



**Public and Residential Pool and Spa Electrical Changes**  
**Including those for Existing Pools and Spas**  
**Effective January 1, 2018**

**Electrical Mods that passed in 6<sup>th</sup> edition**

6498:

110.3 Required Inspections, Electrical and add the following:

4. 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.

6530:

**R4501.16 Electrical.** Electrical equipment wiring and installation, including the bonding and grounding of pool components equipment 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.

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**454.1.4.1 Electrical equipment and wiring.** Electrical equipment wiring and installation, including the bonding and grounding of pool components shall conform 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 Electrical.** Electrical equipment wiring and installation, including the bonding and grounding of pool components equipment 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.

6496:

#### **454.1.10.4 Electrical**

**454.1.10.4.1 Ground-Fault Circuit-Interrupter Protection for Personnel.** Outlets supplying repaired, replaced, altered, or relocated pool pump motors connected to single-phase, 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, and outlets supplying all other repaired, replaced, altered, or relocated 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- and 20-amperes, whether by receptacle or by direct connection, shall be provided with ground-fault circuit interrupter protection for personnel.

**454.1.10.4.2 Equipotential Bonding.** Any of the parts specified in 680.26(B)(1) through (B)(7) of the NFPA 70, *National Electrical Code* that are repaired, replaced, altered, or installed new at an existing swimming pool shall be connected to the existing bonding system using solid copper conductors, insulated, covered, or bare, not smaller than 8 AWG or with rigid metal conduit of brass or other identified corrosion-resistant metal. Connections to bonded parts shall be made in accordance with 250.8 of NFPA 70, *National Electrical Code*. An 8 AWG or larger solid copper bonding conductor provided to reduce voltage gradients in the pool area shall not be required to be extended or attached to



remote panelboards, service equipment, or electrodes. All metallic float-in light rings shall be connected to the equipotential bonding grid. Float-in light rings with no provision for bonding, and other devices which do not provide an electrical connection between a metallic underwater luminaire and the forming shell of a wet niche fixture, including screws or bolts not supplied by the luminaire's manufacturer and listed for use with the specific luminaire, shall not be allowed for use with any underwater luminaire that is required to be grounded. Where none of the bonded parts is in direct connection with the pool water, the pool water shall be in direct contact with an approved corrosion-resistant conductive surface that exposes not less than 5800 mm<sup>2</sup> (9 in.<sup>2</sup>) of surface area to the pool water at all times. The conductive surface shall be located where it is not exposed to physical damage or dislodgement during usual pool activities, and it shall be bonded in accordance with 680.26(B) of the NFPA 70, *National Electrical Code*. A bonded concrete pool shell shall be considered to be a conductive surface. The interior metallic surface or surfaces of any forming shell (wet niche) shall not be covered with any material, including plaster, except potting compound covering internal bonding connections in conformance with 680.23(B)(2)(b) of NFPA 70, *National Electrical Code*, shall be allowed.

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**302.6 Swimming Pools.** The provisions of Sections 302.6.1 and 302.6.2 apply to all alterations, repairs, additions, and relocation of equipment at existing swimming pools regardless of compliance method.

**302.6.1 Ground-Fault Circuit-Interrupter Protection for Personnel.** Outlets supplying repaired, replaced, altered, or relocated pool pump motors connected to single-phase, 120-volt through 240-volt branch circuits, whether by receptacle or by direct connection, and outlets supplying all other repaired, replaced, altered, or relocated 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- and 20-amperes, whether by receptacle or by direct connection, shall be provided with ground-fault circuit interrupter protection for personnel.



**302.6.2 Equipotential Bonding.** Any of the parts specified in 680.26(B)(1) through (B)(7) of the NFPA 70, *National Electrical Code* that are repaired, replaced, altered, or installed new at an existing swimming pool shall be connected to the existing bonding system using solid copper conductors, insulated, covered, or bare, not smaller than 8 AWG or with rigid metal conduit of brass or other identified corrosion-resistant metal. Connections to bonded parts shall be made in accordance with 250.8 of NFPA 70, *National Electrical Code*. An 8 AWG or larger solid copper bonding conductor provided to reduce voltage gradients in the pool area shall not be required to be extended or attached to remote panelboards, service equipment, or electrodes. All metallic float-in light rings shall be connected to the equipotential bonding grid. Float-in light rings with no provision for bonding, and other devices which do not provide an electrical connection between a metallic underwater luminaire and the forming shell of a wet niche fixture, including screws or bolts not supplied by the luminaire's manufacturer and listed for use with the specific luminaire, shall not be allowed for use with any underwater luminaire that is required to be grounded. Where none of the bonded parts is in direct connection with the pool water, the pool water shall be in direct contact with an approved corrosion-resistant conductive surface that exposes not less than 5800 mm<sup>2</sup> (9 in.<sup>2</sup>) of surface area to the pool water at all times. The conductive surface shall be located where it is not exposed to physical damage or dislodgement during usual pool activities, and it shall be bonded in accordance with 680.26(B) of the NFPA 70, *National Electrical Code*. A bonded concrete pool shell shall be considered to be a conductive surface. The interior metallic surface or surfaces of any forming shell (wet niche) shall not be covered with any material, including plaster, except potting compound covering internal bonding connections in conformance with 680.23(B)(2)(b) of NFPA 70, *National Electrical Code*, shall be allowed.