

Florida Building Code 7<sup>th</sup> Edition (2020)  
Building

**Broward County Edition**  
Loose-Leaf Supplement

Insert and maintain this instruction sheet in front of the Florida Building Code, 7<sup>th</sup> Edition (2020) – Building.

File removed pages for reference.

**Building – Remove Old Pages**

Chapter 4 – Page 157 - 158  
Chapter 4 – Page 177 - 178

**Building – Insert New Pages**

Chapter 4 – Page 157 - 158  
Chapter 4 – Page 177 - 178

Highlight of Changes

1. Modification to Section 454.1.4.1.
2. Modification to Section 454.1.4.1.1.
3. Modification to Section 454.2.16.
4. Modification to Section 454.2.16.1.

This page is left intentionally blank.

## SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

ment shall be mounted in a conspicuous place and be readily available for use. Pools greater than 50 feet (15 250 mm) in length shall have multiple units with at least one shepherd's hook and one lifesaving ring located along each of the longer sides of the pools. Spa pools under 200 square feet (1.86 m<sup>2</sup>) of surface area, and interactive water features or wading pools with 2 feet (610 mm) or less of water depth are exempt from this requirement.

**454.1.3.3.2** All pools with a slope transition shall have safety line anchors as required by Section 454.1.2.2.3.2.

**454.1.3.3.3** If a pool cover or solar blanket is installed, it shall be secured around the entire perimeter and designed to support a live load of an adult person; or, the pool area shall be inaccessible to unauthorized individuals during times of cover or blanket use.

**454.1.3.3.4** A room or space shall be provided for chemicals to be stored in a cool, dry, and well-ventilated area under a roof and the area shall be inaccessible to the public.

**454.1.3.3.5** Swimming pool slides shall be installed in accordance with manufacturer's specifications and sound engineering practice. Pools with slides designed for swimming pools are not required to satisfy those of slide plunge pools in Section 454.1.9.2.1.

**454.1.3.3.6** Floating and climb-on devices, objects or toys that are not a part of the approved pool design shall not be tethered in the pool or installed without an engineering alterations application.

#### 454.1.4 Electrical systems.

**454.1.4.1 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.

**454.1.4.1.1 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.

**454.1.4.2 Lighting.** Artificial lighting shall be provided at all swimming pools which are to be used at night or which do not have adequate natural lighting so that all portions of the pool, including the bottom, may be readily seen without glare.

**454.1.4.2.1 Outdoor pool lighting.** Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a mini-

um of 1/2 watt incandescent equivalent, or 10 lumens, per square foot of pool water surface area.

**454.1.4.2.2 Indoor pool lighting.** Lighting shall provide a minimum of 10 footcandles (100 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 8/10 watt incandescent equivalent, or 15 lumens, per square foot of pool surface area.

**454.1.4.2.3 Underwater lighting.** Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.

**454.1.4.2.4 Overhead wiring.** Overhead service wiring shall not pass within an area extending a distance of 10 feet (3048 mm) horizontally away from the inside edge of the pool walls, diving structures, observation stands, towers or platforms. Allowances for overhead conductor clearances to pools that meet the safety standards in the *National Electrical Code* may be used instead. Electrical equipment wiring and installation including the grounding of pool components shall comply with Chapter 27.

**454.1.4.2.5 Voltage limitation.** Underwater lighting, or lighting that may be exposed to nozzle-directed pool water, shall not exceed 30 volts DC or 15 volts AC. Such lights shall be installed in accordance with manufacturer's installation instructions and be listed by a nationally recognized testing laboratory.

#### 454.1.5 Equipment area or rooms.

**454.1.5.1 Equipment.** Equipment designated by the manufacturer for outdoor use may be located in an equipment area, all other equipment must be located in an equipment room or enclosure. Plastic pipe subject to a period of prolonged sunlight exposure must be coated to protect it from ultraviolet light degradation. An equipment area shall be surrounded with a fence at least 4 feet (1219 mm) high on all sides not confined by a building or equivalent structure. A self-closing and self-latching gate with a permanent locking device shall be provided if necessary for access. An equipment room shall be protected on at least three sides and overhead. Any fence or gate installed shall use members spacing that shall not allow passage of a 4-inch (102 mm) diameter sphere. The fourth side may be a gate, fence, or open if otherwise protected from unauthorized entrance. An equipment enclosure shall be lockable or otherwise protected from unauthorized access.

**454.1.5.2 Indoor equipment.** Equipment not designated by the manufacturer for outdoor use shall be located in an equipment room. An equipment room shall be protected on at least three sides and overhead.

The fourth side may be a gate, fence or open if otherwise protected from unauthorized entrance.

**454.1.5.3 Materials.** The equipment enclosure, area or room floor shall be of concrete or other nonabsorbent material having a smooth slip-resistant finish and shall have positive drainage, including a sump pump if necessary. Ancillary equipment, such as a heater, not contained in an equipment enclosure or room shall necessitate an equipment area as described above.

**454.1.5.4 Ventilation.** Equipment rooms shall have either forced draft or cross ventilation. All below-grade equipment rooms shall have a stairway access with forced draft ventilation or a fully louvered door and powered intake within 6 inches (152 mm) of the floor. Where stairway access is not necessary to carry heavy items into the below grade room or vault, a “ship’s ladder” may be used if specified by the design engineer who must consider anticipated workload including equipment removal; and the ladder slope, tread height and width; and construction material of the ladder.

**454.1.5.5 Access.** The opening to an equipment room or area shall be a minimum 3 feet by 6 feet (914 mm by 1829 mm) and shall provide easy access to the equipment. Below-grade collector tank(s) must have adequate access for cleaning, maintenance and inspection.

**454.1.5.6 Size.** The size of the equipment enclosure, room or area shall provide working space to perform routine operations. Clearance shall be provided for all equipment as prescribed by the manufacturer to allow normal maintenance operation and removal without disturbing other piping or equipment. In rooms with fixed ceilings, the minimum height shall be 7 feet (2137 mm).

**454.1.5.7 Lighting.** Equipment rooms or areas shall be lighted to provide 30 footcandles (300 lux) of illumination at floor level.

**454.1.5.8 Storage.** Equipment enclosures, rooms or areas shall not be used for storage of chemicals emitting corrosive fumes or for storage of other items to the extent that entrance to the room for inspection or operation of the equipment is impaired.

**454.1.5.9 Hose bibbs.** A hose bibb with vacuum breaker shall be located in the equipment room or area.

#### 454.1.6 Plumbing systems.

**454.1.6.1 Sanitary facilities.** Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirements of Table 454.1.6.1. Unisex restrooms

shall meet all the requirements for materials, drainage and signage as indicated in Sections 454.1.6.1.1 through 454.1.6.1.4. Each shall include a water closet, a diaper change table, a urinal and a lavatory. Pools with a bathing load larger than 40 persons shall provide separate sanitary facilities labeled for each sex. The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water’s edge of each pool served by the facilities.

**Exception:** Where a swimming pool serves only a designated group of residential dwelling units including hotel rooms and not the general public, poolside sanitary facilities are not required if all living units are within a 200-foot (60 960 mm) horizontal radius of the nearest water’s edge, are not over three stories in height unless serviced by an elevator, and are each equipped with private sanitary facilities.

**454.1.6.1.1 Required fixtures.** Fixtures shall be provided as indicated on Table 454.1.6.1. The fixture count on this chart is deemed to be adequate for the pool and pool deck area that is up to three times the area of the pool surface provided. When multiple fixture sets are required and separate facilities are provided for each sex, the fixtures used in ancillary family-style restrooms can be used to meet the requirements of this section.

One diaper changing table shall be provided at each restroom. Diaper changing tables are not required at restrooms where all pools served are restricted to adult use only. Swim diapers are recommended for use by children that are not toilet trained. Persons that are ill with diarrhea cannot enter the pool.

**Exception:** When a public swimming pool meets all of the following conditions the following shall apply:

1. The pool serves only a designated group of dwelling units,
2. The pool is not for the use of the general public, and
3. A building provides sanitary facilities;

The fixture requirement for the building shall be determined and if it exceeds the requirement in Table 454.1.6.1 then the building requirement shall regulate the fixture count, otherwise the fixture count shall be based on the requirement for the pool. Under no circumstances shall the fixture counts be cumulative.

This page is left intentionally blank.

drain, sewer, drainage system, seepage pit underground leaching pit, or subsoil drainage line, and any line connected to a swimming pool unless approved by the administrative authority.

**454.2.10.2 Disposal through public sewer.** When the waste water from a swimming pool is to be disposed of through a public sewer, a 3-inch (76 mm) P-trap shall be installed on the lower terminus of the building drain and the tall piece from the trap shall extend a minimum of 3 inches (76 mm) above finished grade and below finished floor grade. This trap need not be vented. The connection between the filter waste discharge piping and the P-trap shall be made by means of an indirect connection.

**454.2.10.3 Deviations.** Plans and specifications for any deviation from the above manner of installation shall first be approved by the administrative authority before any portion of any such system is installed. When waste water disposal is to seepage pit installation, it shall be installed in accordance with the approval granted by the administrative authority.

**454.2.11 Separation tank.** A separation tank of an approved type may be used in lieu of the aforementioned means of waste water disposal when connected as a reclamation system.

#### 454.2.12 Tests.

**454.2.12.1 Pressure test.** All pool piping shall be tested and proved tight to the satisfaction of the administrative authority, under a static water or air pressure test of not less than 35 psi (241 kPa) for 15 minutes.

**Exception:** Circulating pumps need not be tested as required in this section.

**454.2.12.2 Drain and waste piping.** All drain and waste piping shall be tested by filling with water to the point of overflow and all joints shall be tight.

#### 454.2.13 Drain piping.

**454.2.13.1 Slope to discharge.** Drain piping serving gravity overflow gutter drains and deck drains shall be installed to provide continuous grade to point of discharge.

**454.2.13.2 Joints and connections.** Joints and connections shall be made as required by the *Florida Building Code, Plumbing*.

#### 454.2.14 Water heating equipment.

**454.2.14.1 Labels.** Swimming pool water heating equipment shall conform to the design, construction and installation requirements in accordance with accepted engineering practices and shall bear the label of a recognized testing agency, and shall include a consideration of combustion air, venting and gas supply requirements for water heaters.

**454.2.14.2 Water retention.** If a heater is not equipped or designed for an approved permanent bypass or anti-siphon device, an approved permanent bypass or anti-siphon device shall be installed to provide a positive

means of retaining water in the heater when the pump is not in operation.

**454.2.14.3 Pit drainage.** When the heater is installed in a pit, the pit shall be provided with approved drainage facilities.

**454.2.14.4 Connections.** All water heating equipment shall be installed with flanges or union connection adjacent to the heater.

**454.2.14.5 Relief valve.** When water heating equipment which is installed in a closed system has a valve between the appliance and the pool, a pressure relief valve shall be installed on the discharge side of the water heating equipment. For units up to and including 200,000 Btu/hour input, the relief valve shall be rated by the American Gas Association.

#### 454.2.15 Gas piping.

Gas piping shall comply with the *Florida Building Code, Fuel Gas*.

**454.2.16 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.

**454.2.16.1 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.

#### 454.2.17 Residential swimming barrier requirement.

Residential swimming pools shall comply with Sections 454.2.17.1 through 454.2.17.3.

**Exception:** A swimming pool with an approved safety pool cover complying with ASTM F1346.

**454.2.17.1 Outdoor swimming pools.** Outdoor swimming pools shall be provided with a barrier complying with Sections 454.2.17.1.1 through 454.2.17.1.14.

**454.2.17.1.1** The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade the barrier may be at ground level or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

**454.2.17.1.2** The barrier may not have any gaps, openings, indentations, protrusions, or structural components that could allow a young child to crawl under, squeeze through, or climb over the barrier as herein described below. One end of a removable

child barrier shall not be removable without the aid of tools. Openings in any barrier shall not allow passage of a 4-inch diameter (102 mm) sphere.

**454.2.17.1.3** Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

**454.2.17.1.4** Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed  $1\frac{3}{4}$  inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed  $1\frac{3}{4}$  inches (44 mm) in width.

**454.2.17.1.5** Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed  $1\frac{3}{4}$  inches (44 mm) in width.

**454.2.17.1.6** Maximum mesh size for chain link fences shall be a  $2\frac{1}{4}$  inch (57 mm) square unless the fence is provided with slats fastened at the top or bottom which reduce the openings to no more than  $1\frac{3}{4}$  inches (44 mm).

**454.2.17.1.7** Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than  $1\frac{3}{4}$  inches (44 mm).

**454.2.17.1.8** Access gates, when provided, shall be self-closing and shall comply with the requirements of Sections 454.2.17.1.1 through 454.2.17.1.7 and shall be equipped with a self-latching locking device located on the pool side of the gate. Where the device release is located no less than 54 inches (1372 mm) from the bottom of the gate, the device release mechanism may be located on either side of the gate and so placed that it cannot be reached by a young child over the top or through any opening or gap from the outside. Gates that provide access to the swimming pool must open outward away from the pool. The gates and barrier shall have no opening greater than  $\frac{1}{2}$  inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

**454.2.17.1.9** Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

1. All doors and windows providing direct access from the home to the pool shall be equipped with an exit alarm complying with

UL 2017 that has a minimum sound pressure rating of 85 dBA at 10 feet (3048 mm). Any deactivation switch shall be located at least 54 inches (1372 mm) above the threshold of the access. Separate alarms are not required for each door or window if sensors wired to a central alarm sound when contact is broken at any opening.

**Exceptions:**

1. Screened or protected windows having a bottom sill height of 48 inches (1219 mm) or more measured from the interior finished floor at the pool access level.
2. Windows facing the pool on the floor above the first story.
3. Screened or protected pass-through kitchen windows 42 inches (1067 mm) or higher with a counter beneath.
2. All doors providing direct access from the home to the pool must be equipped with a self-closing, self-latching device with positive mechanical latching/locking installed a minimum of 54 inches (1372 mm) above the threshold, which is approved by the authority having jurisdiction.
3. A swimming pool alarm that, when placed in a pool, sounds an alarm upon detection of an accidental or unauthorized entrance into the water. Such pool alarm must meet and be independently certified to ASTM F2208, titled "Standard Safety Specification for Residential Pool Alarms," which includes surface motion, pressure, sonar, laser, and infrared alarms. For purposes of this paragraph, the term "swimming pool alarm" does not include any swimming protection alarm device designed for individual use, such as an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water.

**454.2.17.1.10** Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier which meets the requirements of Sections 454.2.17.1.1 through 454.2.17.1.9 and Sections 454.2.17.1.12 through 454.2.17.1.14. When the ladder or steps are secured, locked or removed, any opening created shall not