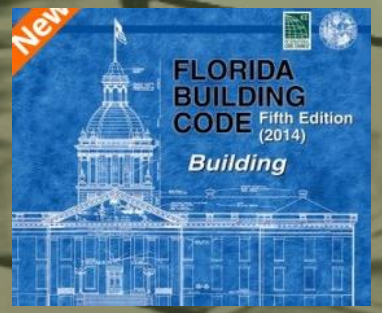
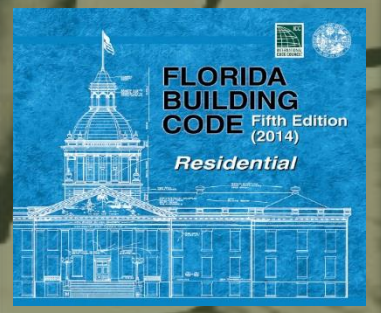
Florida Building Code Swimming Pool Barrier Requirements.



Presented by The Board and Code Administration Division



Senate Bill 86

- **Senate Bill 86** is also known as the “Preston de Ibern/McKenzie Merriam Residential Swimming Pool Safety Act” Created Chapter 515 of the Florida Statutes.
- This is how it all started.
- It became effective October 1, 2000.

Florida Statutes 515

- **515.23 Legislative findings and intent.**--The Legislature finds that drowning is the leading cause of death of young children in this state and is also a significant cause of death for medically frail elderly persons in this state, that constant adult supervision is the key to accomplishing the objective of reducing the number of submersion incidents, and that when lapses in supervision occur a pool safety feature designed to deny, delay, or detect unsupervised entry to the swimming pool, spa, or hot tub will reduce drowning and near-drowning incidents.

- **FBC/Building Chapter 4 Section 454**
- **SWIMMING POOL.** Any structure intended for swimming, recreational bathing or wading that contains water over 24 inches (610 mm) deep. This includes in-ground, aboveground and on-ground pools; hot tubs; spas and fixed-in-place wading pools.


Spa


Fixed-in-place wading pools.


In-ground


Aboveground


On-ground pools


Hot tubs

FLORIDA BUILDING CODE/BUILDING-CHAPTER 4 SECTION 454.2 PRIVATE SWIMMING POOLS

- **Section 454.2.1 Definitions: BARRIER.** A fence, dwelling wall or nondwelling wall or any combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool, especially access from the residence or from the yard outside the barrier.

FLORIDA BUILDING CODE/RESIDENTIAL CHAPTER 45 PRIVATE SWIMMING POOLS

- **Section 4501.1 Definitions: BARRIER.** A fence, dwelling wall or nondwelling wall or any combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool, especially access from the residence or from the yard outside the barrier.

- **SWIMMING POOL, PRIVATE.** Any structure, located in a residential area, that is intended for swimming or recreational bathing and contains water over 24 inches (610 mm)deep including but not limited to inground, above-ground, and onground swimming pools, hot tubs, and nonportable spas

  SWIMMING POOL, INDOOR. A swimming pool which is totally contained within a structure and surrounded on all four sides by walls of said structure.

  SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

- **SWIMMING POOL, RESIDENTIAL.** See ***"Swimming pool, private."***

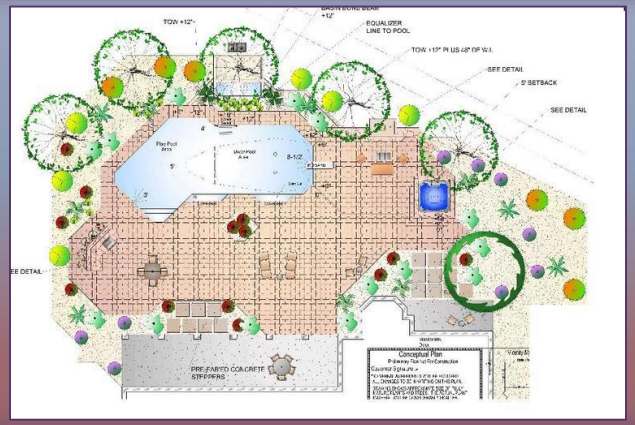
R4501.17 Residential swimming barrier requirement.

- Residential swimming pools shall comply with Sections R4501.17.1 through R4501.17.3.

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

FLORIDA BUILDING CODE /RESIDENTIAL (FBC/R) Section 4502.17.1 Outdoor swimming pools.

(FBC./B Section 454.2.17)

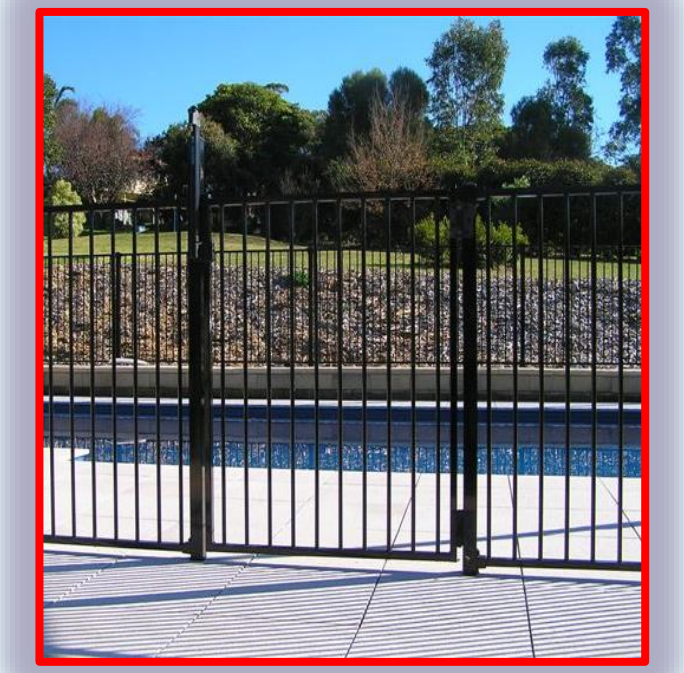


- Outdoor swimming pools shall be provided with a barrier complying with Sections R4501.17.1.1 through R4501.17.1.14.

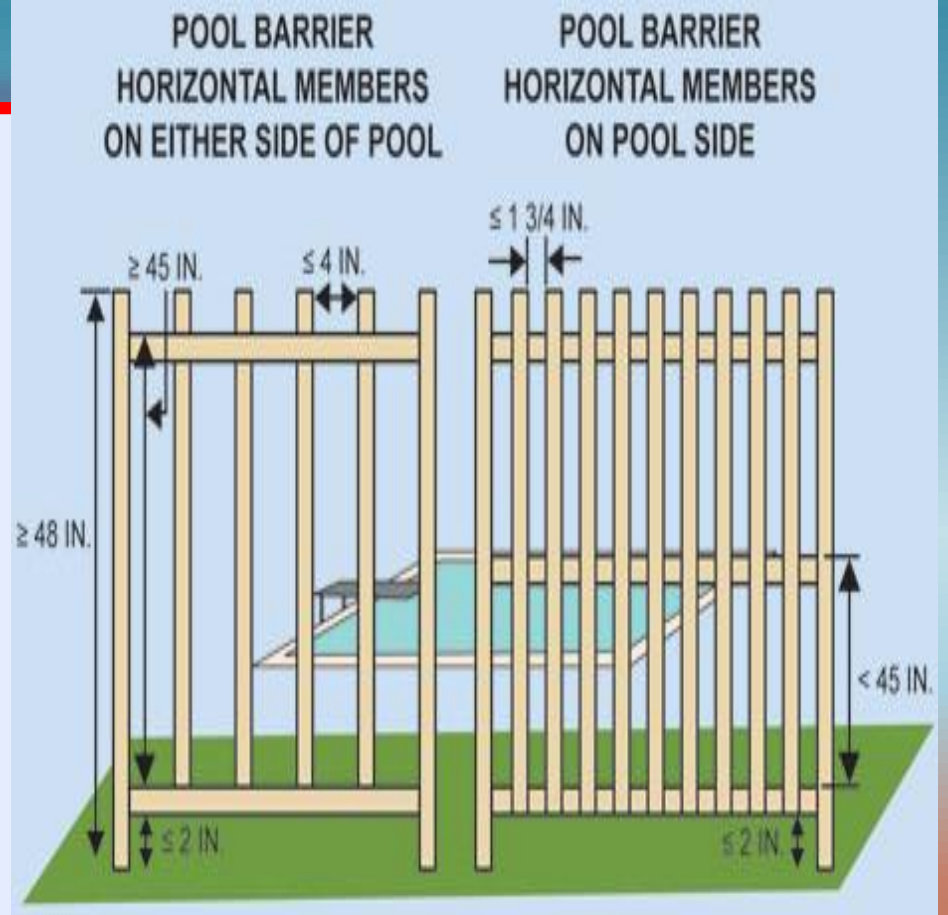
R4501.17.1.1 The top of the barrier shall be at least ***48 inches*** (1219 mm) above grade, measured on the side of the barrier which faces away from the swimming pool.

The maximum vertical clearance between grade and the bottom of the barrier shall be ***2 inches*** (5mm) 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 maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

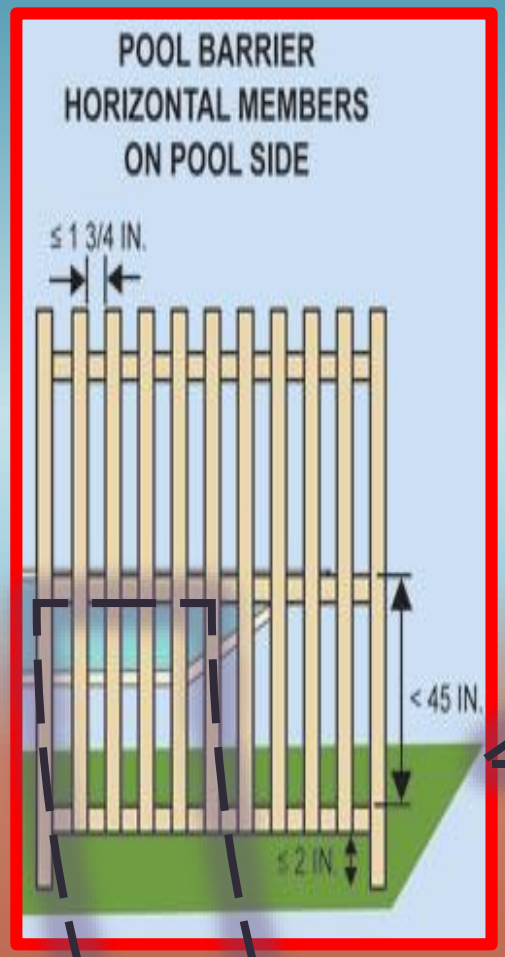


- **R4501.17.1.2** The barrier may not have any gaps, openings, indentations, protrusions, or structural components that could allow a young child to crawl under, squeeze through, or climb over the barrier as herein described below. <u>One end of a removable child barrier shall not be removable without the aid of tools.</u> Openings in any barrier shall not allow passage of a 4-inchdiameter (102 mm) sphere.

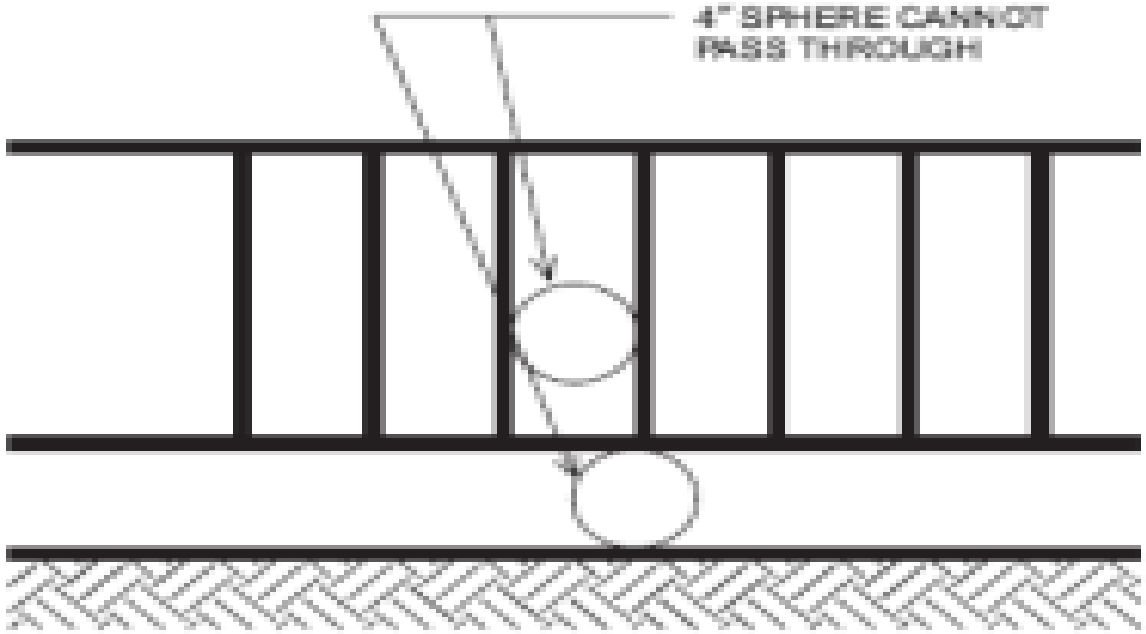


- **R4501.17.1.3** Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

- **R4501.17.1.4** 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 ¾ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches (44 mm) in width.



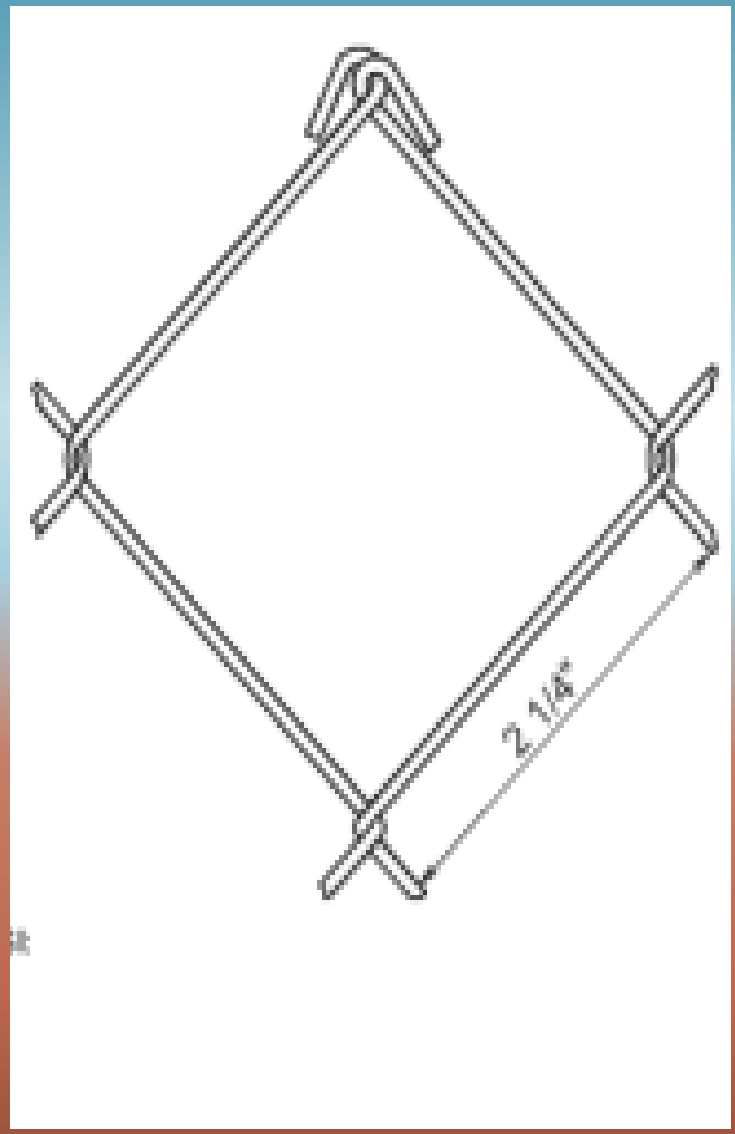
- **R4501.17.1.5** Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches (44 mm) in width.



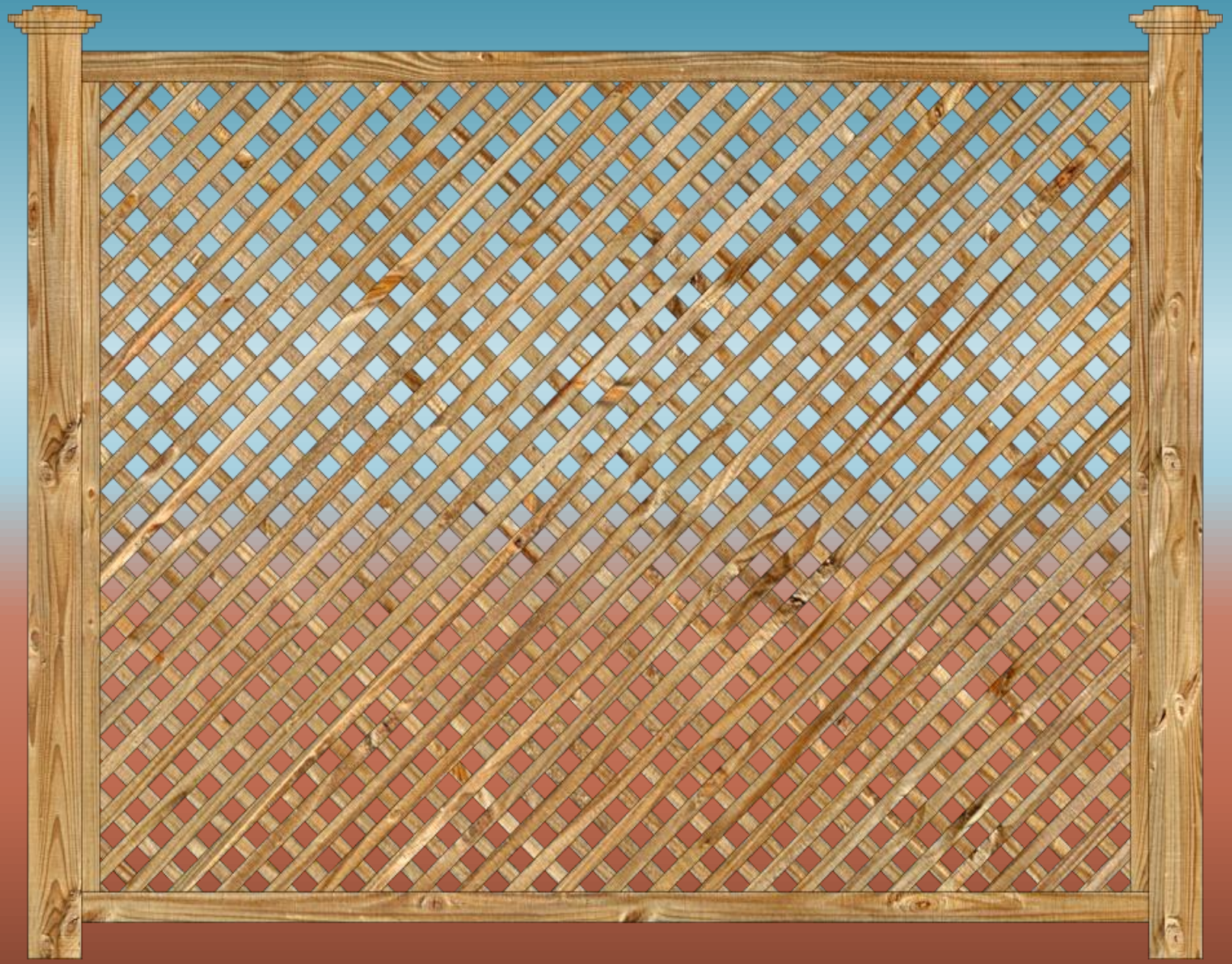
For SI: 1 inch = 25.4 mm.

Figure 3109.4.1.1
BARRIER OPENINGS

- **R4501.17.1.6** Maximum mesh size for chain link fences shall be a 2 1/4 inch square (57 mm) unless the fence is provided with slats fastened at the top or bottom which reduce the openings to no more than 1 ¾ inches (44 mm).

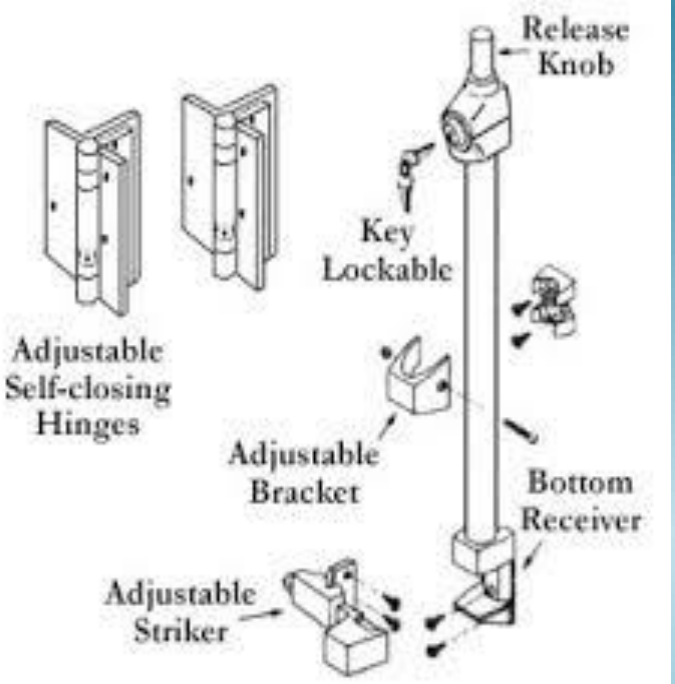


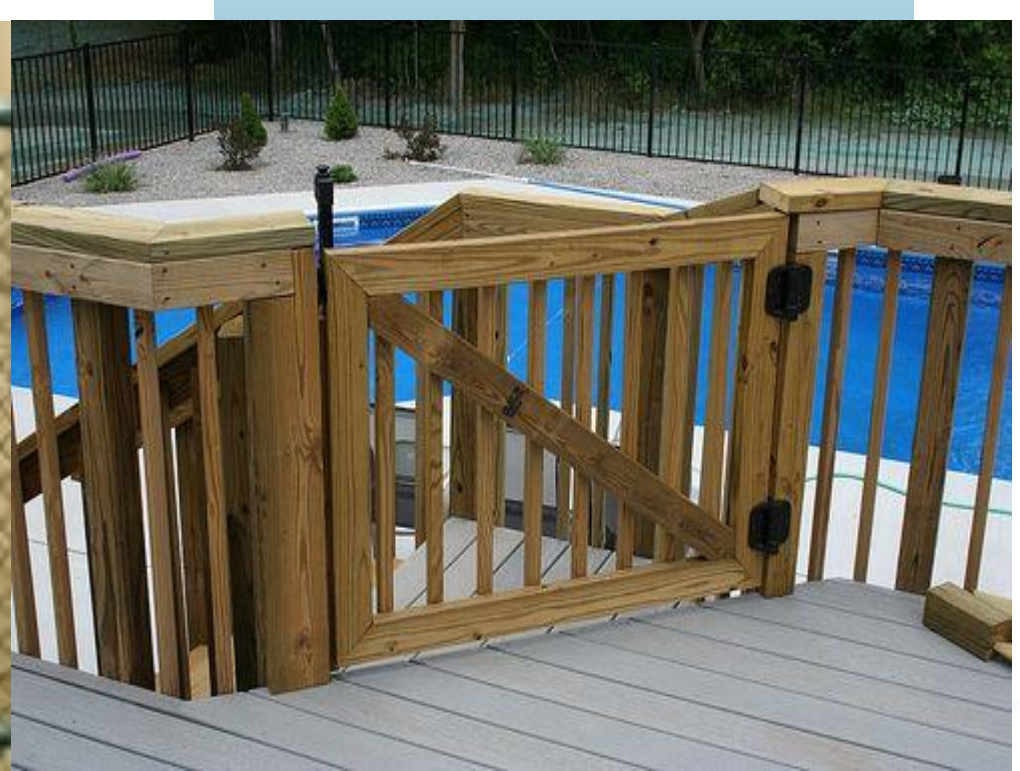
- **R4501.17.1.7** Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than 1 3/4 inches (44mm).



- **R4501.17.1.8** Access gates, when provided, shall be self-closing and shall comply with the requirements of Sections R4501.17.1.1 through R4501.17.1.7 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 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism

Self-Closers & Self-Latches





Self-Closers & Self-Latches

Self-Closers & Self-Latches

4501.17.1.9 Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

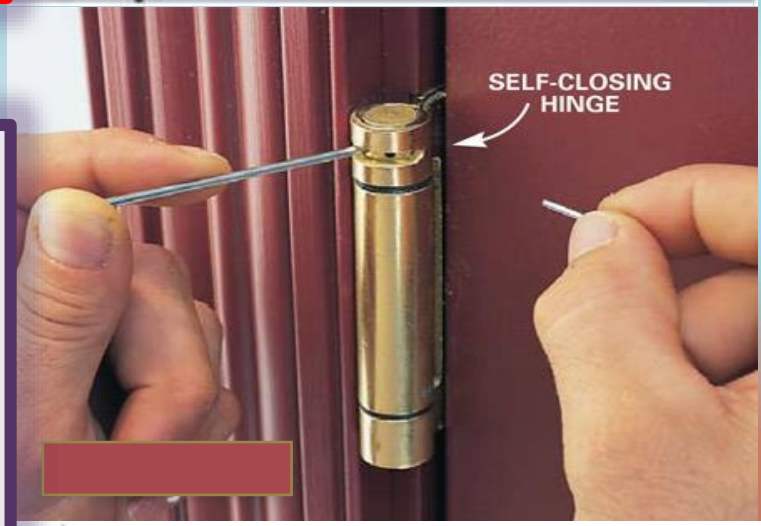
1. All doors and windows providing direct access from the home to the pool shall be equipped with an exit alarm complying with UL 2017 that has a minimum sound pressure rating of 85 dBA at 10 feet (3048 mm). Any deactivation switch shall be located at least 54 inches (1372 mm) above the threshold of 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: (Next Slide)**

4501.17.1.9 Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

- **Exceptions:**
- a. Screened or protected windows having a bottom sill height of 48 inches (1219mm) or more measured from the interior finished floor at the pool access level.
- b. Windows facing the pool on floor above the first story.
- c. Screened or protected pass-through kitchen windows 42 inches (1067 mm) or higher with a counter beneath.

2016 Supplement to the 5th Edition (2014) Florida Building Code HB535/SB1602



- 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.

4501.17.1.9 Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

House Bill 535 and Senate Bill 1602 made the following changes to the existing law for Residential Pool *Alarms.*

New language was added to 5th Edition of the Florida Building Code (2014) / Residential Section 4501.17.1.9.3, which includes "*surface motion*, pressure, sonar, laser, and infrared *alarms"* for the residential swimming pools.

Effective date July 1, 2016

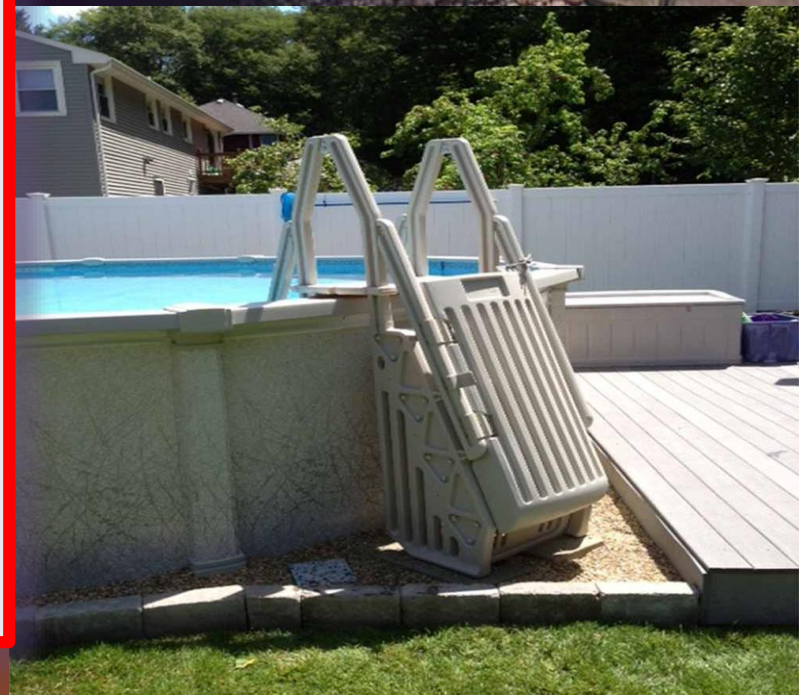
4501.17.1.9 Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

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 Standard F2208, titled "Standard Safety Specification for Residential Pool Alarms," which includes surface motion, pressure, sonar, laser, and infrared alarms. (continue on next slide)

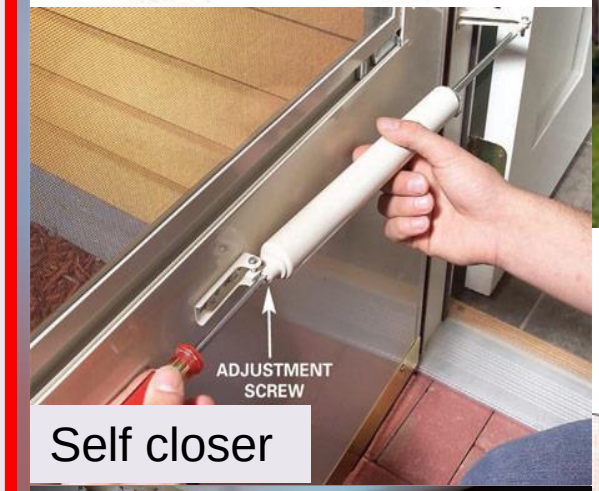
4501.17.1.9 Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

3. cont'd…….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.

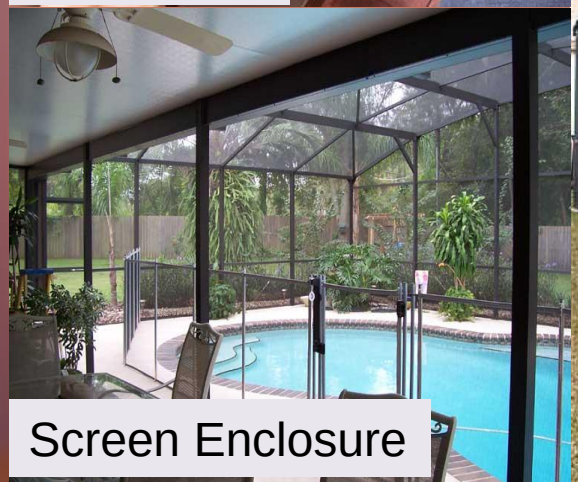
- **R4501.17.1.10** Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier which meets the requirements of Sections R4501.17.1.1 through R4501.17.1.9 and Sections R4501.17.1.12 through R4501.17.1.14. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inchdiameter (102 mm) sphere.



- **R4501.17.1.11** Standard screen enclosures which meet the requirements of Section R4501.17 may be utilized as part, or all, of the “barrier” and shall be considered a “nondwelling” wall. Removable child barriers shall have one end of the barrier non-removable without the aid of tools.



Self closer



Screen Enclosure

- **R4501.17.1.12** The barrier must be placed around the perimeter of the pool and must be separate from any fence, wall, or other enclosure surrounding the yard unless the fence, wall, or other enclosure or portion thereof is situated on the perimeter of the pool, is being used as part of the barrier, and meets the barrier requirements of this section

- **R4501.17.1.13** Removable child barriers must be placed sufficiently away from the water's edge to prevent a young child or medically frail elderly person who may manage to penetrate the barrier from immediately falling into the water. Sufficiently away from the water's edge shall mean no less than 20 inches (508 mm) from the barrier to the water's edge. Dwelling or nondwelling walls including screen enclosures, when used as part or all of the "barrier" and meeting the other barrier requirements, may be as close to the water's edge as permitted by this code.

- **R4501.17.1.14** A wall of a dwelling may serve as part of the barrier if it does not contain any door or window that opens to provide direct access from the home to the swimming pool.

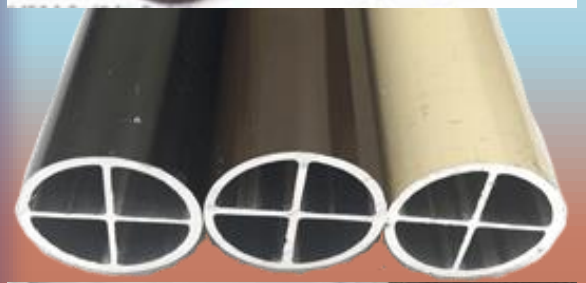
R4501.17.1.14.1 Adjacent waterways. Permanent natural or permanent man-made features such as bulkheads, canals, lakes, navigable waterways, etc., adjacent to a public or private swimming pool or spa may be permitted as a barrier when approved by the authority having jurisdiction. When evaluating such barrier features, the authority may perform on-site inspections and review evidence such as surveys, aerial photographs, water management agency standards and specifications, and any other similar documentation to verify, at a minimum, the following:

1. The barrier feature is not subject to natural changes, deviations, or alterations and is capable of providing an equivalent level of protection as that provided by the code
2. The barrier feature clearly impedes, prohibits or restricts access to the swimming pool or spa.

Mesh Safety Barrier Requirements

- **R4501.17.1.15** A mesh safety barrier meeting the requirements of Section R4501.17 and the following minimum requirements shall be considered a barrier as defined in this section:

  1. Individual component vertical support posts shall be capable of resisting a minimum of 52 pounds (229 N) of horizontal force prior to breakage when measured at a 36-inch (914 mm) height above grade. Vertical posts of the child mesh safety barrier shall extend a minimum of 3 inches (76 mm) below deck level and shall be spaced no greater than 36 inches (914 mm) apart.



- 2. The mesh utilized in the barrier shall have a minimum tensile strength according to ASTM D 5034 of 100 pounds per foot (149 kg/m), and a minimum ball burst strength according to ASTM D 3787 of 150 pounds per foot (223 kg/m). The mesh shall not be capable of deformation such that a 1/4 -inch (6.4 mm) round object could pass through the mesh. The mesh shall receive a descriptive performance rating of no less than “trace discoloration” or “slight discoloration” when tested according to ASTM G 53 (Weatherability, 1,200 hours).

- 3. When using a molding strip to attach the mesh to the vertical posts, this strip shall contain, at a minimum, #8 by 1/2-inch (12.7 mm) screws with a minimum of two screws at the top and two at the bottom with the remaining screws spaced a maximum of 6 inches (152 mm) apart on center.

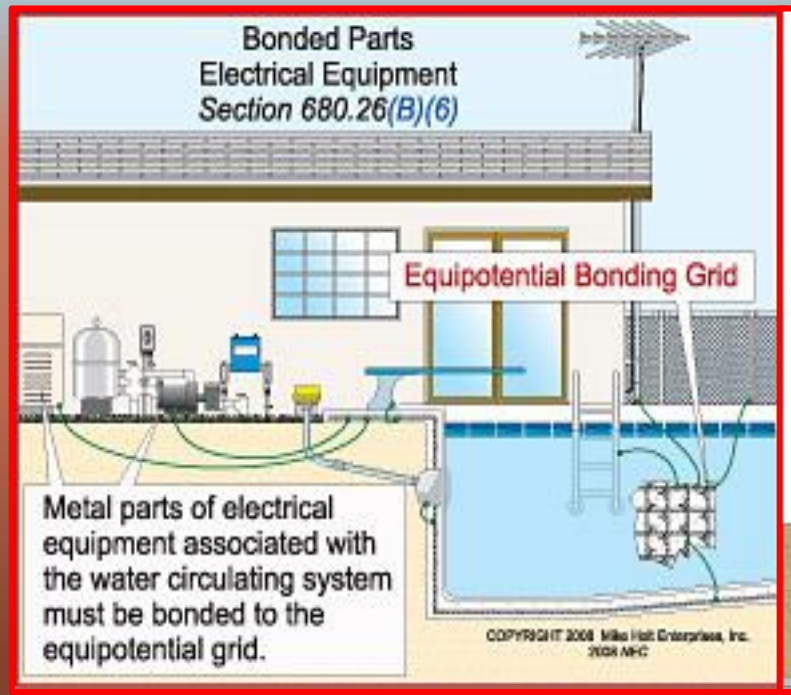
- 4. Patio deck sleeves (vertical post receptacles) placed inside the patio surface shall be of a nonconductive material.
- 5. A latching device shall attach each barrier section at a height no lower than 45 inches (11 613 mm) above grade. Common latching devices that include, but are not limited to, devices that provide the security equal to or greater than that of a hook-and-eye-type latch incorporating a spring actuated retaining lever (commonly referred to as a safety gate hook).

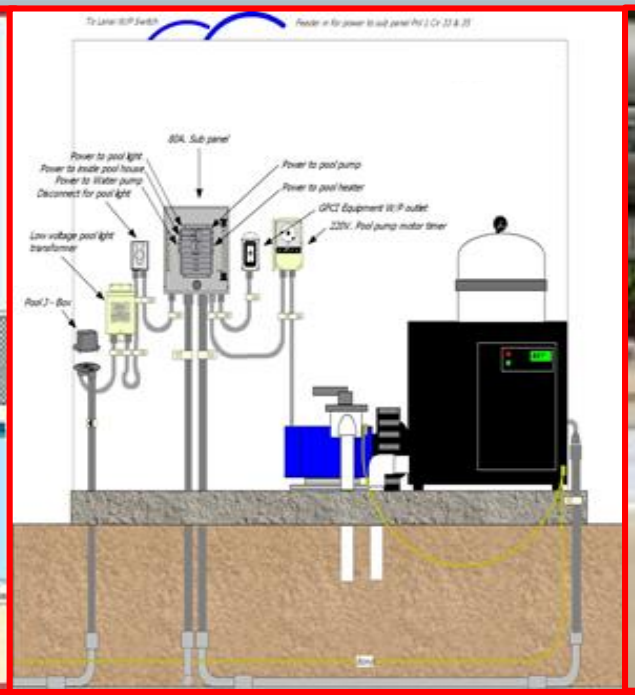
- 6. The bottom of the child mesh safety barrier shall not be more than 1 inch (25 mm) above the deck or installed surface (grade).

R4501.17.2 Indoor swimming pools. All walls surrounding indoor swimming pools shall comply with Section R4501.17.1.9.

R4501.17.3 Prohibited locations. A barrier may not be located in a way that allows any permanent structure, equipment, or window that opens to provide access from the home to the swimming pool.

- **R4501.19 Final inspection.** Final electrical and barrier code inspection shall be completed prior to filling the pool with water.





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