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RESIDENTIAL SWIMMING POOLS

As Per Current Residential NJ Ed Code and the Current International Pool Spa Code

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This is a generic guide and should not be considered a comprehensive code document

Call before you dig! Dial 811 or (800) 272-1000

Definitions:

Swimming Pool: Any structure intended for swimming, recreational bathing or wading that contains water over 24 inches (610mm) deep. This includes in ground, above ground and on ground pools; hot tubs; spas and fixed in place wading pools. On ground pools include portable pools with flexible or nonrigid walls that achieve their structural integrity by means of uninformed shape, a support frame or a combination thereof, and that can be disassembled for storage or relocation.

Barrier: A permanent fence, wall, building wall or combination thereof that surrounds the pool or spa and obstructs the access to the pool or spa. The term permanent shall mean not being able to be removed, lifted or relocated without the use of a tool.

Required Inspections

Depending on the type of pool installed, you may need the following:

Building: Footing, sub grade preparation, steel, Pre collar, post collar, final and pool barrier inspection.

Electric: Trench, bonding, Equipotential bonding and final

Plumbing: Bottom drain rough and final

Mechanical: Final for indoor pools with gas heaters

Plans must be prepared by a New Jersey Licensed Professional: contractor cannot prepare plans for pool.

Section 1 Prior Approvals

All proposed on ground, above ground, in ground or seasonal pools and exterior spas require approval from the department prior to the release of a construction permit application. All pools and exterior spas require zoning approval.

All proposed on ground, above ground, in ground or seasonal pools, permanently installed or portable spas and hot tubs require a construction permit issued by the Township Construction official. Swimming pool are to comply with the current International Residential Code NJ ed and the current International Swimming Pool and Spa Code.

Section 2 The UCC Permit Application

The following must be submitted with the construction permit application.

- Completed construction permit application folder
- Technical forms
 - Building
 - Electrical
 - Plumbing
 - Mechanical (for indoor pools with gas heaters)
- Plans with the following information
 - Size, shape and location of the pool
 - Size, shape and location of all other permanent structures
 - Location of pool compliant barrier with gate locations and depiction of gate swing.
Include manufacturer specifications of barrier and gate or photos of existing barrier.
 - Location and description of the filtration and pool heating systems.

Section 3 In Ground Pools

- Provide two copies of signed and sealed structural pool plans by a registered New Jersey design professional. *Temporary fencing is required during In-ground Pool construction.*
- Plans to Include
 - Accurate plans showing dimensions and construction of the pool. Elevation view and section views through the pool showing depth of water.
 - Manufacturers specifications on prefabricated pools including sub soil materials requirements.
 - For concrete pools, structural steel design, re-bar size and spacing.
 - Electrical Bonding of the steel
 - Type of concrete finish material, PSI of concrete
 - Type of coping material
 - Egress from the pool both shallow and deep end (steps and or swim out)
 - Rope and float location where the point of first slope changes.

- Slide locations and attachment
- Diving Boards
 - Length of board and projection into pool
 - Depict the diving envelope showing the height above waterline and the water depth at the diving end of the pool.
- Two copies of the manufacturers specifications and installation instructions for any diving boards, stairways, slides or ladders to be installed.

Section 4 On or Above Ground Pools and Seasonal Pools

- Plans to Include
 - Two copies of the manufacturers specifications and installation instructions for the pool, filtration system, ladder, slide and accessories.
 - See plumbing and electrical requirements for further details
 - For any newly constructed decks or staircases associated with the pool, a construction application must be presented separately with its own related documents.

Section 5 Pool Barriers

The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be not less than 48 inches (1219mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches for grade surfaces that are not solid, such as grass or gravel or 4 inches to a solid surface such as concrete.
3. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on top of the pool or spa the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches.
4. Openings in the barrier shall not exceed 4 inches.
5. Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.
6. Mesh fences shall not be more than 1" above the deck or installed surface or grade. The mesh fence shall not be able to be lifted more than 4 inches. Any attachment device that attaches each section must not be less than 45 inches above grade. Where a hinged gate is used with a mesh fence the code requirements for gates will apply. Mesh fences shall not be installed on top of on-ground residential pools.

7. 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, the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed 1 $\frac{3}{4}$ inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 $\frac{3}{4}$ inches in width. If it is equal to or more than 45 inches spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed 1 $\frac{3}{4}$ inches.
8. Chain Link Fence: The maximum opening formed by chain link fence shall be not more than 1 $\frac{3}{4}$ inches.
9. Diagonal Members: Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not greater than 1 $\frac{3}{4}$ inches. The angle of diagonal members shall be not greater than 45 degrees from vertical.
10. Clear Zone: There shall be a clear zone of not less than 36 inches between the exterior of the barrier and any permanent structures or equipment such as pumps, filters and heaters that can be used to climb the barrier. The pool or spa side of the required barrier shall be not less than 20 inches from the waters edge.

Gates

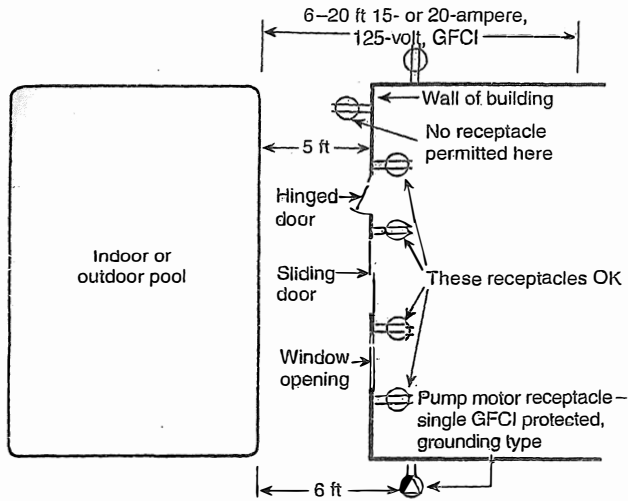
1. Access gates shall comply with the requirements of the barrier code
2. Gates not intended for pedestrian use, such as **utility or service gates**, shall remain locked when not in use.
3. **Double or multiple gates** shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device. The gate and barrier shall not have openings larger than $\frac{1}{2}$ " inch within 18 inches of the latch release mechanism.
4. **Latches:** Where the release mechanism of the self-latching device is located less than 54" inches from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches below the top of the gate, and the gate and barrier shall not have openings greater than $\frac{1}{2}$ " within 18 inches of the release mechanism.

On ground residential pool structure as a barrier

An on ground residential pool wall structure or a barrier mounted on top of an on ground residential pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48" inches above grade for the entire perimeter of the pool, the wall complies with the requirements of the barrier code previously discussed, and the pool manufacture allows the wall to serve as a barrier.
2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the rules for a barrier as previously discussed.
3. Ladders or steps used as means of access to the pool are surrounded by a barrier as previously discussed.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4 inch diameter sphere.
5. Barriers that are mounted on top of on ground residential pool walls are installed in accordance with the pool manufacture's instructions.

NEC®Electrical Requirements for Permanent Above Ground Swimming Pools



Dwelling Unit Receptacle Spacing

UL™ Listed Swimming Pool Pump with a minimum 12AWG cord, not longer than 36" in length

UL™ Listed, Wet location "In-Use" Covers for receptacle outlets, NEC 406.9(B).

Intermediate /Rigid Metal Conduit(6in) or PVC(18in) burial depths per NEC 300.5.

15 or 20 amp, 125Volt branch circuit with a minimum 12AWG Green equipment grounding conductor but not smaller than required by Table 250.122, NEC 680.21.

15 or 20 amp, 125Volt GFCI protected (general purpose). Receptacle located between 6 and 20 feet from wall of pool, NEC 680.22.

Natural Gas water heater(optional), bonded per NEC 680.26.

Convertible underwater luminaire—permanently installed per mfg. Instructions.

8AWG SOLID copper equi-potential bonding conductor, connecting all pool equipment, pool structure and all metal surfaces located w/in 5 feet horizontally, NEC 680.26.

Bonding connectors for the 8AWG copper shall be identified as "Suitable for Direct Burial" solid brass, stainless steel or copper materials only, NEC 680.26.

Minimum 9 square inch water bonding device or equivalent, NEC 680.26(C).

Perimeter surface bonding to either (a) structural reinforcing steel or (b) alternate means-8AWG copper bonding conductor following contour of spa, 18-24" away and 4-6inches below grade, NEC 680.26(B)(2).

NJ Energy Code 403.10.2

Time switches that automatically turn off and on heaters and pumps shall be installed

