

## 2010 Florida Building Code Residential

### **Broward County Edition** Loose-leaf Supplement

Insert and maintain this instruction sheet in front of the 2010 Florida Building Code –Residential.  
File removed pages for reference.

#### **Residential - Remove Old Pages**

41.3 / 41.4

#### **Residential - Insert New Pages**

41.3 / 41.4

#### **Highlight of changes:**

1. Modifications to Section R4101.16 Electrical.
2. New Section R4101.16.1

**R4101.3 Mechanical requirements.** Unless otherwise specified in this code, all piping, equipment and materials used in the process piping system of swimming pools that are built in place shall conform to the *Florida Building Code, Plumbing*.

#### R4101.4 Approvals.

**R4101.4.1 Compliance.** All materials, piping, valves, equipment or appliances entering into the construction of swimming pools or portions thereof shall be of a type complying with this code or of a type recommended and approved by a nationally recognized testing agency or conforming to other recognized standards acceptable to the administrative authority.

**R4101.4.2 Items not covered.** For any items not specifically covered in these requirements, the administrative authority is hereby authorized to require that all equipment, materials, methods of construction and design features shall be proven to function adequately, effectively and without excessive maintenance and operational difficulties.

**R4101.4.2.1 Flood hazard areas.** Pools installed in flood hazard areas established in Section R322 shall comply with Section R322.2.4 (A Zones) or R322.3.3.1 in coastal high-hazard areas (V Zones).

**R4101.4.3 Applicant responsibility.** It shall be the responsibility of the applicant to provide such data, tests or other adequate proof that the device, material or product will satisfactorily perform the function for which it is intended, before such item shall be approved or accepted for tests.

#### R4101.5 Alternate materials and methods of construction.

**R4101.5.1 Approval and authorization.** The provisions of this code are not intended to prevent the use of any alternate material, method of construction, appliance or equipment, provided any such alternate has been first approved and its use authorized by the administrative authority.

**R4101.5.2 Required tests.** When there is insufficient evidence to substantiate claims for alternates, the administrative authority may require tests, as proof of compliance, to be made by an approved agency at the expense of the applicant.

#### R4101.6 Engineering design.

**R4101.6.1 Conformance standard.** Design, construction and workmanship shall be in conformity with the requirements of ANSI/NSPI 3; ANSI/NSPI 4; ANSI/NSPA 5; ANSI/NSPI 6; and ANSI/APSP 7.

**R4101.6.2 Required equipment.** Every swimming pool shall be equipped complete with approved mechanical equipment consisting of filter, pump, piping valves and component parts.

**Exception:** Pools with a supply of fresh water equivalent to the volume of the pool in the specified turnover time will be allowed.

**R4101.6.3 Water velocity.** Pool piping shall be designed so the water velocity will not exceed 10 feet per second (3048 mm/s) for pressure piping and 8 feet per second (2438 mm/s) for suction piping, except that the water velocity shall not exceed 8 feet per second (2438 mm/s) in copper tubing.

Main suction outlet velocity must comply with ANSI/APSP 7.

**Exception:** Jet inlet fittings shall not be deemed subject to this requirement.

**R4101.6.4 Piping to heater.** Water flow through the heater, any bypass plumbing installed, any back-siphoning protection, and the use of heat sinks shall be done in accordance with the manufacturer's recommendations.

**R4101.6.5 Piping installation.** All piping materials shall be installed in strict accordance with the manufacturer's installation standards.

**Exception:** Primer and glue on exposed aboveground piping is not required to be colored.

**R4101.6.6 Entrapment protection for suction outlets** shall be installed in accordance with requirements of ANSI/APSP 7.

#### R4101.7 Pumps.

**R4101.7.1 Strainer.** Pool circulating pumps shall be equipped on the inlet side with an approved type hair and lint strainer when used with a pressure filter.

**R4101.7.2 Installation.** Pumps shall be installed in accordance with manufacturer recommendations.

**R4101.7.3 Capacity.** Pumps shall have design capacity at the following heads.

1. Pressure Diatomaceous Earth—At least 60 feet (18 288 mm).
2. Vacuum Diatomaceous Earth—20-inch (508 mm) vacuum on the suction side and 40-foot (12 192 mm) total head.
3. Rapid Sand—At least 45 feet (13 716 mm).
4. High Rate Sand—At least 60-feet (18 288 mm).

**R4101.7.4 Materials.** Pump impellers, shafts, wear rings and other working parts shall be of corrosion-resistant materials.

#### R4101.8 Valves.

**R4101.8.1 General.** Valves shall be made of materials that are approved in the *Florida Building Code, Plumbing*. Valves located under concrete slabs shall be set in a pit having a least dimension of five pipe diameters with a minimum of at least 10 inches (254 mm) and fitted with a suitable cover. All valves shall be located where they will be readily accessible for maintenance and removal.

**R4101.8.2 Full-way (gate) valves.** Full-way valves shall be installed to insure proper functioning of the filtration and piping system. When the pump is located below the overflow rim of the pool, a valve shall be installed on the discharge outlet and the suction line.

**R4101.8.3 Check valves.** Where check valves are installed they shall be of the swing, spring or vertical check patterns.

**R4101.8.4 Combination valves.** Combination valves shall be installed per manufacturer's installation instructions.

**R4101.9 Water supply.** Unless an approved type of filling system is installed, any water supply which in the judgment of the

## SWIMMING POOLS

administrative authority may be used to fill the pool, shall be equipped with backflow protection. No over the rim fill spout shall be accepted unless located under a diving board or properly guarded.

### **R4101.10 Waste water disposal.**

**R4101.10.1 Connection limitations.** Direct or indirect connections shall not be made between any storm 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.

**R4101.10.2 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.

**R4101.10.3 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.

**R4101.11 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.

### **R4101.12 Tests.**

**R4101.12.1 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 pounds per square inch (psi) (241 kPa) for 15 minutes.

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

**R4101.12.2 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.

### **R4101.13 Drain piping.**

**R4101.13.1 Slope to discharge.** Drain piping serving gravity overflow gutter drains and deck drains shall be installed to provide continuous grade to point of discharge.

**R4101.13.2 Joints and connections.** Joints and connections shall be made as required by the Florida Building Code, Plumbing.

### **R4101.14 Water heating equipment.**

**R4101.14.1 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.

**R4101.14.2 Water retention.** If a heater is not equipped or designed for an approved permanent bypass or antisiphon device, an approved permanent bypass or antisiphon device shall be installed to provide a positive means of retaining water in the heater when the pump is not in operation.

**R4101.14.3 Pit drainage.** When the heater is installed in a pit, the pit shall be provided with approved drainage facilities.

**R4101.14.4 Connections.** All water heating equipment shall be installed with flanges or union connection adjacent to the heater.

**R4101.14.5 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.

**R4101.15 Gas piping.** Gas piping shall comply with the Florida Building Code, Fuel Gas.

**R4101.16 Electrical.** Electrical wiring and equipment shall comply with Chapter 27 of the Florida Building Code.

**R4101.16.1** When underwater light fixtures are installed for swimming or bathing pools, these fixtures shall not exceed the following maximum output/ performance standards:

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
5. The maximum incandescent lamp size shall be 300 watts

**R4101.17 Residential swimming barrier requirement.** Residential swimming pools shall comply with Sections R410L17.1 through R410L17.3.

**Exception:** A swimming pool with an approved safety pool cover complying with ASTM F 1346.

**R4101.17.1 Outdoor swimming pools.** Outdoor swimming pools shall be provided with a barrier complying with R4101.17.1.1 through R4101.17.1.14.

**R4101.17.1.1** 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).

**R4101.17.1.2** 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.

**R4101.17.1.3** Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

**R4101.17.1.4** 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