

Exposure categories to be utilized for design shall be in accordance with Section 1609.4 of the Florida Building Code, Building.

0 5 10 Miles

N

Date: 10/6/2020 S:\Work\skubber\Projects\Building Department\Wind_Data\WindSpeeds_2020\UltimateDesignWindSpeedMaps_1609.3(1).mxd/sek

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(561) 233-5000
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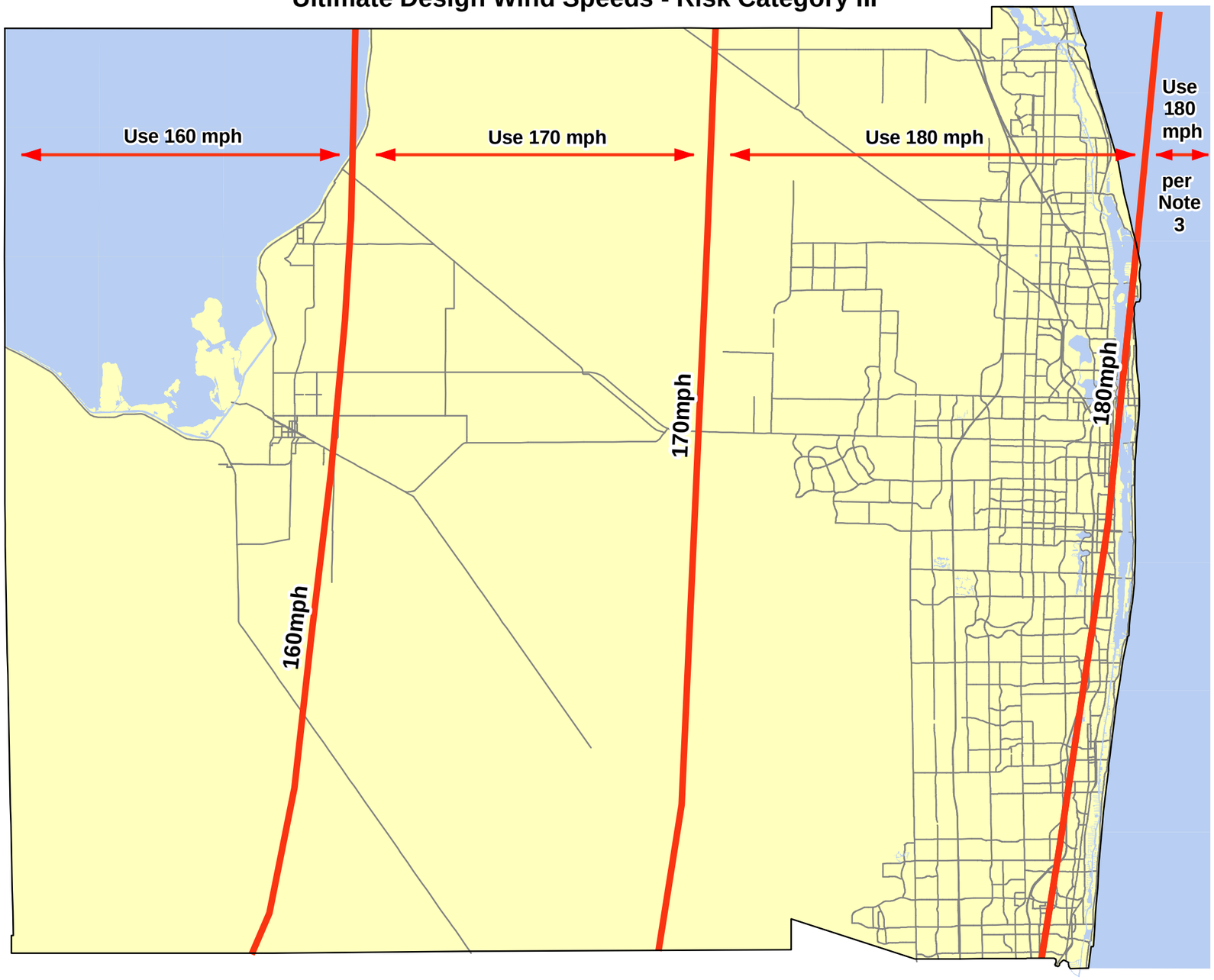
www.pbcgov.com/pzb

Palm Beach County - Figure 1609.3(2)
Ultimate Design Wind Speeds - Risk Category III



Sources: Florida Department of Community Affairs, Codes and Standards Division; Applied Research Associates, Inc; Florida Geographic Library

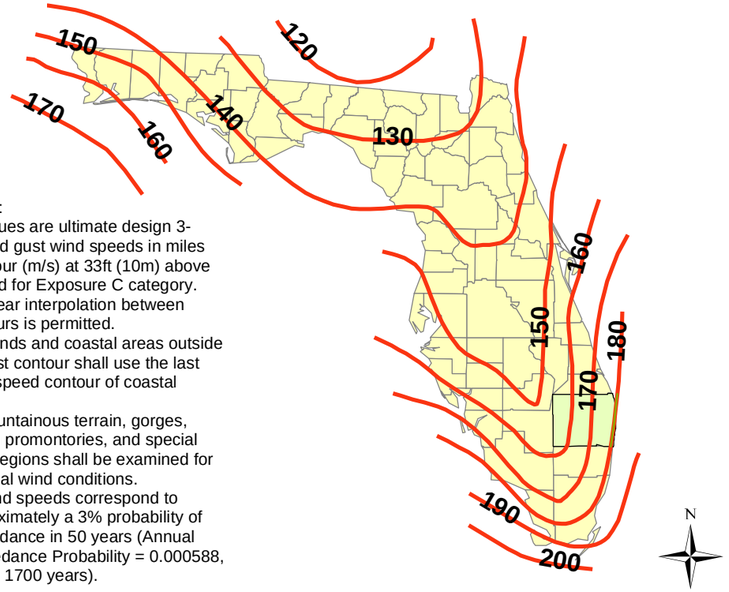
The ultimate design wind speed, Vult, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1), 1609.3(2), 1609.3(3), and 1609.3(4). The ultimate design wind speed, Vult, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, Vult, for use in the design of Risk Category III buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, Vult, for use in the design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(3). The ultimate design wind speed, Vult, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(4). The ultimate design wind speed, Vult, for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local jurisdiction requirements. The ultimate design wind speeds, Vult, determined by the local jurisdiction shall be in accordance with Chapter 26 of ASCE 7. The exact location of wind speed lines shall be established by local ordinance using recognized physical landmarks such as major roads, canals, rivers and lake shores wherever possible. To determine the applicable wind speed of a particular parcel, Palm Beach County has developed separate Geographic Information Systems (GIS) tools for each of the Risk Categories, available on the Building Division website at http://discover.pbcgov.org/pzb/Maps/Wind-Speeds.aspx

WIND-BORNE DEBRIS REGION. Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the coastal mean high water line where the ultimate design wind speed, Vult, is 130 mph (58 m/s) or greater; or
2. In areas where the ultimate design wind speed is 140 mph (63.6 m/s) or greater. Linear interpolation between contours may not be utilized in the determination of the Wind-Borne Debris Region. All of Unincorporated Palm Beach County is within the Wind-Borne Debris Region.

For Risk Category II buildings and other structures and Risk Category III buildings and other structures, except health care facilities, the wind-borne debris region shall be based on Figure 1609.3(1). For Risk Category III health care facilities, the wind-borne debris region shall be based on Figure 1609.3(2). For Risk Category IV buildings and other structures, the wind-borne debris region shall be based upon Figure 1609.3(3).

Figure 1609.3(2) Ultimate Design Wind Speeds, for Risk Category III Buildings and Other Structures



Notes:
1. Values are ultimate design 3-second gust wind speeds in miles per hour (m/s) at 33ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (Annual Exceedance Probability = 0.000588, MRI = 1700 years).

PALM BEACH COUNTY AMENDMENTS TO THE FLORIDA BUILDING CODE - BUILDING, 7th EDITION (2020)

Exposure categories to be utilized for design shall be in accordance with Section 1609.4 of the Florida Building Code, Building.

0 5 10 Miles

Date: 10/6/2020 S:\Work\skubber\Projects\Building Department\Wind_Data\WindSpeeds_2020\UltimateDesignWindSpeedMaps_1609.3(2).mxd/sek

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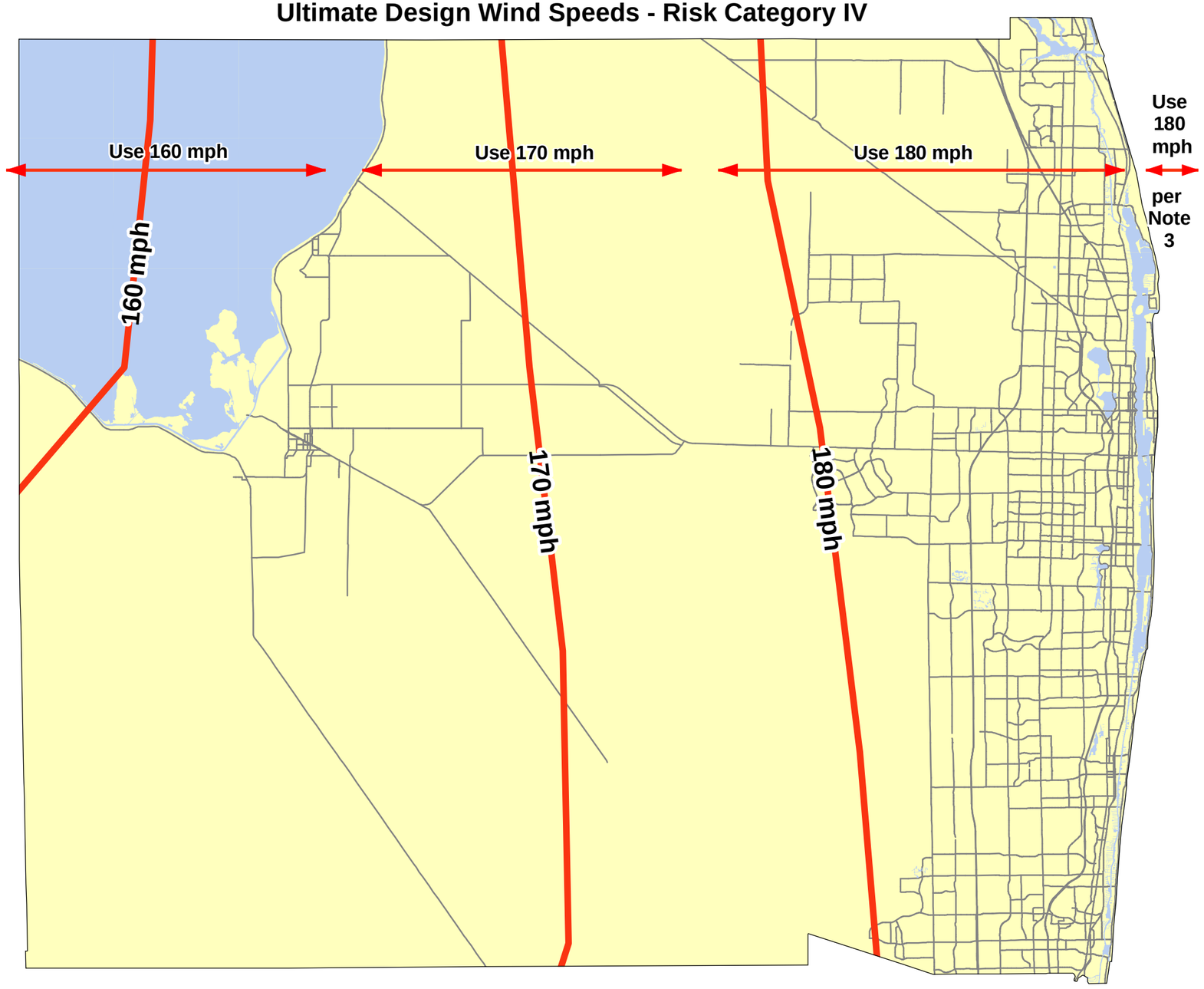
Palm Beach County - Figure 1609.3(3)
Ultimate Design Wind Speeds - Risk Category IV



Sources: Florida Department of Community Affairs, Codes and Standards Division; Applied Research Associates, Inc; Florida Geographic Library

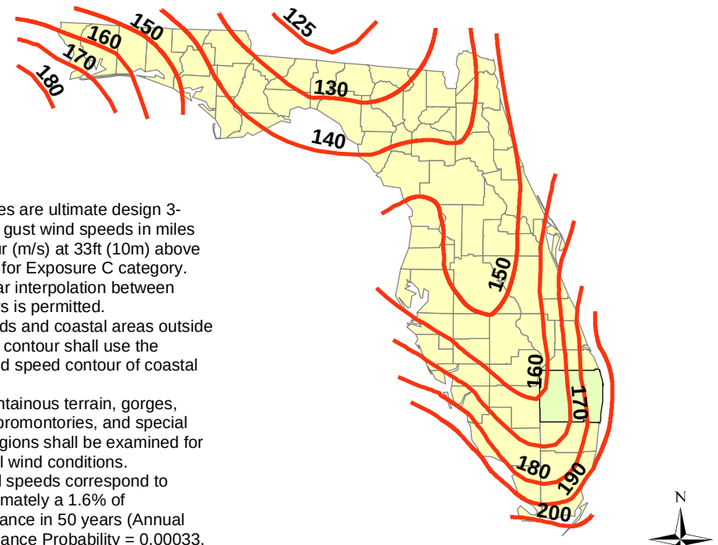
The ultimate design wind speed, Vult, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1), 1609.3(2), 1609.3(3), and 1609.3(4). The ultimate design wind speed, Vult, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, Vult, for use in the design of Risk Category III buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, Vult, for use in the design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(3). The ultimate design wind speed, Vult, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(4). The ultimate design wind speed, Vult, for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local jurisdiction requirements. The ultimate design wind speeds, Vult, determined by the local jurisdiction shall be in accordance with Chapter 26 of ASCE 7. The exact location of wind speed lines shall be established by local ordinance using recognized physical landmarks such as major roads, canals, rivers and lake shores wherever possible. To determine the applicable wind speed of a particular parcel, Palm Beach County has developed separate Geographic Information Systems (GIS) tools for each of the Risk Categories, available on the Building Division website at http://discover.pbcgov.org/pzb/Maps/Wind-Speeds.aspx

WIND-BORNE DEBRIS REGION. Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the coastal mean high water line where the ultimate design wind speed, Vult, is 130 mph (58 m/s) or greater; or
2. In areas where the ultimate design wind speed is 140 mph (63.6 m/s) or greater. Linear interpolation between contours may not be utilized in the determination of the Wind-Borne Debris Region. All of Unincorporated Palm Beach County is within the Wind-Borne Debris Region.

For Risk Category II buildings and other structures and Risk Category III buildings and other structures, except health care facilities, the wind-borne debris region shall be based on Figure 1609.3(1). For Risk Category III health care facilities, the wind-borne debris region shall be based on Figure 1609.3(2). For Risk Category IV buildings and other structures, the wind-borne debris region shall be based upon Figure 1609.3(3).

Figure 1609.3(3) Ultimate Design Wind Speeds, for Risk Category IV Buildings and Other Structures



Notes:
1. Values are ultimate design 3-second gust wind speeds in miles per hour (m/s) at 33ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 1.6% of exceedance in 50 years (Annual Exceedance Probability = 0.00033, MRI = 3000 years).

PALM BEACH COUNTY AMENDMENTS TO THE FLORIDA BUILDING CODE - BUILDING, 7th EDITION (2020)

Exposure categories to be utilized for design shall be in accordance with Section 1609.4 of the Florida Building Code, Building.

0 5 10 Miles

N

Date: 10/6/2020 S:\Work\skubber\Projects\Building Department\Wind_Data\WindSpeeds_2020\UltimateDesignWindSpeedMaps_1609.3(3).mxd/sek

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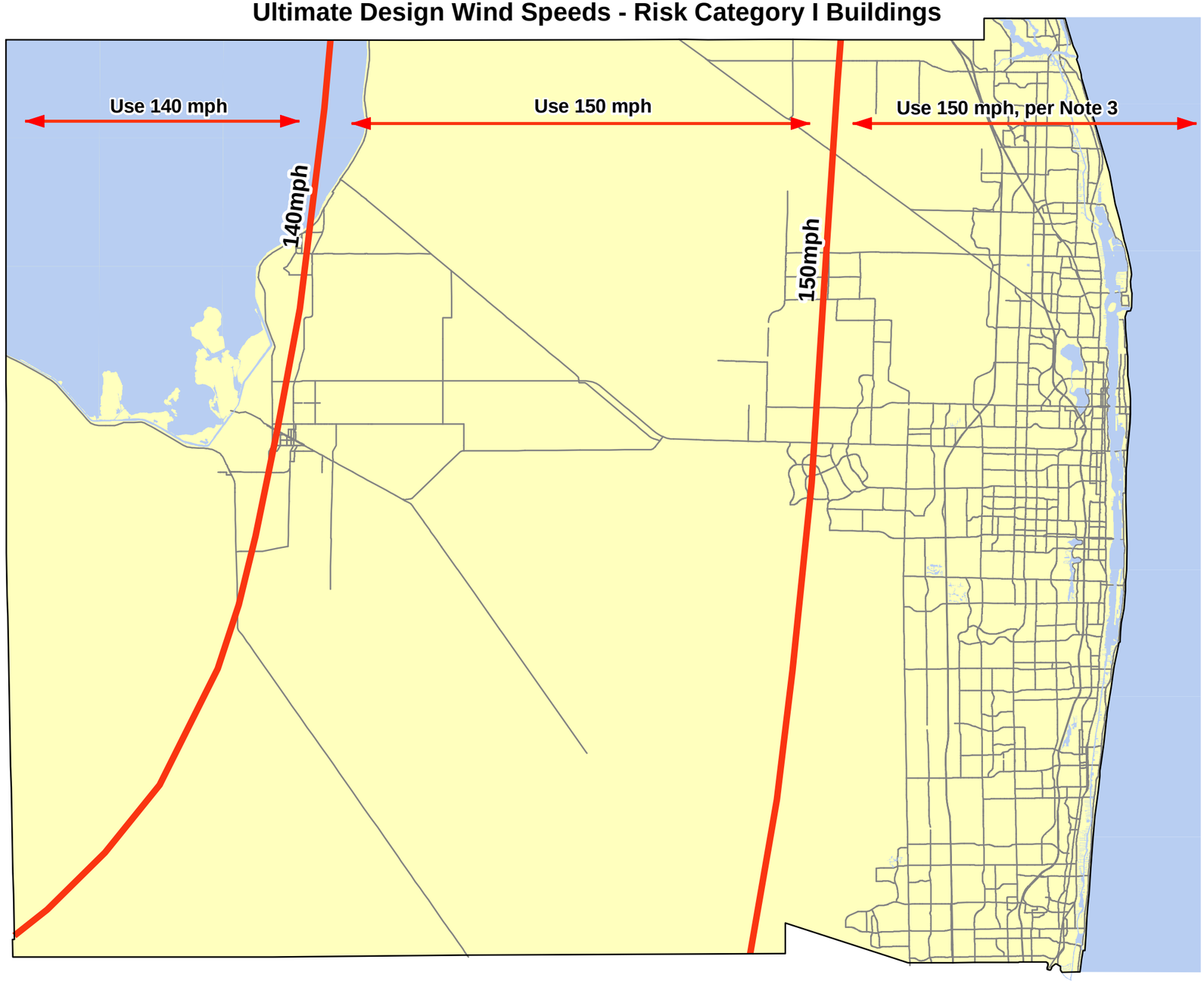
Palm Beach County - Figure 1609.3(4)
Ultimate Design Wind Speeds - Risk Category I Buildings



Sources: Florida Department of Community Affairs, Codes and Standards Division; Applied Research Associates, Inc; Florida Geographic Library

The ultimate design wind speed, Vult, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1), 1609.3(2), 1609.3(3), and 1609.3(4). The ultimate design wind speed, Vult, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, Vult, for use in the design of Risk Category III buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, Vult, for use in the design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(3). The ultimate design wind speed, Vult, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(4). The ultimate design wind speed, Vult, for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local jurisdiction requirements. The ultimate design wind speeds, Vult, determined by the local jurisdiction shall be in accordance with Chapter 26 of ASCE 7. The exact location of wind speed lines shall be established by local ordinance using recognized physical landmarks such as major roads, canals, rivers and lake shores wherever possible. To determine the applicable wind speed of a particular parcel, Palm Beach County has developed separate Geographic Information Systems (GIS) tools for each of the Risk Categories, available on the Building Division website at http://discover.pbcgov.org/pzb/Maps/Wind-Speeds.aspx

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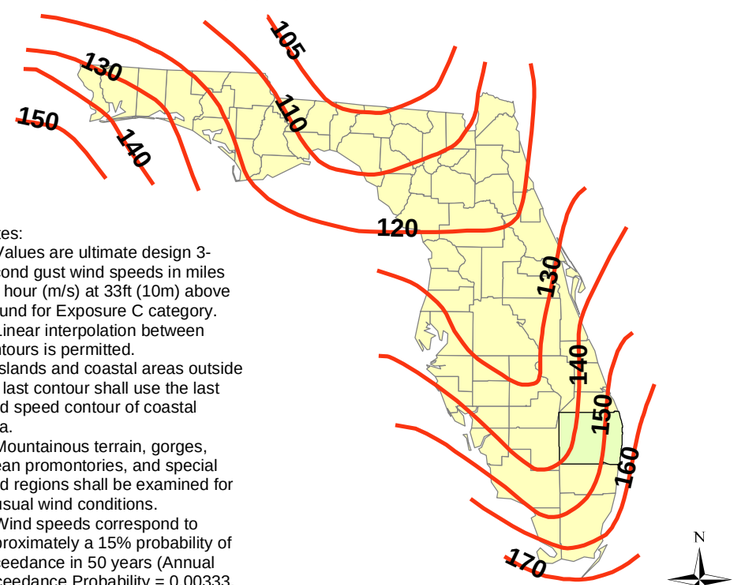
1. Within 1 mile (1.61 km) of the coastal mean high water line where the ultimate design wind speed, Vult, is 130 mph (58 m/s) or greater; or
2. In areas where the ultimate design wind speed is 140 mph (63.6 m/s) or greater. Linear interpolation between contours may not be utilized in the determination of the Wind-Borne Debris Region. All of Unincorporated Palm Beach County is within the Wind-Borne Debris Region.

For Risk Category II buildings and other structures and Risk Category III buildings and other structures, except health care facilities, the wind-borne debris region shall be based on Figure 1609.3(1). For Risk Category III health care facilities, the wind-borne debris region shall be based on Figure 1609.3(2). For Risk Category IV buildings and other structures, the wind-borne debris region shall be based upon Figure 1609.3(3).

Figure 1609.3(4) Ultimate Design Wind Speeds, for Risk Category I Buildings and Other Structures



Notes:
1. Values are ultimate design 3-second gust wind speeds in miles per hour (m/s) at 33ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 15% probability of exceedance in 50 years (Annual Exceedance Probability = 0.00333, MRI = 300 years).

PALM BEACH COUNTY AMENDMENTS TO THE FLORIDA BUILDING CODE - BUILDING, 7th EDITION (2020)

Exposure categories to be utilized for design shall be in accordance with Section 1609.4 of the Florida Building Code, Building.

0 5 10 Miles

N

Date: 10/6/2020 S:\Work\skubber\Projects\Building Department\Wind_Data\WindSpeeds_2020\UltimateDesignWindSpeedMaps_1609.3(4).mxd/sek

Planning, Zoning and Building Department - GIS
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West Palm Beach, FL 33411
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pzbmap@pbcgov.com
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MEMORANDUM

Agenda Item No. 7(A)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: February 5, 2008

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Ordinance relating to water use efficiency standards

Ordinance 08-14

The accompanying ordinance was prepared and placed on the agenda at the request of Commissioner Natacha Seijas.

R. A. Cuevas, Jr.
County Attorney

RAC/bw

Memorandum

Date: February 5, 2008

To: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Ordinance relating to water use efficiency standards

---

The ordinance relating to water use efficiency standards will not have a fiscal impact to Miami-Dade County. The development of the Water Use Efficiency Manual, reviews of Development of Regional Impact (DRI) projects and the public information and outreach activities required in the ordinance will be performed using existing resources.

There will not be an impact to the public except for High Efficiency Appliances, which currently have a higher initial cost. In addition, there will be a fiscal impact to a developer if a DRI project is required to install an alternative water supply, however; the impact will depend on the size and scope of the project.

Susanne M. Torriente
Assistant County Manager

fis00908

MEMORANDUM

(Revised)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: February 5, 2008

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 7(A)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Bid waiver requiring County Manager's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 7(A)
2-5-08

ORDINANCE NO. 08-14

ORDINANCE RELATING TO WATER USE EFFICIENCY STANDARDS; CREATING SECTION 8-31 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA; ADOPTING LOCAL TECHNICAL AMENDMENTS TO FLORIDA BUILDING CODE FOR NEW RESIDENTIAL AND COMMERCIAL DEVELOPMENTS; REVISING AND PROVIDING FOR MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES, FIXTURE FITTINGS AND APPLIANCES; CREATING SECTIONS 32-84, 32-85 AND 32-86 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA; PROVIDING FOR PUBLICATION OF WATER USE EFFICIENCY STANDARDS MANUAL FOR NEW RESIDENTIAL AND COMMERCIAL DEVELOPMENTS; PROVIDING FOR EVALUATION OF ALTERNATIVE WATER SUPPLY PROJECTS FOR NEW DEVELOPMENTS OF REGIONAL IMPACT; PROVIDING FOR WATER USE EFFICIENCY AND CONSERVATION EDUCATION AND OUTREACH; AMENDING SECTION 8A-381 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA TO REQUIRE SUBMETERS IN MULTI-FAMILY RESIDENTIAL DEVELOPMENTS; PROVIDING SEVERABILITY, INCLUSION IN THE CODE AND AN EFFECTIVE DATE

WHEREAS, Miami-Dade County's main source of drinking water is the Biscayne Aquifer which also serves two national parks, the Everglades and Biscayne National Park, agricultural interests, industrial and other users; and

WHEREAS, the Miami-Dade Water and Sewer Department ("Department") supplies potable water to over 400,000 retail customers and provides wholesale water service to 15 municipalities; and

WHEREAS, approximately 348 million gallons per day is withdrawn from the Biscayne Aquifer by the Department for public water supply; and

WHEREAS, Miami-Dade County is located within the Lower East Coast planning area of the South Florida Water Management District ("District"); and

WHEREAS, the District has adopted a new Regional Water Availability Rule that includes the Lower East Coast as a geographic area with restrictions on the utilization of specific water supply sources; and

WHEREAS, the Department has applied to the District for a 20-year Consumptive Use Permit; and

WHEREAS, the County is required to develop alternative water sources to meet increased demands over the next 20 years; and

WHEREAS, the County is making significant financial investments in capital improvement projects to provide adequate water supply for projected water demands by the use of alternative water supplies such as reclaimed water and brackish water from the Floridan Aquifer; and

WHEREAS, this Board finds that the efficient use and conservation of water reflect responsible use of a limited and precious resource that is essential to life, and will prevent and reduce wasteful, uneconomical, impractical, or unreasonable use of water resources; and

WHEREAS, in 2006, this Board approved the Miami-Dade County Water Use Efficiency Five-Year Plan ("Water Use Efficiency Plan") which is goal-based, accountable and measures water conservation efforts; and

WHEREAS, in 2007, the District approved the Water Use Efficiency Plan for 20 years to coincide with the County's proposed 20-year Consumptive Use Permit; and

WHEREAS, a stakeholder Advisory Committee appointed by the Director of the Water and Sewer Department provided this Board with recommendations to achieve maximum water use savings for all new development in Miami-Dade County; and

WHEREAS, in accordance with R-884-06, Miami-Dade County is a partner with the Environmental Protection Agency WaterSense Program for the promotion and implementation of water use saving technologies through its Water-Use Efficiency Plan; and

WHEREAS, Miami-Dade County is an active participant in the Florida Department of Environmental Protection Conserve Florida Water Program for the development of statewide guidelines for water use efficiency; and

WHEREAS, this Board finds that significant amounts of water can be saved through the installation of efficient water fixtures, appliances and other water saving measures and equipment; and

WHEREAS, such water use efficiency measures in new developments will help ensure that the County meets its water conservation goals provided in the Water Use Efficiency Plan for the duration of the County's 20-year water use permit; and

WHEREAS, the Florida Building Code, as amended by local technical amendments pursuant to Section 553.73(4)(b), Florida Statutes, is the uniform building code for Miami-Dade County; and

WHEREAS, based on the local conditions of water resources and the projected demand for water in Miami-Dade County, this Board finds that there is a local need to strengthen the requirements of the Florida Building Code for Miami-Dade County to meet the water conservation

goals provided in the Water Use Efficiency Plan and to ensure the availability of potable water to meet the County's projected demand for water and protect the public's health, safety and welfare; and

WHEREAS, the proposed local technical amendments to the Florida Building Code addresses the County's needs,

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA: BACK TO TOP

Section 1. Section 8-31 of the Code of Miami-Dade County is hereby created to read as follows: [1]

>>**Sec. 8-31. Local Technical Amendments to Florida Building Code**

(A) The County hereby adopts the following local technical amendments to Chapter 6 (Plumbing) of the Florida Building Code.

604.4 Maximum flow and water consumption.

The maximum water consumption flow rates and quantities for all plumbing fixtures, fixture fittings and appliances shall be in accordance with Table 604.4. Effective July 1, 2008, permit applications for new residential and commercial structures shall include high efficiency plumbing fixtures, fixture fittings and appliances as provided in Table 604.4. Such high efficiency plumbing fixtures, fixture fittings and appliances shall comply with the specifications of U.S. Environmental Protection Agency (EPA) WaterSense Program or the Uniform North American Requirements (UNAR) Guidelines and Specifications.

Exceptions:

1. Blowout design water closets [3.5 gallons (13L) per flushing cycle].
2. Vegetable sprays.

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1 Words Stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

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3. Clinical sinks [4.5 gallons (17 L) per flushing cycle].
4. Service sinks.
5. Emergency showers.<<

TABLE 604.4

MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES>>,<< [[~~AND~~]] FIXTURE FITTINGS >>AND APPLIANCES<<

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE [[~~OR QUANTIFY~~]] [b]
Lavatory, private	[[~~2.2~~]] >>1.0<< gpm at 60 psi
Lavatory, public, (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head [a]	[[~~2.5~~]] >> 1.5<< gpm at 80 psi
Sink faucet	[[~~2.2~~]] >> 1.0<< gpm at 60 psi
Urinal	>>Waterless or 0.5<< gallon per flushing cycle
Water closet	[[~~1.6~~]] >>1.28<< gallons per flushing cycle
>>Dishwasher (residential)<<	>>6.5 gallons per cycle or less (Energy Star/Water Sense Certified) [c]<<
>>Dishwasher (commercial)<<	>>less than 1.2 gallons per rack for fill and dump machines and less than 0.9 gallons per rack for all other types of machines<<
>>Under the counter machines<<	>>1.0 gallon or less per rack for high-temperature machines and 1.7 gallons per rack for low-temperature machines<<
>>Washing machine<<	>>Water factor of 8 or lower (Energy Star/Water Sense Certified) [c]<<

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m
1 pound per square inch = 6.895 kPa.
a. A hand-held shower spray is a shower head.
b. Consumption tolerances shall be determined from referenced standards.
>>c. Water factor in gallons per cycle per cubic foot<<

BACK to TOP

>>(B) The County hereby adopts the following local technical amendments to Chapter 29 (Residential) of the Florida Building Code.

P2903.2 Maximum flow and water consumption.

The maximum water consumption flow rates and quantities for all plumbing fixtures, fixture fittings and appliances shall be in accordance with Table P2903.2a. Effective July 1, 2008, permit applications for new residential structures shall include high efficiency plumbing fixtures, fixture fittings and appliances as provided in Table P2903.2a. Such high efficiency plumbing fixtures, fixture fittings and appliances shall comply with the specifications of U.S. Environmental Protection Agency (EPA) WaterSense Program or the Uniform North American Requirements (UNAR) Guidelines and Specifications.<<

TABLE P2903.2a
MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES>>,<< [[~~AND~~]] FIXTURE FITTINGS AND >>APPLIANCES<<

PLUMBING FIXTURE OR FIXTURE FITTING	PLUMBING FIXTURE OR FIXTURE FITTING >>MAXIMUM FLOW RATE [b]<<
Lavatory faucet	[[~~2.2~~]] >>1.0<< gpm at 60 psi
Shower head [a]	[[~~2.5~~]]>>1.5<<gpm at 80 psi
Sink faucet	[[~~2.2~~]]>>1.0<< gpm at 60 psi
Water closet	[[~~1.6~~]]>>1.28<< gallons per flushing cycle
>>Dishwasher (residential)<<	>>6.5 gallons per cycle or less (Energy Star/Water Sense Certified) [c]<<
>>Washing Machine<<	>>Water factor of 8 or lower (Energy Star/Water Sense Certified) [c]<<

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m
1 pound per square inch = 6.895 kPa.
a. A handheld shower spray is a showerhead.
b. Consumption tolerances shall be determined from referenced standards.
>>c. Water factor in gallons per cycle per cubic foot<<

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Section 2. Section 32-84 of the Code of Miami-Dade County, Florida is hereby created to read as follows:

>>**Sec. 32-84. Water use efficiency standards manual**

The Miami-Dade Water and Sewer Department ("MDWASD"), in consultation with the Planning Department and such other applicable county departments and agencies, shall publish a water use efficiency standards manual to achieve maximum water savings in new residential and commercial developments in the incorporated and unincorporated areas of Miami-Dade County. The manual shall be initially published on July 1, 2008 and shall be updated annually on July 1 following approval by the County Commission. Each applicant for water service to a new residential or commercial development in incorporated and unincorporated areas of Miami-Dade County shall include in its application every water use efficiency standard that will be incorporated into the new development. The County or applicable municipality shall review the application for compliance with the manual. In evaluating the application for compliance, the County or applicable municipality will consider the availability of products required to implement the water use efficiency standards. The developer's agreement for water service shall include the water use efficiency standards approved by the County.<<

Section 3. Section 32-85 of the Code of Miami-Dade County is hereby created to read as follows:

>>**Sec. 32-85. Alternative water supply for developments of regional impact.**

Applications for new Developments of Regional Impact ("DRI") with a projected water demand of one million gallons per day or greater shall be evaluated by MDWASD to determine the feasibility of an alternative water supply project. Such projects may include the installation of a reverse osmosis plant, wastewater reclamation facility and reuse distribution system.<<

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BACK TO TOP

Section 4. Section 32-86 of the Code of Miami-Dade County is hereby created to read as follows:

>>**Sec. 32-86. Water use efficiency and conservation education and outreach.**

The Miami-Dade County Water Use Efficiency Manager shall provide public information, education and outreach on all water use efficiency standards and water conservation programs.<<

Section 5. Section 8A-381 of the County of Miami-Dade County, Florida is hereby amended to read as follows:

Sec. 8A-381. Intent and application.

* * *

(c) The provisions of this article shall apply to multiple unit properties utilizing water services. >>Effective July 1, 2008, all permit applications for new multi-family residential developments shall be required to include a submeter for each individual dwelling unit.<<

Section 6. If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

Section 7. It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance, including any Sunset provision, shall become and be made a part of the Code of Miami-Dade County, Florida. The sections of this ordinance may be renumbered or relettered to accomplish such intention and the word "ordinance" may be changed to "section", "article" or other appropriate word.

BACK to TOP

Section 8. This ordinance shall become effective on July 1, 2008 unless vetoed by the Mayor within ten (10) days of enactment, and if vetoed, shall become effective only upon an override by this Board.

PASSED AND ADOPTED: **February 5, 2008**

Approved by County Attorney as to form and legal sufficiency.

Prepared by:

Henry N. Gillman

Sponsored by Commissioner Natacha Seijas

BROWARD COUNTY
BOARD OF RULES AND APPEALS

ONE NORTH UNIVERSITY DRIVE
SUITE 3500-B
PLANTATION, FLORIDA 33324

PHONE: 954-765-4500
FAX: 954-765-4504
www.broward.org/codeappeal

October 13, 2020

RE: Florida Building Code – 7th Edition (2020) Residential, Section 2903.2, Water Supply System

To whom it may concern:

The following amendments to the Florida Building Code – 7th Edition (2020) Residential – Section 2903.2, Water Supply System were passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is December31, 2020.

The amendments consist as follows:

- Residential, CH 29- Section 2903.2, Water Supply System, Table P2930.2
- **Total of Paragraphs Changed: 3**

A full amended document is to be posted on the www.floridabuiding.org. If needed please feel free to contact our office 954-765-4500 – or email us at rulesboard@broward.org at any time.

Thank You,

Ruth Boselli Administrative Coordinator
Attachments

TABLE P2903.2
MAXIMUM FLOR RATES AND CONSUMPTION FOR PLUMBING FIXTURES, AND FIXTURE FITTINGS [b] AND APPLIANCES

PLUMBING FIXTURE OR FIRTURE FITTING	MAXIMUM FLOR RATE OR QUANTITY
Lavatory faucet	~~2.2~~ 1.5 gpm at 60 psi
Shower head [a]	2.0 ~~2.2~~ gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Water closet	~~1.6~~ 1.28 gallons per flushing cycle
Dishwasher (Residential)	6.5 gallons per cycle or less (Energy Star/Watersense Certified) (c)
Washing Machine	Water factor or 8 or lower (Energy Star/Watersense Certified) (c)

c. Water factor in gallons per cycle per cubic foot
Exception: All fixtures, fittings and appliances with U.S. Environmental Agency WaterSense® (EPA) Label

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Broward County
Board of Rules and Appeals
One N. University Drive, Suite 3500-B, Plantation, Florida 33324
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broward.org/codeappeals

BROWARD COUNTY LOCAL AMENDMENT
Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro

Address: 1 North University Dr. Suite 3500B Plantation, FL 33324

E-mail: jdipietro@broward.org

Phone: 954-765-4500

Fax: 954-765-4504

Code: 7th Edition (2020) FBC – Residential

Section #: P2903 Water Supply System, Table P2903.2

Text of Modification (additions underlined; deletions ~~stricken~~):

Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

   This Amendment exceeds minimum standards by reducing plumbing fixture water flow rates currently required by the Florida Building Code "Residential" thereby increasing water conservation standards. This proposed amendment will adopt U.S. Environmental Protection Agency (EPA) WaterSense Label as an Alternate for Table P2903.2.

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

   Water conservation is an essential part of the Broward water supply plan and implementation of high efficiency plumbing requirements is supported by the Broward County Board of County Commissioners, the Broward League of Cities and the Broward Water Resources Task Force. The Biscayne Aquifer is the primary source of drinking water for all of Broward County and offers the lowest cost water supply for the region. However, concerns about future water availability resulted in the permanent restrictions on withdrawals from this Aquifer while saltwater intrusion limits withdrawals from two coastal well fields and threatens several others. Efforts to conserve water are essential to preserving the capacity of existing water sources while reducing the need to develop alternative water supplies which will impose a substantial cost to rate payers.

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3. Explain how the local need is addressed by the proposed local amendment.

   This modification will help reduce the water demands on our Biscayne Aquifer while not creating a health or inconvenience problem for the residents of this area.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

   The local need of water conservation is very serious as mandated by the Broward Commission. The establishment of this amendment is only one of the means to help prevent a water shortage situation.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

   Due to the advancement in technology by all Plumbing Fixture manufacturers and the need for additional water conservation, this amendment would have little to no recognizable impact on materials, products or construction developments.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

This amendment is modifying existing verbiage of the Florida Building Code "Residential"; therefore it does not address a new subject.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
   a) Impact to local government, relative to enforcement.
   b) Impact to property and building owners relative to cost of compliance.
   c) Impact to industry relative to the cost of compliance

   a) No impact.
   b) This modification will reduce impact fees charged by Broward County.
   c) *No impact.*

Broward BORA Public hearing and Vote October 8, 2020

Amendment Effective date: December 31, 2020

BROWARD COUNTY
BOARD OF RULES AND APPEALS

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PHONE: 954-765-4500
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October 12, 2020

RE: **Florida Building Code - 7th Edition (2020) - Residential – R4501.16 Electrical.**

To whom it may concern:

The following amendment to the Florida Building Code - 7th Edition (2020) Residential – R4501.16 Electrical was passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is December 31, 2020.

The amendments consist as follows:

Section – Residential – R4501.16 Electrical.

Sub-Section R4501.16.1 Maximum voltage. (new)

- **Total of paragraphs changed : 6**

A full amended document is to be posted on the www.floridabuiding.org, if needed please feel free to contact our office 954-765-4500 - or email us at rulesboard@broward.org at any time.

Thank you,

Ruth Boselli
Administrative Coordinator

Attachments

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R4501.16 Electrical.
Electrical equipment wiring and installation, including the bonding and grounding of pool components, shall comply with Chapter 27 of the Florida Building Code, Building. Outlets supplying pool pump motors connected to single-phase 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, and outlets supplying other electrical equipment ~~and underwater luminaires operating at voltages greater than the low voltage contact limit~~, connected to single-phase, 120 volt through 240 volt branch circuits, rated 15 or 20 amperes, whether by receptacle or by direct connection, shall be provided with ground-fault circuit interrupter protection for personnel.

R4501.16.1 Maximum voltage. The maximum voltage for each luminaire in any private swimming or bathing pools shall not exceed the Low Voltage Contact Limit, which is defined as a voltage not exceeding the following values:

(1) 15 volts (RMS) for sinusoidal alternating current
(2) 21.2 volts peak for nonsinusoidal alternating current
(3) 30 volts continuous direct current
(4) 12.4 volts peak for direct current that is interrupted at a rate of 10 to 200 Hertz The maximum incandescent lamp size shall be 300 watts.

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BROWARD COUNTY LOCAL AMENDMENT
Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro

Address: 1 North University Dr. Suite 3500B Plantation, FL 33324

E-mail: jdipietro@broward.org

Phone: 954-765-4500

Fax: 954-765-4504

Code: Florida Building Code, Building, 7th Edition (2020). Section R4501.16

Text of Modification (additions underlined; deletion ~~stricken~~):
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

   This amendment exceeds the minimum standards by requiring all swimming pool lighting fixtures to be low voltage (15 Volts or less) RMS for sinusoidal alternating current.

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

   South Florida has more swimming pools than other jurisdictions, also South Florida salty environment may cause loose or broken connections on electrical equipment.

3. Explain how the local need is addressed by the proposed local amendment.

   This modification will require all swimming pool lighting to be 15 volts or less RMS for sinusoidal alternating current, thereby reducing the probability of electrocution hazard of high voltage lighting in residential swimming pools.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

This modification will require all swimming pool lighting to be 15 volts or less RMS for sinusoidal alternating current, thereby reducing the probability of electrocution hazard of high voltage lighting in residential swimming pools.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

   No.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

   The Florida Building Code currently allows the use of high voltage and low voltage types of light fixtures. Thus, by only allowing low voltage pool light fixtures to be used for pool lighting would strengthen the code.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
   a) Impact to local government, relative to enforcement.

      None

   b) Impact to property and building owners relative to cost of compliance.

      Less than $50.00 per swimming pool

   c) Impact to industry relative to the cost of compliance

      Less than $50.00 per swimming pool

Broward County Board of Rules and Appeals Public hearing and vote on October 8th, 2020.

Amendment Effective date: December 31, 2020.

BROWARD COUNTY
BOARD OF RULES AND APPEALS

ONE NORTH UNIVERSITY DRIVE
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FAX: 954-765-4504
www.broward.org/codeappeal

October 12, 2020

RE: Florida Building Code - 7th Edition (2020) Plumbing Section 314- Sub- Section 314.2.1 — Condensate Disposal 1

To whom it may concern:

The following amendments to the Florida Building Code - 7th Edition (2020) Plumbing –Section 314- Condensates – Sub-section 314.2.1 were passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is December 31, 2020.

The amendments consist as follows:

- **Chapter 3 -Section 314 - Sub-section 314.2.1 –**
- **Total of paragraphs changed : 6**

A full amended document is to be posted on the www.floridabuiding.org, if needed please feel free to contact our office 954-765-4500 - or email us at rulesboard@broward.org at any time.

Thank you,

Ruth Boselli
Administrative Coordinator

Attachments

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Broward County Amendments to subsection 314.2.1 of the Florida Building Code - Plumbing, 7th Edition (2020)

Effective December 31, 2020.

CHAPTER 3 GENERAL REGULATIONS

SECTION 314 CONDENSATE DISPOSAL

[M] 314.2.1 Condensate drainage collection, use disposal.

Condensate from all cooling coils and evaporators of equipment served by an onsite cooling tower in a building or structure wherein the aggregate cooling capacity of the equipment exceeds 65,000 Btu/hr shall be collected and conveyed from the drain pan outlet and discharged to the cooling tower. Where an on-site cooling tower is not installed the condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

Exceptions:

1. Condensate from cooling coils and evaporators is not required to be collected and conveyed to an on-site cooling tower; provided 1.1 through 1.3 are met:

1.1 The equipment comprises 10% or less of the total capacity of the cooling tower system.

1.2 The equipment is located in an isolated or remote area.

1.3 The size of the equipment is 65,000 Btu/hr. or less.

2. In existing buildings condensate may be collected and conveyed to a cooling tower or discharged to an approved place of disposal.

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http://www.broward.org/codeappeals

Broward County Local Amendments

Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Statute

Name: Broward County Board of Rules & Appeals, Attention: James DiPietro, ADMINISTRATIVE DIRECTOR

Address: One North University Drive, Suite 3500-B, Plantation FL 33324

E-mail: jdipietro@broward.org

Phone: 954) 765-4500

Fax: (954) 765-4504

Code: 7th Edition (2020) Florida Building Code, Plumbing and Mechanical

Section #: Plumbing Section [M] 314.2.1 and

Text of Modification (additions underlined; deletion ~~stricken~~):
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?
   REQUIRES THE COLLECTION OF CONDENSATE FROM ALL COOLING COILS AND EVAPORATORS OF EQUIPMENT SERVICED BY ON SITE COOLING TOWER IN A BUILDING OR STRUCTURE WHEREIN THE AGGREGATE COOLING CAPACITY OF THE EQUIPMENT EXCEEDS 65,000 BTU/HR

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.
   BY FAR, THE MOST IMPORTANT DEMOGRAPHIC TREND AFFECTING WATER RESOURCES IS POPULATION GROWTH. SIGNIFICANT POPULATION GROWTH IS ANTICIPATED. ACCORDING TO THE MOST RECENT POPULATION PROJECTIONS, THE COUNTY IS PROJECTING A 13% INCREASE IN POPULATION TO NEARLY 2 MILLION RESIDENTS BY 2040. THIS ASSUMES POPULATION GROWTH RATES REMAIN MODERATED BY THE ECONOMIC DOWN TURN. HOWEVER, IN A COUNTY WITH THE 12TH LARGEST POPULATION IN THE UNITED STATES, EVEN A MODERATE GROWTH RATE TRANSLATES INTO A SUBSTANTIAL INCREASE IN WATER DEMAND. IN 2010, BROWARD COUNTY PUMPED APPROXIMATELY 233 MILLION GALLONS PER DAY (MGD) FROM THE BISCAYNE AQUIFER. HOWEVER, IN ACCORDANCE WITH THE REGIONAL WATER AVAILABILITY RULE, INCREASES IN WATER DEMAND MUST BE MET THROUGH ALTERNATIVE WATER SUPPLIES. BROWARD COUNTY HAS TO MAKEUP THE DIFFERENCE INCLUDING A PROJECTED INCREASE OF 22 MGD BY 2040 FROM THE FLORIDIAN AQUIFER OR OTHER WATER SUPPLIES (SUCH AS RECLAIMED WATER) WHICH REQUIRE MUCH HIGHER LEVELS OF TREATMENT BY REVERSE OSMOSIS AND/OR MEMBRANE FILTRATION, BOTH OF WHICH WILL REQUIRED NEW CAPITAL INVESTMENTS AND ENERGY INTENSIVE PROCESSES. IT HAS BEEN REPEATEDLY RECOGNIZED BY BROWARD WATER PROVIDERS AND ELECTED LEADERS THAT WATER CONSERVATION OFFER THE MOST COST EFFECTIVE AND IMMEDIATE MEANS TO MEET NEW WATER DEMANDS. WITHOUT EFFECTIVE WATER CONSERVATION BROWARD COUNTY'S CONTINUED GROWTH WILL BE DEPENDENT ON OUR ABILITY TO DEVELOP MORE COSTLY ALTERNATIVE WATER SUPPLIES.

   FLORIDA STATE STATUTES, SECTION 373.016(S), RECOGNIZES THAT THE WATER RESOURCE PROBLEMS OF THE STATE VARY FROM REGION TO REGION, BOTH IN MAGNITUDE AND COMPLEXITY. SPECIFICALLY, IN BROWARD COUNTY, THE

LIMITATIONS OF OUR AQUIFER, THE AMOUNT OF WATER THE STATE ALLOWS US TO WITHDRAW, THE INTRUSION OF SALT WATER INTO THE AQUIFER, AND THE INCREASED FUTURE DEMANDS THAT ARE PROJECTED ESTABLISH AND REINFORCE THE ISSUE OF REGIONAL VARIATION.

THE CONTINUED DISPOSAL OF CONDENSATE INTO THE STORM WATER DRAINAGE SYSTEMS OR PERVIOUS GRADE IS IRRECONCILABLE WITH THE VITAL ROLE CONDENSATE COLLECTION AND USE CAN PLAY IN EASING THE DEMANDS ON OUR INCREASINGLY BURDENED POTABLE WATER RESOURCES. MOREOVER, IT IS INCONSISTENT WITH FLORIDA STATUTE 373.227 WHICH CAUTIONS, "THE LEGISLATURE RECOGNIZES THAT THE PROPER CONSERVATION OF WATER IS AN IMPORTANT MEANS OF ACHIEVING THE ECONOMICAL AND EFFICIENT UTILIZATION OF WATER NECESSARY, IN PART, TO CONSTITUTE A REASONABLE—BENEFICIAL USE. THE OVERALL WATER CONSERVATION GOAL OF THE STATE IS TO PREVENT AND REDUCE WASTEFUL, UNECONOMICAL, IMPRACTICAL, OR UNREASONABLE USE OF WATER RESOURCES."

3. Explain how the local need is addressed by the proposed local amendment.
   THIS MODIFICATION WILL REQUIRE LESS WATER USAGE FROM THE AQUIFERS.

4. Explain how the local amendment is no more stringent than necessary to address the local need.
   THE LOCAL NEED FOR WATER CONSERVATION IS VERY SERIOUS AND IS MANDATED BY THE BROWARD COUNTY COMMISSION AND SUPPORTED BY THE BROWARD LEAGUE OF CITIES AND THE BROWARD WATER RESOURCES TASK FORCE. THIS AMENDMENT WILL HELP ACHIEVE WATER CONSERVATION BUT CANNOT SOLVE THE PROJECTED WATER SHORTAGE PROBLEM WITHOUT OTHER LOCAL WATER CONSERVATION EFFORTS.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?
   PUBLIC MEETINGS AND A PUBLIC HEARING WERE HELD AND STAKEHOLDERS WERE INVITED TO ATTEND. AS PART OF THE COMMITTEE AND FINAL BOARD ADOPTION PROCESS, IT WAS DETERMINED THAT THE MODIFICATION WOULD NOT BE DISCRIMINATORY.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.
   THIS MODIFICATION REVISES AN EXISTING SECTION OF THE FLORIDA BUILDING CODE.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
   a) Impact to local government, relative to enforcement.
   b) Impact to property and building owners relative to cost of compliance.
   c) Impact to industry relative to the cost of compliance

   a) THERE IS NO FISCAL IMPACT TO BROWARD COUNTY OR THE MUNICIPALITIES.
   b) WHEN CONSIDERING LIFECYCLES, THERE IS NO COST TO BUILDING OWNERS FOR COMPLIANCE. THE FISCAL IMPACT INVOLVES HIGHER INITIAL COSTS, WHICH VARY BASED UPON THE SIZE AND COMPLEXITY OF THE COOLING SYSTEMS. HOWEVER, THE INITIAL COSTS ARE OFFSET BY A SYSTEM PAYOFF FROM 6 MONTHS TO SIX YEARS AS REASONABLY PROJECTED.
   c) NO FISCAL IMPACT TO INDUSTRY.

BROWARD BORA PUBLIC HEARING AND VOTE October 8, 2020.

AMENDMENT EFFECTIVE DATE December 31, 2020.

BROWARD COUNTY
BOARD OF RULES AND APPEALS

ONE NORTH UNIVERSITY DRIVE
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www.broward.org/codeappeal

October 13, 2020

RE: Florida Building Code – 7th Edition (2020) Plumbing, Section 604

To whom it may concern:

The following amendments to the Florida Building Code – 7th Edition (2020) Plumbing – Section 604 were passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is December 31, 2020.

The amendments consist as follows:

- Plumbing, 604.4 Maximum flow and water consumption.
- Plumbing, Table 604.4
- **Total of Paragraphs Changed: 5**

A full amended document is to be posted on the www.floridabuiding.org. If needed please feel free to contact our office 954-765-4500 – or email us at rulesboard@broward.org at any time.

Thank You,

Ruth Boselli Administrative Coordinator
Attachments

604.4 Maximum flow and water consumption.

Exceptions:

6. All fixtures, fittings and appliances with U.S. Environmental Agency WaterSense® (EPA) label.

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TABLE 604.4
MAXIMUM FLOW RATES AND CONSUMPTION
FOR PLUMBING FIXTURES,
~~AND~~ FIXTURE FITTINGS AND APPLIANCES

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY
Lavatory, private	~~2.2~~ 1.5 gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head *	2.0 ~~2.5~~ gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Urinal	~~1.0~~ 0.5 gallon per flushing
Water closet	~~1.6~~ 1.28 gallons per flushing cycle
Dishwasher (Residential) *	6.5 gallons per cycle or less (Energy Star/WaterSense Certified)
Dishwasher (Commercial)	Less than 1.2 gallons per rack for fill and dump machines and less than 0.9 gallons per rack for low temperature machines.
Dishwasher (Under the counter machines commercial)	1.0 gallons per rack for high temperature machines and 1.7 gallons per rack for low temperature machines.
Washing Machine *	Water factor of 8 or lower (EnergyStar/WaterSense Certified) ©

a. A hand-held shower spray is a shower head. *If installed

c. Water factor in gallons per cycle per cubic foot

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BROWARD COUNTY LOCAL AMENDMENT
Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Stat

Name: Broward County, Board of Rules and Appeals, ATTN: J. DiPietro

Address: 1 North University Dr. Suite 3500B Plantation, FL 33324

E-mail: jdipietro@broward.org

Phone: 954-765-4500

Fax: 954-765-4504

Code: 7th Edition (2020) FBC – Plumbing

Section #: 604 - Design of Building Water Distribution System, Table 604.4

Text of Modification (additions underlined; deletions ~~stricken~~):

Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

   This Amendment exceeds minimum standards by reducing plumbing fixture water flow rates currently required by the Florida Building Code "Plumbing" thereby increasing water conservation standards. This proposed amendment will adopt U.S. Environmental Protection Agency (EPA) WaterSense Label as an Alternate for table 604.4.

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

   Water conservation is an essential part of the Broward water supply plan and implementation of high efficiency plumbing requirements is supported by the Broward County Board of County Commissioners, the Broward League of Cities and the Broward Water Resources Task Force. The Biscayne Aquifer is the primary source of drinking water for all of Broward County and offers the lowest cost water supply for the region. However, concerns about future water availability resulted in the permanent restrictions on withdrawals from this Aquifer while saltwater intrusion limits withdrawals from two coastal well fields and threatens several others. Efforts to conserve water

are essential to preserving the capacity of existing water sources while reducing the need to develop alternative water supplies which will impose a substantial cost to rate payers.

3. Explain how the local need is addressed by the proposed local amendment.

   This modification will help reduce the water demands on our Biscayne Aquifer while not creating a health or inconvenience problem for the residents of this area.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

   The local need of water conservation is very serious as mandated by the Broward Commission. The establishment of this amendment is only one of the means to help prevent a water shortage situation.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?

   Due to the advancement in technology by all Plumbing Fixture manufacturers and the need for additional water conservation, this amendment would have little to no recognizable impact on materials, products or construction developments.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

   This amendment is modifying existing verbiage of the Florida Building Code "Plumbing", therefore it does not address a new subject.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
   a) Impact to local government, relative to enforcement.
   b) Impact to property and building owners relative to cost of compliance.
   c) Impact to industry relative to the cost of compliance

   a) No impact.
   b) This modification will reduce impact fees charged by Broward County.
   c) *No impact.*

BROWARD BORA PUBLIC HEARING AND VOTE, OCTOBER 8, 2020.

AMENDMENT EFFECTIVE DATE DECEMBER 31, 2020.

BROWARD COUNTY
BOARD OF RULES AND APPEALS

ONE NORTH UNIVERSITY DRIVE
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PLANTATION, FLORIDA 33324

PHONE: 954-765-4500
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www.broward.org/codeappeal

October 13, 2020

RE: Plumbing, Appendix F: Proposed Construction Building Codes for Turf and Landscape Irrigation Systems

To whom it may concern:

The following amendments to the Florida Building Code – 7th Edition (2020) Plumbing – Section Plumbing, Appendix F: Proposed Construction Building Codes for Turf and Landscape Irrigation Systems were passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is December 31, 2020.

The amendments consist as follows:

- Plumbing, Appendix F: Proposed Construction Building Codes for Turf and Landscape Irrigation Systems, PART 1: GENERAL, Preconstruction submittals., Plans or drawings., Sprinkler layout.
- Plumbing, Appendix F: Proposed Construction Building Codes for Turf and Landscape Irrigation Systems, PART IV: MATERIALS, PVC pipe and fittings.
- Plumbing, Appendix F: Proposed Construction Building Codes for Turf and Landscape Irrigation Systems, PART V: INSTALLATION, Pipe installation.
- Plumbing, Appendix F: Proposed Construction Building Codes for Turf and Landscape Irrigation Systems, PART VI: TESTING & INSPECTIONS, Rough inspections.
- **Total of Paragraphs Changed: 6**

A full amended document is to be posted on the www.floridabuiding.org. If needed please feel free to contact our office 954-765-4500 – or email us at rulesboard@broward.org at any time.

Thank You,

Ruth Boselli Administrative Coordinator
Attachments

APPENDIX F

PROPOSED CONSTRUCTION BUILDING CODES FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS

PART 1: GENERAL

A. Description.

1. **Purpose.** To establish uniform minimum standards and requirements for the design and installation of safe, cost effective, reliable irrigation systems for turf and landscape areas which promote the efficient use and protection of water and other natural resources.
2. **Definition.** Turf and landscape irrigation systems apply water.by means of permanent above-ground or subsurface sprinkler or microsprinkler equipment under pressure.
3. **Scope.** These construction codes shall apply to all irrigation systems used on residential and commercial landscape areas. They address the design requirements, water quality, materials, installation, inspection, and testing for such systems. These construction codes do not apply to irrigation systems for golf courses, nurseries, greenhouses, or agricultural production systems.
4. **Application.** All new irrigation systems and any new work to existing irrigation systems shall conform to the requirements of this code.
5. **Application to existing irrigation installations.** Nothing contained in this code shall be deemed to require any irrigation system or part thereof, which existed prior to the establishment of this code, to be changed, altered or modified to meet the standards of this code.

B. Permits.

1. **Permits required.** It shall be unlawful to construct, enlarge, alter, modify, repair, or move any irrigation system or part thereof, or to install or alter any equipment for which provision is made or the installation of which is regulated by this code without first having filed application and obtained a permit therefore from the building official. A permit shall be deemed issued when signed by the building official and impressed with the seal of the governmental agency issuing said permit.
2. **Exceptions.** All work where exempt from permit shall still be required to comply with the code. No permit shall be required for general maintenance or repairs which do not change the structure or alter the system and the value of which does not exceed $600.00 in labor and material based on invoice value.

C. Preconstruction submittals.

1. **Plans or drawings.**
   a. **Single-family residence.** Provide design draw-ings or shop drawings, where required, for the installation prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, and include all improvements. Drawings can be pre-pared by a properly licensed qualified contractor.
   b. **Commercial, industrial, municipal and multi-ple-family.** Provide professionally designed drawings prior to start of construction. Design drawings shall be clearly readable, to reasonable scale, show the entire site to be irrigated, includ-ing all improvements, and shall include but not be limited to: date, scale, revisions, legend, speci-fications which list all aspects of equipment and assembly there of, water source, water meter and/or point of connection, backflow prevention devices, pump station size, pump station location, design operating pressure and flow rate per zone, precipitation rate per zone, locations of pipe, con-trollers, valves, sprinklers, sleeves, gate valves, etc. The plans and specifications shall be pre-pared in accordance with Section 107 of the *Flor-ida Building Code, Building*.
   c. **Sprinkler layout.** Sprinkler layout may be modified to adjust for field conditions provided it complies with part VI, Section B, subsection 1 Sprinkler layout and spacing. Prior to final inspection, the contractor shall submit a letter or as-built drawing that reflects the modification to the authority with jurisdiction.

D. Definitions.

ABS Pipe. Acrylonitrile-butadiene-styrene black, semi-rigid, plastic pipe extruded to IPS. ABS pipe is in limited use in present day irrigation systems. Solvent weld fittings are used with this pipe (see ASTM D1788).

Air Release Valve. A valve which will automatically release to the atmosphere accumulated small pockets of air from a pressurized pipeline. A small orifice is used to release air at low flow rates. Air release valves are normally required at all summits of mainline and submain pipelines in an irrigation system.

Anti-Siphon Device. A safety device used to prevent back-flow of irrigation water to the water source by back-siphonage.

Application Rate. The average rate at which water is applied by an irrigation system, sometimes also called precipitation rate. Units are typically inches/hr or mm/hr.

Application Uniformity. Irrigation application uniformity (also known as distribution uniformity) describes how evenly water is distributed within an irrigation zone.

Arc. The angle of coverage of a sprinkler in degrees from one side of throw to the other. A 90-degree arc would be a quarter-circle sprinkler.

Atmospheric Vacuum Breaker. An anti-siphon device which uses a floating seat to direct water flow. Water draining back from irrigation lines is directed to the atmosphere to protect the potable water supply.

Automatic Control Valve. A valve in a sprinkler system which is activated by an automatic controller by way of hydraulic or electrical control lines and controls a single device or multiple devices.

Automatic System. An irrigation system which operates following a preset program entered into an automatic controller.

Backflow Prevention Device. An approved safety device used to prevent pollution or contamination of the irrigation water supply due to backflow from the irrigation system.

Belled (Pipe). Pipe which is enlarged at one end so that the spigot end of another length of pipe can be inserted into it during the assembly of a pipeline.

Block (of sprinklers). A group of sprinklers controlled by one valve. Also called zones or subunits.

Block System. An irrigation system in which several groups of sprinklers are controlled by one valve for each group.

Bubbler Irrigation. The application of water to the soil surface or a container as a small stream or fountain. Bubbler emitter discharge rates are greater than the 0.5 to 2 gph characteristic of drip emitters, but generally less than 60 gph.

Check Valve. A valve which permits water to flow in one direction only.

Chemical Water Treatment. The addition of chemicals to water to make it acceptable for use in irrigation systems

Chemigation. The application of water soluble chemicals by mixing or injecting with the water applied through an irrigation system.

Contractor. Any person who engages in the fabrication and installation of any type of irrigation system on a contractual basis in accordance with all stipulations receiving his compensation.

Control Lines. Hydraulic or electrical lines which carry signals (to open and close the valves) from the controller to the automatic valves.

Controller. The timing mechanism and its mounting box. The controller signals the automatic valves to open and close on a pre-set program or based on sensor readings.

Coverage. Refers to the way water is applied to an area.

Cycle. Refers to one complete run of a controller through all programmed controller stations.

Demand (or irrigation demand). Refers to the irrigation requirements of the irrigated area. Demand primarily depends on the type of crop, stage of growth, and climatic factors.

Design Area. The specific land area to which water is to be applied by an irrigation system.

Design Emission Uniformity. An estimate of the uniformity of water application with an irrigation system.

Design Pressure. The pressure at which the irrigation system or certain components are designed to operate. The irrigation system design pressure is that measured at the pump discharge or entrance to the system if there is no pump, and a zone design pressure is the average operating pressure of all emitters within that zone.

Direct Burial Wire. Plastic-coated single-strand copper wire for use as control line for electric valves.

Discharge Rate. The instantaneous flow rate of an individual sprinkler, emitter, or other water emitting device, or a unit length of line-source microirrigation tubing. Also, the flow rate from a pumping system.

Double Check Valve. An approved assembly of two single, independently-acting check valves with test ports to permit independent testing of each check valve.

Drain Valve. A valve used to drain water from a line. The valve may be manually or automatically operated.

Drip Irrigation. The precise low-rate application of water to or beneath the soil surface near or directly into the plant root zone. Applications normally occur as small streams, discrete or continuous drops, in the range of 0.5 to 2.0 gph.

Effluent water. Also referred to as reclaimed or gray water is wastewater which has been treated per Florida Statute, §403.086 and is suitable for use as a water supply for irrigation systems.

Emitters. Devices which are used to control the discharge of irrigation water from lateral pipes. This term is primarily used to refer to the low flow rate devices used in microirrigation systems.

Fertigation. The application of soluble fertilizers with the water applied through an irrigation system.

Filtration System. The assembly of physical components used to remove suspended solids from irrigation water. These include both pressure and gravity type devices, such as settling basins, screens, media filters, and centrifugal force units (vortex sand separators).

Flexible Swing Joint. A flexible connection between the lateral pipe and the sprinkler which allows the sprinkler to move when force is applied to it.

Flow Meters. Devices used to measure the volume of flow of water (typically in gallons), or flow rates (typically in gpm), and to provide data on system usage.

Gauge (Wire). Standard specification for wire size. The larger the gauge number, the smaller the wire diameter.

Head. A sprinkler head. Sometimes used interchangeably with and in conjunction with "Sprinkler."

Infiltration Rate. The rate of water flow across the surface of the soil and into the soil profile. Units are usually inches/hr.

Irrigation. Application of water by artificial means, that is, means other than natural precipitation. Irrigation is practiced to supply crop water requirements, leach salts, apply chemicals, and for environmental control including crop cooling and freeze protection.

Irrigation Water Requirement or Irrigation Requirement. The quantity of water that is required for crop production, exclusive of effective rainfall.

Landscape. Refers to any and all areas which are ornamentally planted, including but not limited to turf, ground covers, flowers, shrubs, trees, and similar plant materials as opposed to agricultural crops grown and harvested for monetary return.

Lateral. The water delivery pipeline that supplies water to the emitters or sprinklers from a manifold or header pipeline downstream of the control valve.

Line-Source Emitters. Lateral pipelines which are porous or contain closely-spaced perforations so that water is discharged as a continuous band or in overlapping patterns rather than discrete widely-spaced points along the pipeline length.

Looped System. A piping system which allows more than one path for water to flow from the supply to the emitters or sprinklers.

Low Volume Sprinklers. Sprinkler heads that emit less than 0.5 gallons per minute.

Mainline. A pipeline which carries water from the control station to submains or to manifolds or header pipelines of the water distribution system.

Manifold. The water delivery pipeline that conveys water from the main or submain pipelines to the laterals. Also sometimes called a header pipeline.

Manual System. A system in which control valves are manually operated rather than operated by automatic controls.

Matched Precipitation. An equal distribution of water over a given area or zone.

Meter Box. A concrete or plastic box buried flush to grade which houses flow (water) meters or other components.

Microirrigation. The frequent application of small quantities of water directly on or below the soil surface, usually as discrete drops, tiny streams, or miniature sprays through emitters placed along the water delivery pipes (laterals). Microirrigation encompasses a number of methods or concepts, including drip, subsurface, bubbler, and spray irrigation. Previously known as trickle irrigation.

Overlap. The amount one sprinkler pattern overlaps another one when installed in a pattern. Expressed as a percentage of the diameter of coverage.

PE Pipe. Flexible polyethylene pipe for use in irrigation systems, normally manufactured with carbon black for resistance to degradation by ultraviolet radiation.

Potable Water. Water which is suitable in quality for human consumption and meets the requirements of the Health Authority having jurisdiction.

Pressure Relief Valve. A valve which will open and discharge to atmosphere when the pressure in a pipeline or pressure vessel exceeds a pre-set point to relieve the high-pressure condition.

Pressure Vacuum Breaker. A backflow prevention device which includes a spring-loaded check valve and a spring-loaded vacuum breaker to prevent the backflow of irrigation system water to the water source.

Pumping Station. The pump or pumps that provide water to an irrigation system, together with all of the necessary accessories such as bases or foundations, sumps, screens, valves, motor controls, safety devices, shelters and fences.

PVC Pipe. Polyvinyl chloride plastic pipe made in standard thermoplastic pipe dimension ratios and pressure rated for water. Manufactured in accordance with AWWA C-900 or ASTM D2241.

Rain Shut off Device. A calibrated device that is designed to detect rainfall and override the irrigation cycle of the sprinkler system when a predetermined amount of rain fall has occurred.

Riser. A threaded pipe to which sprinklers or other emitters are attached for above-ground placement.

Sleeve. A pipe used to enclose other pipes, wire, or tubing; usually under pavement, sidewalks, or planters.

Spacing. The distance between sprinklers or other emitters.

Spray Irrigation. The microirrigation application of water to the soil or plant surface by low flow rate sprays or mists.

Sprinkler. The sprinkler head. Sometimes called "Head."

Supply (Water Source). The origin of the water used in the irrigation system.

Swing Joint. A ridged connection between the lateral pipe and the sprinkler, utilizing multiple ells and nipples, which allows the sprinkler to move when force is applied to it.

Tubing. Generally used to refer to flexible plastic hydraulic control lines which are usually constructed of PE or PVC.

PART II — DESIGN CRITERIA

A. Design defined. Within the scope of this code, irrigation system design is defined as the science and art of properly selecting and applying all components within the system. The irrigation system shall be designed and installed to achieve the highest possible efficiency by providing operating pressures, sprinkler placement and

nozzle selection that are within the manufacturer's recommendations, and maintained to keep the system at or within those ranges.

B. Water supply.

1. The water source shall be adequate from the standpoint of volume, flow rate, pressure, and quality to meet the irrigation requirements of the area to be irrigated, as well as other demands, if any, both at the time the system is designed and for the expected life of the system. The irrigation system shall use the lowest quality water source available on site.
2. If the water source is effluent, it shall meet the advanced waste treatment standard as set forth in *Florida Statute* §403.086(4) as well as any other standard as set forth by the controlling governmental agency.

C. Application uniformity.

1. Sprinkler irrigation systems should be designed with the appropriate uniformity for the type of plants being grown and the type of soil found in that area. The general watering of different types of plants as one group without regard to their individual water requirements is to be avoided.
2. Use sprinkler head spacing, type and nozzle selection to achieve the highest application uniformity.
3. Use application rates which avoid runoff and permit uniform water infiltration into the soil. Land slope, soil hydraulic properties, vegetative ground cover, and prevailing winds and sun exposure will be considered when application rates are specified. Different types of sprinklers with different application rates, i.e., spray heads vs. rotor heads, bubbler heads vs. rotor heads, shall not be combined on the same zone or circuit.

D. System zoning. The irrigation system should be divided into zones based on consideration of the following hydrozoning practices.

1. Available flow rate.
2. Cultural use of the area.
3. Type of vegetation irrigated, i.e., turf, shrubs, native plants, etc.
4. Type of sprinkler, i.e., sprinklers with matching precipitation rates.
5. Soil characteristics and slope.
6. Sun exposure.

E. Sprinkler/emitter spacing and selection.

1. Sprinkler/Emitter spacing will be determined considering the irrigation requirements, hydraulic characteristics of the soil and device, and water quality with its effect on plant growth, sidewalks, buildings, and public access areas.
2. All pop-up spray head bodies in turf areas shall be no less than 6 inches in height for St. Augustine, Zoysia and Bahia and no less than 4 inches in height for Bermuda, Centapede and Seashore Paspalum.
3. Sprinklers should be located in all corners and on the perimeter of each irrigated zone area for a matched precipitation rate objective.
4. Single row head spacing should only occur when an additional row will cause saturated soils at the toe of a slope or other inefficiencies.
5. All heads shall not exceed 50 percent of manufacturer's specified diameters of coverage.
6. Water conservation will be emphasized by minimizing irrigation of nonvegetated areas.
7. Microirrigation systems should be designed using the Emission Uniformity concept. Space microirrigation emitters to wet 100 percent of the root zone in turf areas and 50 percent of the root zone for shrubs and trees.
8. Microirrigation or low volume heads shall be required in all areas less than 4 feet in either direction.
9. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PD main or lateral break.
10. Each plant shall have an adequate number and size (gph) of microirrigation devices, properly placed, to meet the plant water requirements for no rainfall.

F. Pipelines. Pipelines will be sized to limit pressure variations so that the working pressure at all points in the irrigation system will be in the range required for uniform water application. Velocities will be kept to 5 feet (1524 mm) per second.

G. Wells.

1. Well diameters and depths are to be sized to correspond to the irrigation system demand. Refer to SCS Code FL-642 and local water management district regulations.
2. Well location and depth shall be in compliance with applicable state, water management district and local codes.

H. Pumps

satisfying the total system demand without invading the service factor of the motor except during start-up and between zones.

2. Pumps shall be positioned with respect to the water surface in order to ensure that the net positive suction head required (NPSHr) for proper pump operation is achieved.
3. The pumping system shall be protected against the effects of the interruption of water flow.

I. Control valves.

1. Control valve size shall be based on the flow rate through the valve. Friction loss through the valve, an approved air gap separation, or a reduced pressure should not exceed 10 percent of the static mainline head.
2. Control systems using hydraulic communication between controller and valve(s) shall comply with the manufacturer's recommendations for maximum distance between controller and valve, both horizontally and vertically (elevation change).
3. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications; based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except individual, single lot residential systems.
4. Locate manually operated control valves so that they can be operated without wetting the operator.
5. Locate inground valves away from large tree and palm root zones.
6. A manual shut-off valve shall be required to be installed close to the point of connection but downstream from any backflow device to minimize water loss when the system is shut off for repairs or emergencies.
7. An automatic shut-off valve (normally closed) is required on all systems with a constantly pressurized mainline to confine the water loss from minor main line leaks, weeping valves, or stuck on valves to just the time the system is operating automatically.

J. Automatic irrigation controller. Automatic irrigation controllers must be UL approved and have an adequate number of stations and power output per station to accommodate the irrigation system design. The controller shall be capable of incorporating a rain shut-off device or other sensors to override the irrigation cycle when adequate rainfall has occurred as required by *Florida Statutes*, Section 373.62.

K. Chemical injection.

1. Chemical injection systems for the injection of fertilizer, pesticides, rust inhibitors, or any other injected substance will be located and sized according to the manufacturers' recommendations.
2. Injection systems will be located downstream of the applicable backflow prevention devices as required by *Florida Statutes*, Sections 487.021 and 487.055; the Environmental Protection Agency (EPA); Pesticide Regulation Notice 87-1; or other applicable codes.
3. If an irrigation water supply is also used for human consumption, an air gap separation or an approved reduced pressure principal backflow prevention device is required.

L. Backflow prevention methods. Provide backflow prevention assemblies at all cross connections with all water supplies in accordance with county, municipal or other applicable codes to determine acceptable backflow prevention assembly types and installation procedures for a given application. In the event of conflicting regulation provide the assembly type which gives the highest degree of protection.

1. Irrigation systems into which chemicals are injected shall conform to Florida state law (*Florida Statutes* 487.021 and 487.055) and Environmental Protection Agency Pesticide Regulation Notice 87-1, which requires backflow prevention regulations to be printed on the chemical label.
2. For municipal water supplies, chemical injection equipment must be separated from the water supply by an approved air gap separation or a reduced pressure principle assembly that is approved by the Foundation for CCC and the Hydraulic Research Institute. The equipment must also comply with ASSE 1013 to protect the water supply from back-siphonage and back-pressure.
3. For other water supplies, Florida State law, EPA regulations, or other applicable local codes must be followed. In the absence of legal guidelines at least a PVB should be used.

PART III — STANDARDS

1. American Society of Agricultural Engineers (ASAE) Standards:

ASAE S330.1: Procedure for sprinkler distribution testing for research purposes.

ASAE S376.1: Design, installation, and performance of underground thermoplastic irrigation pipelines.

ASAE S397.1: Electrical service and equipment for irrigation.

ASAE S435: Drip/Trickle Polyethylene Pipe used for irrigation laterals.

ASAE S398.1: Procedure for sprinkler testing and performance reporting.

ASAE S339: Uniform classification for water hardness.

ASAE S394: Specifications for irrigation hose and couplings used with self-propelled, hose-drag agricultural irrigation system.

ASAE EP400.1: Designing and constructing irrigation wells.

ASAE EP405: Design, installation, and performance of trickle irrigation systems.

ASAE EP409: Safety devices for applying liquid chemicals through irrigation systems.

2. **ASTM International Standards:**

   ASTM D2241: Poly (Vinyl Chloride) (PVC) Plastic pipe (SDR-PR).

   ASTM D2239: Specification for polyethylene (PE) plastic pipe (SDR-PR).

   ASTM D2466: Specification for socket-type poly (vinyl chloride) (PVC) and chlorinated poly (vinyl chloride) (CPVC) plastic pipe fittings, Schedule 40.

   ASTM D2855: Standard recommended practice for making solvent cemented joints with polyvinyl chloride pipe and fittings.

   ASTM D3139: Specification for joints for plastic pressure pipes using flexible elastomeric seals.

   ASTM F477: Specification for elastomeric seals (gaskets for joining plastic pipe).

3. **American Water Works Association (AWWA) standards:**

   AWWA C-900: PVC pipe standards and specifications.

4. **American Society of Sanitary Engineers (ASSE) Standards:**

   ASSE 1001: Pipe applied atmospheric type vacuum breakers.

   ASSE 1013: Reduced pressure principle backflow preventers.

   ASSE 1015: Double check valve-type back pressure backflow preventers.

   ASSE 1020: Vacuum breakers, anti-siphon, pressure type.

   ASSE 1024: Dual check valve-type backflow preventers.

5. **Hydraulic Institute Standards, 14th Edition.**

6. **Standards and Specifications For Turf and Landscape Irrigation Systems Florida Irrigation Society (FIS) Standards.**

7. **Soil Conservation Service (SCS) Field Office Technical Guide, Section IV-A — Cropland Codes:**

   SCS Code 430-DD: Irrigation water conveyance, underground, plastic pipeline.

   SCS Code 430-EE: Irrigation water conveyance. Low pressure, underground, plastic pipeline.

   SCS Code 430-FF: Irrigation water conveyance, steel pipeline.

   SOS Code 441-1: Irrigation system, trickle.

   SCS Code 442: Irrigation system sprinkler.

   SCS Code 449: Irrigation water management.

   SCS Code 533: Pumping plant for water control.

   SCS Code 642: Well.

PART IV: MATERIALS

A. PVC pipe and fittings.

1. PVC pipe should comply with one of the following standards: ASTM D1785, ASTM D2241, AWWA C-900, or AWWA C-905. SDR-PR pipe shall have a minimum wall thickness as required by SDR-26. All pipe used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.
2. All solvent-weld PVC fittings shall, at a minimum, meet the requirements of Schedule 40 as set forth in ASTM D2466.
3. Threaded PVC pipe ~~firings~~ fittings shall meet the requirements of Schedule 40 as set forth in ASTM D2464.
4. PVC gasketed fittings shall conform to ASTM D3139. Gaskets shall conform to ASTM F477.
5. PVC flexible pipe should be pressure rated as described in ASTM D2740 with standard outside diameters compatible with PVC IPS solvent-weld fittings.
6. PVC cement should meet ASTM D2564. PVC cleaner-type should meet ASTM F656.

B. Ductile iron pipe and fittings.

1. Gasket fittings for iron pipe should be of materials and type compatible with the piping material being used.

C. Steel pipe and fittings.

1. All steel pipe shall be rated Schedule 40 or greater and be hot-dipped galvanized or black in accordance with ASTM A53/A53M.
2. Threaded fittings for steel pipe should be Schedule 40 Malleable Iron.

D. Polyethylene pipe.

1. Flexible swing joints shall be thick-walled with a minimum pressure rating of 75 psi (517 kPa) in accordance with ASTM D2239.
2. Low pressure polyethylene pipe for microirrigation systems shall conform with ASAE S-435.
3. Use fittings manufactured specifically for the type and dimensions of polyethylene pipe used.

E. Sprinklers, spray heads, and emitters.

1. Select units and nozzles in accordance with the size of the area and the type of plant material being irrigated. Sprinklers must fit the area they are intended to water without excessive overspray onto anything but the lot individual landscaped surface. Intentional direct spray onto walkways, buildings, roadways, and drives is prohibited. All sprinklers used with effluent water systems shall be designated for non-potable use by either label or by the industry standard color purple.
2. Use equipment that is protected from contamination and damage by use of seals, screens, and springs

where site conditions present a potential for damage.

3. Support riser-mounted sprinklers to minimize movement of the riser resulting from the action of the sprinkler.
4. Swing joints, either flexible or rigid, shall be constructed to provide a leak-free connection between the sprinkler and lateral pipeline to allow movement in any direction and to prevent equipment damage.
5. Check valves shall be installed on any sprinkler where low point drainage occurs.
6. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

F. Valves.

1. Valves must have a maximum working pressure rating equal to or greater than the maximum pressure of the system, but not less than 125 psi (861 kPa). This requirement may be waived for low mainline pressure systems [30 psi (207 kPa) or less]. All valves used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.
2. Only valves that are constructed of materials designed for use with the water and soil conditions of the installation shall be used. Valves that are constructed from materials that will not be deteriorated by chemicals injected into the system shall be used on all chemical injection systems.

G. Valve boxes.

1. Valve boxes are to be constructed to withstand traffic loads common to the area in which they are installed. They should be sized to allow manual operation of the enclosed valves without excavation.
2. Each valve box should be permanently labeled to identify its contents. All valve boxes used with effluent water systems shall be designated for nonpotable use by either label or by the industry standard color purple.

H. Low voltage wiring.

1. All low voltage wire which is directly buried must be labeled for direct burial wire. Wire not labeled for direct burial must be installed in watertight conduits, and be UL listed TWN or THHN type wire as described in the NEC. All wire traveling under any hardscape or roadway must installed within a pipe and sleeve.
2. The size of the electrical control wire shall be in accordance with the valve manufacturer's specifications, based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating, on the circuit. Minimum of #14 AWG single strand control wire shall be used on all systems, except single lot individual residential systems.
3. Connections are to be made using UL approved devices specifically designed for direct burial. All splices shall be enclosed within a valve box.

I. Irrigation controllers.

1. All irrigation controllers shall be UL listed, conform to the provisions of the *National Electric Code* (NEC), and be properly grounded in accordance with manufacturer's recommendations. Equip solid state controls with surge suppressors on the primary and secondary wiring, except single lot residential systems.
2. The controller housing or enclosure shall protect the controller from the hazards of the environment in which it is installed.
3. The rain switch shall be placed on a stationary structure minimum of 5-foot (1524 mm) clearance from other outdoor equipment, free and clear of any tree canopy or other overhead obstructions, and above the height of the sprinkler coverage. Soil moisture sensors and ET sensors shall be installed and monitored per manufacturer's guidelines per *Florida Statutes*, Section 373.62 requirements.

J. Pumps and wells.

1. Irrigation pump electrical control systems must conform to NEC and local building codes.
2. The pumping system shall be protected from the hazards of the environment in which it is installed.
3. Use electric motors with a nominal horsepower rating greater than the maximum horsepower requirement of the pump during normal operation. Motor shall have a service factor of at least 1.15.
4. Casings for drilled wells may be steel, reinforced plastic mortar, plastic, or fiberglass pipe. Only steel pipe casings shall be used in driven wells. Steel pipe must have a wall thickness equal to or greater than Schedule 40. See SCS code FL-642. Steel casings shall be equal to or exceed requirements of ASTM A589.

K. Chemical injection equipment.

1. Chemical injection equipment must be constructed of materials capable of withstanding the potential corrosive effects of the chemicals being used. Equipment shall be used only for those chemicals for which it was intended as stated by the injection equipment manufacturer.

L. Filters and strainers.

1. Filtration equipment and strainers constructed of materials resistant to the potential corrosive and

erosive effects of the water shall be used. They shall be sized to prevent the passage of foreign material that would obstruct the sprinkler/emitter outlets in accordance with the manufacturer's recommendations.

PART V: INSTALLATION

A. Pipe installation.

1. Pipe shall be installed at sufficient depth below ground to protect it from hazards such as vehicular traffic or routine occurrences which occur in the normal use and maintenance of a property. Depths of cover shall meet or exceed SCS Code 430-DD, Water Conveyance, as follows:

   a. Vehicle traffic areas.

Pipe Size (inches)	Depth of Cover (inches)
$^1/_2 - 2^1/_2$	18
3 – 5	24
6 and larger	30

   b. All areas except vehicle traffic:

Pipe Size (inches)	Depth of Cover (inches)
$^1/_2 - 1^1/_2$	6
2 – 3	12
4 – 6	18
more than 6	24

2. Make all pipe joints and connections according to manufacturer's recommendations. Perform all solvent-weld connections in accordance with ASTM D2855.
3. Minimum clearances shall be maintained between irrigation lines and other utilities. In no case shall one irrigation pipe rest upon another. Comingling or mixing of different types of pipe assemblies shall be prohibited.
4. Thrust blocks or other approved method must be used on all gasketed PVC systems. They must be formed against a solid, hand-excavated trench wall undamaged by mechan-ical equipment. They shall be constructed of con-crete, and the space between the pipe and trench shall be filled to the height of the outside diameter of the pipe. Size thrust blocks in accordance with ASAE S-376.1.
5. The trench bottom must be uniform, free of debris, and of sufficient width to properly place pipe and support it over its entire length. Native excavated material may be used to backfill the pipe trench. However, the initial backfill material to 6" above the top of the pipe shall be free from rocks or stones larger than 1-inch in diameter. The final backfill material shall be free of rock or debris that is greater than 3" in diameter. At the time of placement, the moisture content of the material shall be such that the required degree of compaction can be obtained with the backfill method to be used. Blocking or mounding shall not be used to bring the pipe to final grade.
6. Pipe sleeves must be used to protect pipes or wires installed under pavement or roadways-, or when position of irrigation pipes or wires conflict with pipes or appurtenances of other trades. Use pipe sleeves two pipe sizes larger than the carrier pipe or twice the diameter of the wire bundle to be placed under the paving or roadway and extending a mini-mum of 3 feet beyond the paved area or as required by the Florida Department of Transportation (FDOT). Use sleeve pipe with wall thickness at least equal to the thickness of Schedule 40 or PR 160 pipe, whichever is thicker. Proper backfill and compaction procedures should be followed.

B. Control valve installation.

1. Valve installation shall allow enough clearance for proper operation and maintenance. Where valves are installed underground, they shall be provided with a valve box with cover extending from grade to the body of the valve. The top of the valve body should have a minimum of 6 inches (152 mm) of cover in nontraffic and noncultivated areas and 18 inches (457 mm) of cover in traffic areas. The valve box shall be installed so as to minimize the effect of soil intrusion within the valve box with the use of filter fabric, pea gravel, or other acceptable material. If an automatic valve is installed under each sprinkler, then the valve box may be omitted.
2. Install valve boxes so that they do not rest on the pipe, the box cover does not conflict with the valve stem or interfere with valve operation, they are flush with the ground surface and do not present a tripping hazard or interfere with routine maintenance of the landscape.
3. Install quick coupling valves on swing joints or flexible pipe with the top of the valve at ground level.
4. Any above-ground manually-operated valves on nonpotable water systems will be adequately identified with distinctive purple colored paint. Do not provide hose connections on irrigation systems that utilize nonpotable water supplies.

C. Sprinkler installation.

1. On flat landscaped areas, install sprinklers plumb. In areas where they are installed on slopes, sprinklers may be tilted as required to prevent erosion.
2. Sprinklers should be adjusted to avoid unnecessary discharge on pavements and structures.
   a. Adjust sprinklers so they do not water on roads.
   b. Provide a minimum separation of 4 inches (102 mm) between sprinklers and pavement.
   c. Provide a minimum separation of 12 inches (305 mm) between sprinklers and buildings and other vertical structures.
   d. Polyethylene (PE) nipples shall not be used in maintenance equipment traffic areas or alongside roadways and driveways.
3. Piping must be thoroughly flushed before installation of sprinkler nozzles.

4. Surface mounted and pop-up heads shall be installed on swing joints or flexible pipe.
5. Above-ground (riser mounted) sprinklers shall be mounted on Schedule 40 PVC or steel pipe and be effectively stabilized.
6. The pop-up height for sprays and rotator nozzles shall be adequate to prevent being obstructed by the turf grass blades: 6-inch height for St. Augustine, Zoysia and Bahia, 4-inch height for Bermuda, Centapede and Seashore Paspalum.
7. All microirrigation zones shall have adequate filtration installed at the zone valve or at the point where the drip tubing is attached to PVC pipe to protect the emission devices from contamination from a PVC main or lateral break.
8. All microirrigation zones shall have adequate pressure regulation installed at the zone valve or at the point where the drip tubing is attached to the PVC to ensure that all emission devices meet the manufacturer's performance standards.
9. Each plant shall have a adequate number and size(gph) of microirrigation devices, properly placed to meet the plant water requirements for no rainfall.
10. All tubing shall be installed under ground cover using staples at close enough intervals (24 to 36 inches) to secure the tubing and prevent it from moving through the mulch bed.

D. Pump installation.

1. Install pumps as per the manufacturer's recommendations. Set pumps plumb and secure to a firm concrete base. There should be no strain or distortion on the pipe and fittings. Pipe and fittings should be supported to avoid placing undue strain on the pump. Steel pipe should be used on pumps 5 horsepower (hp) or larger whenever practical.
2. Pumps must be installed in a manner to avoid loss of prime. Install suction line to prevent the accumulation of air pockets. All connections and reductions in suction pipe sizes should be designed to avoid causing air pockets and cavitation.
3. Pumps must be located to facilitate service and ease of removal. Appropriate fittings should be provided to allow the pump to readily be primed, serviced, and disconnected. Provide an enclosure of adequate size and strength, with proper ventilation, to protect the pump from the elements (except residential systems).

E. Low voltage wire installation.

1. Install low voltage wire (less than 98 volts) with a minimum depth of cover of 12 inches (305 mm) where not installed directly under the mainline.
2. Provide a sufficient length of wire at each connection to allow for thermal expansion/shrinkage.
3. As a minimum, provide a 12-inch (305 mm) diameter loop at all splices and connections.
4. Terminations at valves will have 24-inches (610 mm) minimum free wire.
5. Install all above-ground wire runs and wire entries into buildings in electrical conduit.

   Exception: No conduit is required when wiring above ground manifolds from the valve to the ground immediately beneath it.
6. Provide common wires with a different color than the power wires (white shall be used for common wires).
7. Connections are to be made using UL approved devices specifically designed for direct burial.
8. All splices shall be enclosed within a valve box.

F. Hydraulic control tubing.

1. For hydraulic control systems, use a water supply that is filtered and free of deleterious materials, as defined by the hydraulic control system manufacturer. Install a backflow prevention device where the hydraulic control system is connected to potable water supplies.
2. Install tubing in trenches freely and spaced so that it will not rub against pipe, fittings, or other objects that could score the tubing, and with a minimum 12-inch (305 mm) diameter loop at all turns and connections. Provide a minimum depth of cover of 12 inches (305 mm).
3. Connect tubing with couplings and collars recommended by the tubing manufacturer. All splices shall be made in valve boxes. Prefill tubing with water, expelling entrapped air and testing for leaks prior to installation.

Install exposed tubing in a protective conduit manufactured from Schedule 40 UV protected PVC or electrical conduit.

PART VI: TESTING & INSPECTIONS

A. Purpose. All materials and installations covered by the Irrigation Code shall be inspected by the governing agency to verify compliance with the Irrigation Code.

B. Rough inspections. Rough inspections will be performed throughout the duration of the installation. These inspections will be made by the governing agency to ensure that the installation is in compliance with the design intent, specifications, and the Irrigation Codes. Inspections will be made on the following items at the discretion of the governing agency:

1. Sprinkler layout and spacing: This inspection will verify that the irrigation system design is accurately installed in the field. It will also provide for alteration or modification of the system to meet field conditions. To pass this inspection, sprinkler/emitter spacing should be within ± 5 percent of the design spacing.

2. Pipe installation depth: All pipes in the system shall be installed to depths as previously described in this code.
3. Test all mainlines upstream of the zone valves as follows:
   a. Fill the completely installed pipeline slowly with water to expel air. Allow the pipe to sit full of water for 24 hours to dissolve remaining trapped air.
   b. Using a metering pump, elevate the water pressure to the maximum static supply pressure expected and hold there for a period of 2 hours, solvent-weld pipe connections shall have no leakage.
   c. For gasketed pipe main lines add water as needed to maintain the pressure. Record the amount of water added to the system over the 2-hour period.
   d. Use the following formulas to determine the maximum allowable leakage limit of gasketed pipe.

DUCTILE IRON:

$$L = \frac{SDP}{133,200}$$

PVC, GASKETED JOINT:

$$L = \frac{NDP}{7,400}$$

Where:

L = allowable leakage (gph),

N = number of joints,

D = nominal diameter of pipe (inches), P

= average test pressure (psi), and

S = length of pipe (fi).

   e. When testing a system which contains metal-seated valves, an additional leakage per closed valve of 0.078 gph/inch of nominal valve size is allowed.

4. Open Trench Inspection: The trench at all joints and every transition in pipe size, will be open where open trench inspection is required.

C. Final inspection. When the work is complete the contractor shall request a final inspection.

1. Cross connection control and backflow prevention.
   a. Public or domestic water systems: Check that an approved backflow prevention assembly is properly installed and functioning correctly. Review the location of the assembly to check that it is not creating a hazard to pedestrians or vehicular traf-fic.
   b. Water systems other than public or domestic water systems: Check that the proper backflow prevention assemblies are provided.
   c. All assemblies that can be, will be tested by a technician certified for backflow testing by a State recognized certifying board prior to being placed into service.
2. Sprinkler coverage testing.
   a. All sprinklers must be adjusted to minimize overspray onto buildings and paved areas. Minor tolerances shall be made to allow for prevailing winds.
   b. All sprinkler controls must be adjusted to minimize runoff of irrigated water. Water application rates shall not exceed the absorption rate of the soil.
   c. All sprinklers must operate at their design radius of throw. Nozzle sizes and types called for in the system design must have been used. All nozzles within the same zone shall have matched precipitation rates unless otherwise directed in order to increase efficiency by adjusting the nozzle selection to match site conditions.
   d. Spray patterns must overlap as designed (a.k.a. head to head coverage) or placed to achieve the highest possible distribution uniformity using the manufacturer's specifications.
   e. Sprinklers must be connected, as designed, to the appropriate zone.
   f. Sprinkler heads must operate within 20 percent of the optimum operating pressure but not more than the maximum nor less than the minimum guidelines as specified by the manufacturer. If the dynamic water pressure at the site's water source(s) is too low to achieve this pressure range at the sprinklers, a booster pump or alternate source shall be required. If the dynamic water pressure at the site's water source(s) is too high to achieve this pressure range at the sprinklers, a pressure regulating device shall be required at either the source, the zone valve, or the sprinklers, or any combination there of.

D. Site restoration.

1. All existing landscaping, pavement, and grade of areas affected by work must be restored to original condition or to the satisfaction of the governing authority.

Verify that the pipeline trenches have been properly compacted to the densities required by the plans and specifications.

E. Record Drawings.

1. A record drawing shall be required of all irrigation systems installed on commercial and residential developments and shall contain the following information:
   a. Location, type pressure and maximum flow available of all water sources.

      Include limitations like days of week watering requirements.

b. Location type and size of all components including sprinklers, microirrigation, main and lateral piping, master valves, valves, moisture sensors, rain sensors, controllers, pump start relays, backflow devices, pumps, wells, etc.

c. The flow rate, application rate (inches per hour), and the operating pressure for the sprinklers and microirrigation within each zone.

d. An irrigation schedule for each zone, for each season (monthly is preferred), indicating the frequency and duration each zone should operate to meet the plant water requirements without rainfall and stay within the hydraulic capacities of the sprinkler system installed.

e. The name, address, phone, email, professional license or certification number of the installation contractor.

f. Date of installation.

g. Irrigation system maintenance schedule that shall include, but is not limited to the following:

1. routine visual inspections (at least 4 per year);

2. adjustments to components to keep sprinklers straight, at the right height;

3. aligned and unobstructed nozzles and screens cleaned;

4. filters cleaned and sensors monitored,; and

5. pressures and flows at the source and sprinklers are correct for original design.

F. Irrigation System Maintenance.

a. Repairs to all irrigation components shall be done with originally installed components, equivalent components or those with greater efficiency.

b. The operation of the irrigation system outside of the normal watering window shall be allowed for evaluating, maintaining or repairing the system or its components.

G. Irrigation system management.

a. The frequency (times per week/month) and duration (minutes/hours) of the operation of each zone shall be adjusted and operate in order to meet the water needs of the plants within each zone as a supplement to rainfall. Adjustments shall be made a minimum 4 times per year to match the seasonal changes of the plants and the operational restrictions.

b. It is recommended that the schedule be adjusted monthly or controllers be properly installed and programmed to automatically adjust to maximize water savings.

BROWARD COUNTY
BOARD OF RULES AND APPEALS

ONE NORTH UNIVERSITY DRIVE
SUITE 3500-B
PLANTATION, FLORIDA 33324

PHONE: 954-765-4500
FAX: 954-765-4504
www.broward.org/codeappeal

October 12, 2020

RE: Florida Building Code - 7th Edition (2020) Mechanical – Chapter 3 – Condensates – Sub-section 307.2.1

To whom it may concern:

The following amendments to the Florida Building Code - 7th Edition (2020) Mechanical – Chapter 3 – Condensates – Sub-section 307.2.1 were passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is December 31, 2020.

The amendments consist as follows:

- **Chapter 3 - Sub-section 307.2.1 – Total of paragraphs changed : 6**

A full amended document is to be posted on the www.floridabuiding.org, if needed please feel free to contact our office 954-765-4500 - or email us at rulesboard@broward.org at any time.

Thank you,

Ruth Boselli
Administrative Coordinator

Attachments

C:\Users\rboselli\Documents\1 - Amendments to State - chapter 1\Memo Chapter I .docx

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Broward County Amendments to subsection 307.2.1 of the 2020 Florida Building Code - Mechanical, 7th Edition (2020)

Effective December 31, 2020.

CHAPTER 3 GENERAL REGULATIONS

SECTION 307 CONDENSATE DISPOSAL

307.2.1 Condensate drainage collection, use or disposal.

Condensate from all cooling coils and evaporators of equipment served by an onsite cooling tower in a building or structure wherein the aggregate cooling capacity of the equipment exceeds 65,000 Btu/hr shall be collected and conveyed from the drain pan outlet and discharged to the cooling tower. Where an on-site cooling tower is not installed the condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas so as to cause a nuisance.

Exceptions:

1. Condensate from cooling coils and evaporators is not required to be collected and conveyed to an on-site cooling tower; provided 1.1 through 1.3 are met:

1.1 The equipment comprises 10% or less of the total capacity of the cooling tower system.

1.2 The equipment is located in an isolated or remote area.

1.3 The size of the equipment is 65,000 Btu/hr. or less.

2. In existing buildings condensate may be collected and conveyed to a cooling tower or discharged to an approved place of disposal.

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Broward County
Board of Rules and Appeals
One N. University Drive, Suite 3500-B, Plantation, Florida 33324
TL 954.765.4500 ✧ FX 954.765.4504
http://www.broward.org/codeappeals

Broward County Local Amendments

Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Statute

Name: Broward County Board of Rules & Appeals, Attention: James DiPietro, ADMINISTRATIVE DIRECTOR

Address: One North University Drive, Suite 3500-B, Plantation FL 33324

E-mail: jdipietro@broward.org

Phone: 954) 765-4500

Fax: (954) 765-4504

Code: 7th Edition (2020) Florida Building Code, Plumbing and Mechanical

Section #: Plumbing Section [M] 314.2.1 and

Mechanical Section 307.2.1

Text of Modification (additions underlined; deletion ~~stricken~~):
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?
   REQUIRES THE COLLECTION OF CONDENSATE FROM ALL COOLING COILS AND EVAPORATORS OF EQUIPMENT SERVICED BY ON SITE COOLING TOWER IN A BUILDING OR STRUCTURE WHEREIN THE AGGREGATE COOLING CAPACITY OF THE EQUIPMENT EXCEEDS 65,000 BTU/HR

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.
   BY FAR, THE MOST IMPORTANT DEMOGRAPHIC TREND AFFECTING WATER RESOURCES IS POPULATION GROWTH. SIGNIFICANT POPULATION GROWTH IS ANTICIPATED. ACCORDING TO THE MOST RECENT POPULATION PROJECTIONS, THE COUNTY IS PROJECTING A 13% INCREASE IN POPULATION TO NEARLY 2 MILLION RESIDENTS BY 2040. THIS ASSUMES POPULATION GROWTH RATES REMAIN MODERATED BY THE ECONOMIC DOWN TURN. HOWEVER, IN A COUNTY WITH THE 12TH LARGEST POPULATION IN THE UNITED STATES, EVEN A MODERATE GROWTH RATE TRANSLATES INTO A SUBSTANTIAL INCREASE IN WATER DEMAND. IN 2010, BROWARD COUNTY PUMPED APPROXIMATELY 233 MILLION GALLONS PER DAY (MGD) FROM THE BISCAYNE AQUIFER. HOWEVER, IN ACCORDANCE WITH THE REGIONAL WATER AVAILABILITY RULE, INCREASES IN WATER DEMAND MUST BE MET THROUGH ALTERNATIVE WATER SUPPLIES. BROWARD COUNTY HAS TO MAKEUP THE DIFFERENCE INCLUDING A PROJECTED INCREASE OF 22 MGD BY 2040 FROM THE FLORIDIAN AQUIFER OR OTHER WATER SUPPLIES (SUCH AS RECLAIMED WATER) WHICH REQUIRE MUCH HIGHER LEVELS OF TREATMENT BY REVERSE OSMOSIS AND/OR MEMBRANE FILTRATION, BOTH OF WHICH WILL REQUIRED NEW CAPITAL INVESTMENTS AND ENERGY INTENSIVE PROCESSES. IT HAS BEEN REPEATEDLY RECOGNIZED BY BROWARD WATER PROVIDERS AND ELECTED LEADERS THAT WATER CONSERVATION OFFER THE MOST COST EFFECTIVE AND IMMEDIATE MEANS TO MEET NEW WATER DEMANDS. WITHOUT EFFECTIVE WATER CONSERVATION BROWARD COUNTY'S CONTINUED GROWTH WILL BE DEPENDENT ON OUR ABILITY TO DEVELOP MORE COSTLY ALTERNATIVE WATER SUPPLIES.

   FLORIDA STATE STATUTES, SECTION 373.016(S), RECOGNIZES THAT THE WATER RESOURCE PROBLEMS OF THE STATE VARY FROM REGION TO REGION, BOTH IN MAGNITUDE AND COMPLEXITY. SPECIFICALLY, IN BROWARD COUNTY, THE

LIMITATIONS OF OUR AQUIFER, THE AMOUNT OF WATER THE STATE ALLOWS US TO WITHDRAW, THE INTRUSION OF SALT WATER INTO THE AQUIFER, AND THE INCREASED FUTURE DEMANDS THAT ARE PROJECTED ESTABLISH AND REINFORCE THE ISSUE OF REGIONAL VARIATION.

THE CONTINUED DISPOSAL OF CONDENSATE INTO THE STORM WATER DRAINAGE SYSTEMS OR PERVIOUS GRADE IS IRRECONCILABLE WITH THE VITAL ROLE CONDENSATE COLLECTION AND USE CAN PLAY IN EASING THE DEMANDS ON OUR INCREASINGLY BURDENED POTABLE WATER RESOURCES. MOREOVER, IT IS INCONSISTENT WITH FLORIDA STATUTE 373.227 WHICH CAUTIONS, "THE LEGISLATURE RECOGNIZES THAT THE PROPER CONSERVATION OF WATER IS AN IMPORTANT MEANS OF ACHIEVING THE ECONOMICAL AND EFFICIENT UTILIZATION OF WATER NECESSARY, IN PART, TO CONSTITUTE A REASONABLE—BENEFICIAL USE. THE OVERALL WATER CONSERVATION GOAL OF THE STATE IS TO PREVENT AND REDUCE WASTEFUL, UNECONOMICAL, IMPRACTICAL, OR UNREASONABLE USE OF WATER RESOURCES."

3. Explain how the local need is addressed by the proposed local amendment.
   THIS MODIFICATION WILL REQUIRE LESS WATER USAGE FROM THE AQUIFERS.

4. Explain how the local amendment is no more stringent than necessary to address the local need.
   THE LOCAL NEED FOR WATER CONSERVATION IS VERY SERIOUS AND IS MANDATED BY THE BROWARD COUNTY COMMISSION AND SUPPORTED BY THE BROWARD LEAGUE OF CITIES AND THE BROWARD WATER RESOURCES TASK FORCE. THIS AMENDMENT WILL HELP ACHIEVE WATER CONSERVATION BUT CANNOT SOLVE THE PROJECTED WATER SHORTAGE PROBLEM WITHOUT OTHER LOCAL WATER CONSERVATION EFFORTS.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?
   PUBLIC MEETINGS AND A PUBLIC HEARING WERE HELD AND STAKEHOLDERS WERE INVITED TO ATTEND. AS PART OF THE COMMITTEE AND FINAL BOARD ADOPTION PROCESS, IT WAS DETERMINED THAT THE MODIFICATION WOULD NOT BE DISCRIMINATORY.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.
   THIS MODIFICATION REVISES AN EXISTING SECTION OF THE FLORIDA BUILDING CODE.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
   a) Impact to local government, relative to enforcement.
   b) Impact to property and building owners relative to cost of compliance.
   c) Impact to industry relative to the cost of compliance

   a) THERE IS NO FISCAL IMPACT TO BROWARD COUNTY OR THE MUNICIPALITIES.
   b) WHEN CONSIDERING LIFECYCLES, THERE IS NO COST TO BUILDING OWNERS FOR COMPLIANCE. THE FISCAL IMPACT INVOLVES HIGHER INITIAL COSTS, WHICH VARY BASED UPON THE SIZE AND COMPLEXITY OF THE COOLING SYSTEMS. HOWEVER, THE INITIAL COSTS ARE OFFSET BY A SYSTEM PAYOFF FROM 6 MONTHS TO SIX YEARS AS REASONABLY PROJECTED.
   c) NO FISCAL IMPACT TO INDUSTRY.

BROWARD BORA PUBLIC HEARING AND VOTE - October 8, 2020.

AMENDMENT EFFECTIVE DATE - December 31, 2021.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

P2906.9.1.4 PVC plastic pipe. A purple primer that conforms to ASTM F656 shall be applied to PVC solvent-cemented joints. Solvent cement for PVC plastic pipe conforming to ASTM D 2564 shall be applied to all joint surfaces.

Exception: Clear Primer conforming to ASTM F656 may be used on any exposed PVC pipe or fittings on trim/finish work.

Local Conditions and Need: This amendment permits the use of clear primer instead of purple primer when used on exposed PVC pipe or fittings on trim/finish work.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

Add:

P2903.2.1 Size of water service. The minimum size water service pipe shall be ¾" (19 mm). The size of water service mains, branch mains and risers shall be as required per Table P2903.2.1.

TABLE P2903.2.1 MINIMUM WATER SERVICE SIZE[a]

TABLE P2903.2.1
MINIMUM WATER SERVICE SIZE[a]

NO. OF FIXTURE UNITS FLUSH TANK WC[b]	DIAMETER OF WATER PIPE[c]	RECOMMENDED METER SIZE (inches)[d]	APPROX. PRESSURE LOSS METER + 100' PIPE (psi)[e]	NO. OF FIXTURE UNITS FLUSH VALVE WC[b]
18	3/4	5/8	30	-
19-55	1	1	30	-
-	1	1	30	9
56-85	1 ¼	1	30	-
-	1 ¼	1	30	10-20
8-225	1 ½	1 ½	30	-
-	1 ½	1 ½	30	21-77
226-350	2	1 ½	30	-
-	2	1 ½	30	78-175
351-550	2	2	30	-
-	2	2	30	176-315
551-640	2 ½	2	30	-
-	2 ½	2	30	316-392
641-1340	3	3	22	-
-	3	3	22	393-940

ADD TABLE FOOTNOTES:

a. Table is applicable for both copper and plastic water piping.
b. See Table P3004.1 for fixture unit values.
c. Minimum water service shall be ¾" to control valve.
d. All secondary submeters and backflow assemblies shall be at least the same size as the line in which they are installed.
e. Table based on minimum water main pressure of 50 psi.
f. Minimum sizes for fixture supply pipe from the main or from the riser shall be from the Florida Building Code 7th Edition (2020) - Plumbing Section 604.5.
g. Four (4) fixtures maximum (hot or cold) may connect to a one-half inch fixture water supply or as required by manufacturers' installation instructions.
h. Where the water main pressure falls below 50 psi the next larger pipe size shall be used.
i. Buildings above three (3) stories in height shall use the next larger pipe size.

Local Conditions and Need: Adds more limitations to control pipe sizing.

Fiscal Impact Statement: Cost per installation will be controlled due to added limitations.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th Edition (2020) – RESIDENTIAL

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AMEND EXISTING SECTION

P2903.1 Water supply system design criteria. The water service and water distribution systems shall be designed and pipe sizes shall be selected such that under conditions of peak demand, the capacities at the point of outlet discharge shall not be less than shown in Table P2903.1.

EXCEPTION: For one-family, two-family, or three-family residential dwellings, when the building owner approves in writing, one bathroom group may be added to the existing hot and cold water distribution system, not to exceed a maximum of eight drainage fixture units for any fixtures added. In no case shall the additional fixtures be connected to existing hot and/or cold piping that is less than ¾" in diameter.

P2903.1.1 Applicable Sizes. The requirements of P2903.1 in the following sizes shall apply when connected to an existing approved potable system.

1. All Building Department permitted and approved onsite potable drinking water piping two-inch (2") diameter and greater than one hundred fifty (150) lineal feet in length.
2. All Building Department permitted and approved onsite potable drinking water piping of greater than two-inch (2") diameter and greater than fifty (50) lineal feet in length.
3. All Building Department permitted and approved onsite potable drinking water piping in size(s) and length(s) adequate to contain twenty (20) gallons or more. (Volume = .0408 x diameter^2 x length in feet).
4. Any size or length water pipe that has been subjected to contamination will require disinfection.

Local Conditions and Need: This amendment will provide building owners flexibility when adding one bathroom group to an existing hot and/or cold water distribution system. It also strengthens this section by clarifying that disinfection is not required every time work is performed on a plumbing system. This makes the section more stringent because it clarifies what was a wide range of interpretations. Materials in the code and installation procedures will not change.

Fiscal Impact Statement: Implementation of this amendment will result in a cost reduction by recognizing that a plumbing system test may not be required every time work is done on a potable plumbing line.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

P2705.1 General. The installation of fixtures shall conform to the following:

1. Floor-outlet or floor-mounted fixtures shall be secured to the drainage connection and to the floor, where so designed, by screws, bolts, washers, nuts and similar fasteners of copper, copper alloy or other corrosion-resistant material.
2. Wall-hung fixtures shall be rigidly supported so that strain is not transmitted to the plumbing system.
3. Where fixtures come in contact with walls and floors, the contact area shall be water tight.
4. Plumbing fixtures shall be usable and functionally accessible.
5. Water closets, lavatories and bidets. A water closet, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition or vanity or closer than 30 inches (762 mm) center-to-center between adjacent fixtures. There shall be a clearance of not less than 21-inch (533 mm) in front of a water closet, lavatory or bidet to any wall, fixture or door in accordance with the fixture spacing requirements of Section R307.1.
6. The location of piping, fixtures or equipment shall not interfere with the operation of windows or doors.
7. In flood hazard areas as established by Table R301.2(1), plumbing fixtures shall be located or installed in accordance with Section R322.1.6.
8. Integral fixture-fitting mounting surfaces on manufactured plumbing fixtures or plumbing fixtures constructed on site, shall meet the design requirements of ASME A112.19.2/CSA B45.1 or ASME A112.19.3/CSA B45.4.

Local Conditions and Need: This amendment brings awareness to the plumbing fixture spacing requirements located in both sections of the code.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - RESIDENTIAL

AMEND EXISTING SECTION

M1411.3 Condensate disposal. Condensate from cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than 1/8 unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other areas where it would cause a nuisance. All primary condensate drain lines installed within unconditioned areas shall be insulated with insulation having a thermal resistivity of not less than R-3.

Local Conditions and Need: This amendment requires all horizontal primary condensate drain within unconditioned areas shall be insulated.

Fiscal Impact Statement: The cost impact associated with this amendment is minimal.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th Edition (2020) – RESIDENTIAL

AMEND EXISTING SECTION

G2415.15 Outlet closures. Gas *outlets* that do not connect to *appliances* shall be capped gas tight and shall be labeled with a weatherproof label stating "Connection of a gas appliance to this outlet in the future will require a permit and inspection." Appliance shutoff valves required by G2420.5 [409.5] shall be installed only at the time of appliance connection to gas outlets.

Exception: *Listed* and *labeled* flush-mounted-type quick-disconnect devices and *listed* and *labeled* gas convenience outlets shall be installed in accordance with the manufacturer's instructions.

Local Conditions and Need: Adds limitations to control future connections to gas outlets.

Fiscal Impact Statement: Cost increase to provide label is insignificant.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

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LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - PLUMBING

AMEND EXISTING SECTION

705.10.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F656 shall be applied. Clear Primer conforming to ASTM F656 may be used on any exposed PVC pipe or fittings on trim/finish work. Solvent cement not purple in color and conforming to ASTM D2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D2855. Solvent-cement joints shall be permitted above or below ground.

Exception: A primer is not required where both of the following conditions apply:

1. The solvent cement used is third-party certified as conforming to ASTM D2564.
2. The solvent cement is used only for joining PVC drain, waste and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inches (102 mm) in diameter.

Local Conditions and Need: This amendment permits the use of clear primer instead of purple primer when used on exposed PVC pipe or fittings on trim/finish work.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - PLUMBING

AMEND EXISTING SECTION

SECTION 610 DISINFECTION OF POTABLE WATER SYSTEM

610.2 Applicable Sizes. The requirements of 610.1 in the following sizes shall apply when connected to an existing approved potable system.

1. All Building Department permitted and approved onsite potable drinking water piping two-inch (2") diameter and greater than one hundred fifty (150) lineal feet in length.
2. All Building Department permitted and approved onsite potable drinking water piping of greater than two-inch (2") diameter and greater than fifty (50) lineal feet in length.
3. All Building Department permitted and approved onsite potable drinking water piping in size(s) and length(s) adequate to contain twenty (20) gallons or more. (Volume = .0408 x diameter^2 x length in feet).
4. Any size or length water pipe that has been subjected to contamination will require disinfection.

Local Conditions and Need: This amendment strengthens this section by clarifying that disinfection is not required every time work is performed on a plumbing system. This makes the section more stringent because it clarifies what was a wide range of interpretations. Materials in the code and installation procedures will not change.

Fiscal Impact Statement: Implementation of this amendment will result in a cost reduction by recognizing that a plumbing system test may not be required every time work is done on a potable plumbing line.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - PLUMBING

AMEND EXISTING SECTION

605.21.3 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F656 shall be applied. Solvent cement not purple in color and conforming to ASTM D2564 or CSA B137.3 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D2855. Solvent-cement joints shall be permitted above or below ground.

Exception: Clear Primer conforming to ASTM F656 may be used on any exposed PVC pipe or fittings on trim/finish work.

Local Conditions and Need: This amendment permits the use of clear primer instead of purple primer when used on exposed PVC pipe or fittings on trim/finish work.

Fiscal Impact Statement: There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th Edition (2020) – FUEL GAS

AMEND EXISTING SECTION

404.15 Outlet closures. Gas *outlets* that do not connect to *appliances* shall be capped gas tight and shall be labeled with a weatherproof label stating "Connection of a gas appliance to this outlet in the future will require a permit and inspection." Appliance shutoff valves required by G2420.5 [409.5] shall be installed only at the time of appliance connection to gas outlets.

Exception: *Listed* and *labeled* flush-mounted-type quick-disconnect devices and *listed* and *labeled* gas convenience outlets shall be installed in accordance with the manufacturer's instructions.

Local Conditions and Need: Adds limitations to control future connections to gas outlets.

Fiscal Impact Statement: Cost increase to provide label is insignificant.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT

FLORIDA BUILDING CODE 7th Edition (2020) - BUILDING

AMEND EXISTING SECTION

1510.10 Mechanical Units.

Roof mounted mechanical units shall be mounted on curbs raised a minimum of 8 inches (203 mm) above the roof surface, or where roofing materials extend beneath the unit, on raised equipment supports providing a minimum clearance height in accordance with Table 1510.10.

Exception: In buildings where the existing rooftop equipment, in the opinion of the building official, provides sufficient clearance to repair, recover, replace and/or maintain the roofing system or any of its components, such existing equipment need not comply with Table 1510.10.

TABLE 1510.10	
CLEARANCE BELOW RAISED ROOF	
MOUNTED MECHANICAL UNITS	
WIDTH OF MECHANICAL UNIT (inches)	**MINIMUM CLEARANCE ABOVE SURFACES (inches)**
< 24	14
24 < 36	~~18~~ 14
36 < 48	~~24~~ 14
48 < 60	~~30~~ 14
> 60	48

For SI: 1 inch = 25.4 mm.

Exception: When removing or replacing roof mounted mechanical units for individual units and/or spaces within multi-unit buildings the individual units may be reinstalled utilizing the existing system of attachment. At such time of reroofing of the building all mechanical units must be brought into compliance with this code section.

Local Conditions and Need: This amendment strengthens this code section when dealing with replacement of individual mechanical units by requiring that all roof mounted mechanical units comply with the code section upon reroofing the building.

Fiscal Impact Statement: By providing the exemption, costs to individual unit Owners/Leaseholders would be reduced by waiving the requirements to provide attachment/wind load engineering, material and equipment to elevate the mechanical units to comply with Table 1510.10 and Building Department plan review.

By requiring all mechanical units to comply upon reroofing, engineering, material and Building Department plan review costs limited to a single instance thereby reducing the overall cost to comply with this code section and conform the intent of reducing future reroofing costs.

LOCAL TECHNICAL AMENDMENT

FLORIDA BUILDING CODE 7th Edition (2020) - BUILDING

As currently written the code section does not take into account that in the event that a building requiring reroofing prior to all mechanical units having been brought into compliance effectively has experienced no net gain or ease of reroofing by having performed compliance by piecemeal/incomplete methods.

Effective Date: Upon Board Approval and posting on the Commission Website.
This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) – BUILDING

NFPA 70 NATIONAL ELECTRICAL CODE

2701.1 Scope. The provisions of this chapter and NFPA 70 shall govern the design, construction, erection and installation of the electrical components, appliances, equipment and systems used in buildings and structures covered by this code. The Florida Fire Prevention Code and NFPA 70 shall govern the use and maintenance of electrical components, appliances, equipment and systems. The Florida Building Code, Existing Building and NFPA 70 shall govern the alteration, repair, relocation, replacement and addition of electrical components, appliances, equipment and systems.

AMEND EXISTING NEC SECTION

Article 250.96 Bonding Other Enclosures.
(A) **General.** Metal raceways, cable trays, cable armor, cable sheath, enclosures, frames, fittings, and other metal non-current-carrying parts that are to serve as equipment grounding conductors, with or without the use of supplementary equipment grounding conductors, shall be bonded where necessary to ensure electrical continuity and the capacity to conduct safely any fault current likely to be imposed on them. Any nonconductive paint, enamel, or similar coating shall be removed at threads, contact points, and contact surfaces or be connected by means of fittings designed so as to make such removal unnecessary. All raceways shall contain an equipment-grounding conductor sized in accordance with Table 250.122.

Local Conditions and Need: This amendment assures a positive return path for faults.

Fiscal Impact Statement: Minimal cost impact associated with this amendment since this requirement has been in effect in Pinellas County since 1987.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

LOCAL TECHNICAL AMENDMENT
Pinellas County Construction Licensing Board (PCCLB)
FLORIDA BUILDING CODE 7th EDITION (2020) - BUILDING

AMEND EXISTING SECTION

1609.3 Ultimate design wind speed. The ultimate design wind speed V*ult*, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1), 1609.3(2), 1609.3(3) and 1609.4. The ultimate design wind speed, V*ult*, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, V*ult*, for use in the design of Risk Category III buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(3). The ultimate design wind speed, V*ult*, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(4). The ultimate design wind speed, V*ult,* for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local jurisdiction requirements. The ultimate design wind speeds, V*ult,* determined by the local jurisdiction shall be in accordance with Chapter 26 of ASCE 7.

The exact location of wind speeds are approved and adopted as follows: All incorporated and unincorporated Pinellas County, Risk Category I – 135 MPH with interpolation permitted as allowed in the Code and ASCE 7-16; Risk Category II – 145 MPH with interpolation permitted as allowed in the Code and ASCE 7-16; Risk Category III – 155 MPH with interpolation permitted as allowed in the Code and ASCE 7-16; Risk Category IV – 157 MPH with interpolation permitted as allowed in the Code and ASCE 7-16 ~~lines shall be established by local ordinance using recognized physical landmarks such as major roads, canals, rivers and lake shores wherever possible~~.

Local Conditions and Need: This amendment defines Pinellas County's basic wind speed designations.

Fiscal Impact Statement: This amendment adopts Pinellas County's minimum basic wind speeds. There is no cost impact associated with this amendment.

Effective Date: Upon Board Approval and posting on the Commission Website.

Effect of Implementation: This amendment if implemented would not discriminate against materials, products, or construction techniques of demonstrated capabilities.

BROWARD COUNTY
BOARD OF RULES AND APPEALS

ONE NORTH UNIVERSITY DRIVE
SUITE 3500-B
PLANTATION, FLORIDA 33324

PHONE: 954-765-4500
FAX: 954-765-4504
www.broward.org/codeappeal

October 13, 2020

RE: Florida Building Code - 7th Edition (2020) Mechanical – Chapter 9 Specific Appliances, Fireplaces and Solid Fuel-Burning Equipment - Section 908 Cooling Towers, Evaporative Condensers and Fluid Coolers.

To whom it may concern:

The following amendments to the Florida Building Code - 7th Edition (2020) Mechanical – Chapter 9 – Section 908 Cooling Towers, Evaporative Condensers and Fluid Coolers was passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is January 1, 2021.

The amendments consist as follows:

Chapter 9 -Section 908.3 - Cooling Towers, Evaporative Condensers and Fluid Coolers.
New section : 908.3.1 - Chapter 15 - Reference Standards

- **– Total of paragraphs changed : 2**

A full amended document is to be posted on the www.floridabuiding.org, if needed please feel free to contact our office 954-765-4500 - or email us at rulesboard@broward.org at any time.

Thank you,

Ruth Boselli
Administrative Coordinator

Attachments

C:\Users\rboselli\Documents\1 - Amendments to State - chapter 1\Memo Chapter I .docx

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Broward County Amendments to subsection 908.3.1 of the 2020 Florida Building Code - Mechanical, Seventh Edition showing the differences with the statewide code. Effective December 31, 2021.

CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

SECTION 908 COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS.

~~Stricken thru text~~ are deletions from the Florida Building Code - Mechanical, Seventh Edition.

Underscored text is additions Florida Building Code - Mechanical, Seventh Edition.

908.3 Location.

Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the *Florida Building Code, Building*.

908.3.1 Sitting of cooling towers shall comply with Section 7.2.1 of ASHRAE 188-2018.

Exception: The replacement of existing cooling towers on previously permitted and approved locations.

CHAPTER 15 REFERENCED STANDARDS

ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
1791 Tullie Circle, NE
Atlanta, GA 30329

Standard Reference Number	Title	Referenced in code section number
ASHRAE—2017	ASHRAE Fundamentals Handbook	603.2
15—2016	Safety Standard for Refrigeration Systems	1101.6, 1105.8, 1108.1
34—2016	Designation and Safety Classification of Refrigerants	202, 1102.2.1, 1103.1
62.1—2016	Ventilation for Acceptable Indoor Air Quality	403.3.1.1.2.3.2
170--2017	Ventilation of Health Care Facilities	407
188-2018	Legionellosis: Risk Management for Building Water Systems	908.3.1

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Broward County
Board of Rules and Appeals
One N. University Drive, Suite 3500-B, Plantation, Florida 33324
TL 954.765.4500 ✧ FX 954.765.4504
http://www.broward.org/codeappeals

Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Statute

Name: ___Rolando_Soto_____

Address: One N. University Drive, Suite 3500-B, Plantation, Florida 33324 _____

E-mail:___rosoto@broward.org_____

Phone: _____9547654500_____

Fax:_____9547654504_____

Code: _____7th Edition FBC Mechanical (2020) _____

Section #: ___908.3_+ Chapter 15_Referenced Standards_____

Text of Modification (additions underlined; deletion ~~stricken~~):
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?

It requires designers and/or contractors to address the following issues not included in the FBC Mechanical 7th Edition:
a. Potential contamination from building systems or facility processes to be drawn into the equipment
b. Potential for equipment to discharge into occupied spaces, trafficable areas, pedestrian thoroughfares, outdoor air intakes, and building openings
c. Potential for equipment siting that inhibits access to the equipment for the required maintenance and inspection consistent with the manufacturer's instructions and guidelines

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.

Large areas of Broward County include high density residential and large commercial buildings, hospitals schools, etc. Many of these buildings use Cooling Towers for heat rejection. Cooling Towers create a potential breeding environment for the Legionella bacteria, the cause of a serious, and sometime fatal condition known as Legionellosis. The increasing number of Cooling Towers in Broward County places large number of county residents in potential danger of being exposed to this infectious agent.

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Board of Rules and Appeals
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3. Explain how the local need is addressed by the proposed local amendment.

This local amendment will bring emphasis to the prevention of conditions, conducive to the spread of Legionellosis during the design, siting and installation of Cooling Towers in Broward County.

4. Explain how the local amendment is no more stringent than necessary to address the local need.

No prescriptive parameters are set. Only the desired result is stated. Designers, contractors and building owners are free to find different ways to achieve the results.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?
   No.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.
   Yes, this is a new subject not addressed by the code, the sitting of Cooling Towers to prevent the spread of the Legionella bacteria.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
   a) Impact to local government, relative to enforcement.
   b) Impact to property and building owners relative to cost of compliance.
   c) Impact to industry relative to the cost of compliance

a) No impact to local government, relative to enforcement, is expected.
b) No impact to property and building owners, relative to cost of compliance is expected.
c) No impact to industry, relative to the cost of compliance is expected.

BROWARD BORA PUBLIC HEARING AND VOTE OCTOBER 8, 2020.

AMENDMENT EFFECTIVE DATE: DECEMBER 31, 2020.

BROWARD COUNTY
BOARD OF RULES AND APPEALS

ONE NORTH UNIVERSITY DRIVE
SUITE 3500-B
PLANTATION, FLORIDA 33324

PHONE: 954-765-4500
FAX: 954-765-4504
www.broward.org/codeappeal

October 12, 2020

RE: **Florida Building Code - 7th Edition (2020) Mechanical – Chapter 9 – Section 908.8 Cooling Towers**

To whom it may concern:

The following amendments to the Florida Building Code - 7th Edition (2020) Mechanical - Chapter 9 – Section 908.8 Cooling Towers were passed by vote of the Broward County Board of Rules and Appeals on its regular session of October 8, 2020, the effective date is December 31, 2020.

The amendments consist as follows:

- **Chapter 9 – Section 908.8- Cooling Towers – Total of paragraphs changed : 5**

A full amended document is to be posted on the www.floridabuiding.org, if needed please feel free to contact our office 954-765-4500 - or email us at rulesboard@broward.org at any time.

Thank you,

Ruth Boselli
Administrative Coordinator

Attachments

Broward County Amendments to subsection 908.8 of the 2020 Florida Building Code - Mechanical, Seventh Edition showing the differences with the statewide code. Effective December 31, 2020.

CHAPTER 9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

~~Stricken thru text~~ are deletions from the Florida Building Code - Mechanical, Seventh Edition.

Underscored text are additions to Florida Building Code - Mechanical, Seventh Edition. There is no change in the text of the original code amendment.

908.8 Cooling towers. Cooling towers, both open circuit and closed circuit type, and evaporative condensers shall comply with Sections 908.8.1 ~~and 908.8.2~~ thru 908.8.3.

908.8.1 Conductivity ~~or~~ and flow-based control of cycles of concentration. ~~Cooling towers and evaporative condensers shall include controls that automate system bleed based on conductivity, fraction of metered makeup volume, metered bleed volume, recirculating pump run time or bleed time.~~ New cooling towers, and evaporative condensers, including replacements shall be operated with conductivity controllers, as well as make-up and blowdown (bleed off) meters and shall achieve a minimum of 8 cycles of concentration.

908.8.2 Drift eliminators. Cooling towers and evaporative condensers shall be equipped with drift eliminators that have a maximum drift rate of 0.002% of the recirculated water volume for counterflow towers and 0.005% of the recirculated water flow for crossflow towers ~~as established in the equipment's design specifications~~.

908.8.3 An affidavit of compliance demonstrating compliance with section 908.5 Florida Building Code shall be submitted by the property manager/owner to the local water provider every 12 months following system installation. The affidavit shall be signed by the service provider and include all dates of service within the reporting period and verified system operation at a minimum of 8 cycles of concentration.

Exception: Cooling water tower systems utilizing reclaimed water for the total amount of makeup water are exempt from the provisions of section 908.8.1 thru 908.8.3 Florida Building Code.

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Broward County
Board of Rules and Appeals
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Broward County Local Amendments

Proposed Modification to the Florida Building Code

Per Section 553.73. Fla Statute

Name: Broward County Board of Rules & Appeals, Attention: James DiPietro, ADMINISTRATIVE DIRECTOR

Address: One North University Drive, Suite 3500-B, Plantation FL 33324

E-mail: jdipietro@broward.org

Phone: (954) 765-4500

Fax: (954) 765-4504

Code: 7th Edition (2020) Florida Building Code – Mechanical

Section #: 908.8

Text of Modification (additions underlined; deletion ~~stricken~~):
Please see attachment.

Respond to the following questions:

1. How is the local amendment more stringent than the minimum standards described in the FBC?
   THIS MODIFICATION TO THE LOCAL AMENDMENT REQUIRES COOLING TOWERS TO BE OPERATED IN A MANNER THAT ACHIEVES A MINIMUM NUMBER OF CYCLES CONCENTRATION TO SUPPORT WATER CONSERVATION NEEDS

2. Demonstrate or provide evidence or data that the geographical jurisdiction governed by the local governing body exhibits a local need to strengthen the FBC beyond the needs or regional variation addressed by the FBC.
   AS THE SECOND MOST POPULATED COUNTY WITHIN THE STATE OF FLORIDA, BROWARD COUNTY'S POPULATION IS PROJECTED TO INCREASE TO 2,033,471 MILLION BY 2040, A GROWTH OF ALMOST 15% FROM 2015. RECENT LOCAL PLANNING ACTIVITIES IN THE REGION DEMONSTRATE THAT THE ECONOMIC DOWNTURN HAVE ENDED IN SOUTH FLORIDA AND CONTINUED GROWTH WILL RESULT IN A CONCOMITANT INCREASE UPON OUR LIMITED WATER SUPPLIES. IN 2013, BROWARD COUNTY PUMPED APPROXIMATELY 226 MILLION GALLONS/DAY (MGD) FROM ALL WATER SOURCES. THE PROJECTED INCREASED WATER DEMAND IN 2040 WILL RANGE FROM 17 – 52 MILLION GALLONS/DAY, DEPENDING ON THE MEDIUM OR HIGH GROWTH RATES ESTIMATES PRODUCED BY UNIVERSITY OF FLORIDA BUREAU OF ECONOMIC AND BUSINESS RESEARCH (BEBR).

   IN ACCORDANCE TO THE LOWER EAST COAST WATER AVAILABILITY RULE, NEW WATER DEMANDS WILL NEED TO BE MET THROUGH THE DEVELOPMENT OF ALTERNATIVE WATER SUPPLY OPTIONS. THIS INCLUDES THE USE OF THE BRACKISH FLORIDIAN AQUIFER AS NON-TRADITIONAL SOURCE OF WATER OR RECLAIMED WATER. HOWEVER, THESE REQUIRE SUBSTANTIAL INVESTMENTS IN NEW CAPITAL INFRASTRUCTURE, ADVANCED TREATMENT REQUIREMENTS, GREATER ENERGY DEMANDS, AND HIGHER OPERATIONAL COSTS. WATER UTILITIES WOULD HAVE A VERY DIFFICULT TIME IN TRYING TO DEVELOP THESE OPTIONS ON THEIR OWN.

   BEYOND THIS WATER SOURCE ALLOCATION RESTRICTION, THERE CONTINUES TO BE PRESENT THREATS TO THE BISCAYNE AQUIFER RELATED TO CLIMATE CHANGE. SEA LEVEL RISE IS DOCUMENTED TO HAVE SUBSTANTIALLY ACCELERATED THE

RATE OF SALTWATER INTRUSION OF THE COASTAL AQUIFER WITH APPROXIMATELY 40% OF THE BROWARD COUNTY'S COASTAL WELLFIELD CAPACITY DEMONSTRATED TO BE VULNERABLE TO SALTWATER CONTAMINATION DUE TO PROJECTED SEA LEVEL RISE. WE HAVE ALREADY SEEN THE LOSS OF WELLS, RELOCATION OF WELLFIELDS, AND SEVERE LIMITATIONS ON SEVERAL REMAINING COASTAL WELLFIELDS DUE TO SALTWATER CONSTRAINTS. SEA LEVEL RISE DOUBLES THE RATE AT WHICH THIS FRONT MOVES AND POSES SEVERE CHALLENGES FOR THE FUTURE. THEREFORE, IT IS IMPERATIVE THAT LOCAL GOVERNMENTS, INCLUDING BROWARD COUNTY, FORMALIZE EFFORTS TO PROVIDE LONG-TERM WATER SAVINGS AND SIZEABLE REDUCTIONS IN THE COST OF NEW AND REPLACEMENT INFRASTRUCTURE THROUGH PERMANENT CONSERVATION PRACTICES AND POLICIES.

FLORIDA STATE STATUTES, SECTION 373.016(5), RECOGNIZES THAT THE WATER RESOURCE PROBLEMS OF THE STATE VARY FROM REGION TO REGION, BOTH IN MAGNITUDE AND COMPLEXITY. IN BROWARD COUNTY, RESTRICTED WITHDRAWALS FROM OUR AQUIFER IN ACCORDANCE WITH STATE POLICY, COUPLED WITH THE LOSS OF EXISTING CAPACITY IN COASTAL WELLS AND THE CONTINUED IN INCREASE IN DEMAND THAT COMES WITH POPULATION GROWTH ALL COMBINE TO UNDERSCORE THE DRAMATIC REGIONAL VARIATIONS AND PRESSURES THAT MUST BE ACTIVELY ADDRESSED.

IN ADDITION, THE HISTORIC PRACTICE OF DISCHARGING MASSIVE VOLUMES OF PURE CONDENSATE WATER FROM AIR HANDLERS TO THE STORMWATER COLLECTION SYSTEMS OR GROUND SURFACE IS IRRECONCILABLE WITH THE VITAL ROLE CONDENSATE COLLECTION CAN PLAY AS A MAKEUP WATER FOR COOLING TOWERS. THE LOCAL AMENDMENT ALSO REQUIRES THAT CONDENSATE BE CAPTURED AND REUSED FOR THIS PURPOSE. MOREOVER, SUCH WASTE IS INCONSISTENT WITH FLORIDA STATURE 373.227 WHICH CAUTIONS, "THE LEGISLATURE RECOGNIZES THAT THE PROPER CONSERVATION OF WATER IS AN IMPORTANT MEANS OF ACHIEVING THE ECONOMICAL AND EFFICIENT UTILIZATION OF WATER NECESSARY, IN PART, TO CONSTITUTE A REASONABLE –BENEFICIAL USE. THE OVERALL WATER CONSERVATION GOAL OF THE STATE IS TO PREVENT AND REDUCE WASTEFUL, UNECONOMICAL, IMPRACTICAL OR UNREASONABLE USE OF WATER RESOURCES."

3. Explain how the local need is addressed by the proposed local amendment.
   COOLING TOWERS ARE ESTIMATED TO ACCOUNT FOR APPROXIMATELY 10% OF COUNTY-WIDE DEMANDS ON THE POTABLE WATER SYSTEM. CONSERVATION PRACTICES THROUGH IMPROVED COOLING TOWER OPERATIONS ARE ESTIMATED TO SAVE AS MUCH AS 20 MILLION GALLONS PER DAY OF POTABLE WATER FOR POTABLE PURPOSES.

   THE MODIFICATION WILL REQUIRE LESS WATER USAGE FROM THE LIMITED BISCAYNE AQUIFER AND WILL REDUCE DISCHARGE TO THE SANITARY SYSTEM. THIS AMENDMENT WILL PROVIDE ADDITIONAL WATER CONSERVATION INITIATIVES SO NECESSARY FOR THE REGION TO MEET ITS INCREASING WATER DEMANDS.

4. Explain how the local amendment is no more stringent than necessary to address the local need.
   THE LOCAL AMENDMENT WILL HELP TO SUPPORT THE BROWARD COUNTY COMMISSIONS' LONG STANDING EFFORTS TO ACHIEVE SUSTAINED WATER CONSERVATION THROUGH A NUMBER OF INCENTIVES. THE COUNTY HAS ADOPTED A VARIETY OF WATER CONSERVATION MEASURES TO HELP IMPROVE CONSERVATION PRACTICES IN THE RESIDENTIAL AND COMMERCIAL SECTORS, AS WELL AS WITHIN GOVERNMENT OPERATIONS. THIS PARTICULAR AMENDMENT WAS WIDELY VETTED WITH INDUSTRY AND STRIKES A PRACTICAL BALANCE IN IMPLEMENTATION AS ALL CURRENT TECHNOLOGIES ARE ABLE TO ACHIEVE THE REQUIRED 8 CYCLES OF CONCENTRATION, PROVIDING NO ONE MANUFACTURER OR TECHNOLOGY WITH AN ADVANTAGE WHILE ALSO LIMITING THE REQUIRED CYCLES OF CONCENTRATION TO A FACTOR THAT OFFERS A SOLID RETURN ON INVESTMENT.

5. Are the additional requirements discriminatory against materials, products, or construction techniques of demonstrated capabilities?
   ON SEPTEMBER 10, 2020, THE BROWARD COUNTY BOARD OF RULES AND APPEALS ADOPTED CHANGES TO CHAPTER 9, SECTION 908.8, WHICH CONTAINS THE SAME WATER EFFICIENCIES THAT ARE REQUESTED IN THIS AMENDMENT. PRIOR TO THAT EFFORT, EXTENSIVE AND WIDELY ATTENDED PUBLIC MEETINGS WERE HELD WITH TESTIMONY FROM BOTH WATER

TREATMENT COMPANIES AND EQUIPMENT MANUFACTURES AND IT WAS DETERMINED THAT THIS MODIFICATION WOULD NOT BE DISCRIMINATORY. THESE STANDARDS WERE ADVANCED WITHOUT ANY OBJECTIVE AND WITH THE COLLECTIVE CONCURRENCE OF DIVERSE SERVICE PROVIDERS AND MANUFACTURERS.

6. Indicate whether or not additional requirements introduce a new subject not already addressed in the FBC.

   THIS MODIFICATION REVISES AN EXISTING SECTION OF THE FLORIDA BUILDING CODE.

7. Include a fiscal impact statement which documents the costs and benefits of the proposed amendment. Criteria for the fiscal impact statement shall include a, b, and c:
   a) Impact to local government, relative to enforcement.
   b) Impact to property and building owners relative to cost of compliance.
   c) Impact to industry relative to the cost of compliance

   a) Broward County has included review for cooling tower compliance as part of the existing environmental review for project permitting.

   b) There are no net cost increases to property and business owners. While there is a $100 operational annual licensing fee to cover certification, verification, and noticing to industry to ensure they are operating the cooling towers as required (8 cycles of concentration), these costs are also offset by reduced water and wastewater disposal charges. This modification will reduce assessed impact fees charged by Broward County by more than what it would cost to comply. Water utilities have begun to meter water associated with cooling towers separate from irrigation meters. This means that not only is the user charged for the cost of the potable water, but also the cost of disposal. As disposal rates are actually higher than water rates, there is an economic advantage to reducing consumption through more efficient operations. The requirements are only implemented at the time of new construction or cooling tower replacement.

   c) There is no realized cost to industry given the economics of saving waters. Industry will see a growing economic advantage as water rates continue to increase as new water sources must be developed.

BROWARD BORA PUBLIC HEARING AND VOTE, OCTOBER 8, 2020.

AMENDMENT EFFECTIVE DATE DECEMBER 31, 2020.