

Basic Requirements for Swimming Pool

Construction Permit Applications

*****AT THE COMPLETION OF THE JOB, A CERTIFICATE OF APPROVAL IS SENT VIA EMAIL ONLY.
INCLUDE AN EMAIL ADDRESS FOR BOTH THE PROPERTY OWNER & CONTRACTOR*****

Submit a completed application for the work intended: A separate application is required for each structure, i.e.: Pool, Pool House, Shed, etc. See checklist below for submittal requirements. There is no separate application for Zoning.

UCC FORMS PRINTED FROM THE INTERNET OR COPIES OF UCC FORMS SHALL BE SUBMITTED SIGNED & SEALED AS REQUIRED. UCC FORMS SHALL BE LEGIBLE AND NOT HAVE OFFICE ONLY SECTIONS BLACKED OUT, AND UCC FORMS SHALL BE PRINTED IN THE CORRECT PORTRAIT OR LANDSCAPE FORMAT

****If your property is subject to review/approval from a Homeowners Association (HOA) for construction work; you must submit a copy of the HOA approval with your Construction Permit Application.**

****Other documentation may need to be submitted. Consult a technical assistant for more information i.e.: Board of Health.**

****CSST INSTALLATIONS:**

The following is required for permit applications whether the installation involves new install or extension of existing that includes CSST gas piping:

- 1. A copy of the installer's certification from the manufacturer for the installation of CSST.*
- 2. An electrical permit is required for the bonding of the CSST.*

Checklist: *Use the checklist to ensure you have all the necessary documentation to submit a completed application. Incomplete applications will not be accepted. Be sure that the applications are signed and sealed (where required) and filled out completely in blue or black ink.*

- [] [Construction Permit Application Folder](#)
- [] [Building Subcode Technical Section](#) – Pool, Spa, & Fence
- [] [Electrical Subcode Technical Section](#)
- [] [Plumbing Subcode Technical Section](#) – Pool Drains
- [] [Mechanical Inspection Technical Section](#) – Gas piping & pool heater
- [] Copy of all contractors licenses and/or registrations
- [] Zoning Review Fee, \$100.00 payable to Bernards Township (**NO SEPARATE APPLICATION**)
- [] Board of Health Approval Letter (if property is on septic or public pool)
- [] Copy of Memorialized Resolution (If variance was obtained)
- [] Copy of HOA approval (if required)
- [] **3 copies** of property survey for any pool, spa, hot tub, or swim spa. (Show location of pool, spa, hot tub, swim spa, patio, fence, etc.)
- [] **3 copies** of grading plan from a professional engineer for any inground pool or spa.
- [] **2 copies of:**
 - [] Signed/Sealed pool plan
 - [] Pumps
 - [] Filters
 - [] Heater
 - [] Fence
 - [] Hot Tub Cover Specs
 - [] Manufacturer Instructions (above ground pool/hot tub)
 - [] Ladder w/Built in Gate (above ground pool)
 - [] Lights
 - [] Pool Drains
 - [] Gate Latches
 - [] Gas Riser Diagram (if installing pool heater, BBQ, Firepit, etc.)

Township of Bernards Engineering Department

CALCULATING LOT COVERAGE

Definition from Bernards Township Land Development Ordinance:

COVERAGE

Shall mean the portion of a site, expressed as a percentage of the lot area, covered by impervious materials. Parking areas, regardless of the materials used for construction, shall be deemed to be covered by impervious material.

Lot coverage must be calculated for existing conditions and proposed conditions. The following items must be included in all lot coverage calculations, except for properties in the PUD-5 zone:

- building footprint, including cantilevers and overhangs
- driveways/parking areas, including all surface types (asphalt, pavers, concrete, gravel etc.)
- accessory structures
- walkways/ patios/recreational courts, including all surface types (asphalt, concrete, pavers, flagstone etc.)
- above-ground and in ground swimming pools (surface area of pool and surrounding patio)
- covered porches, covered decks (note: open decks with no walls or roofs are not included)
- any other impervious surfaces on the lot

Call the Zoning Officer, Nancy Koederitz, with any questions: (908) 204-2507

ZONING REGULATIONS FOR SWIMMING POOLS

- A. The surface area of a private swimming pool shall not exceed 25% of the area of the rear yard. No part of any pool, including water area and surrounding patios, walkways, or decking (regardless of material), shall be located closer than 20 feet to any property line. In all cases the pool shall be located behind the rear building line of existing residential structures on adjoining lots. No swimming pool shall be located within the zoning front yard.**
- B. The surface area of the pool plus any patio, walkway, decking, etc, all contribute to increased new impervious lot coverage, and, thus, must comply with the maximum lot coverage requirements of the property's zoning classification (i.e. R-1, R-4, RC-4, etc.)**
- C. If the proposed pool plus surrounding patio, walkway, decking, etc. exceed 999 square feet of new impervious lot coverage, or, 2500 square feet of land disturbance, the Applicant must comply with Ordinance # 1853, which requires incorporating storm water management practices -- i.e. dry wells, troughs, etc., including calculations, details, and locations on the property.**
- D. Private swimming pools shall not be more than 1000 square feet in size, and no aboveground lighting is to be provided for use after dark.**
- E. No private swimming pool shall drain into a public sanitary sewer or be located in such a manner that the water from the pool drains onto another property.**
- F. No private swimming pool shall be located closer than 20 feet to any on-site sanitary disposal system (this does not apply to property connected to a public sanitary sewer system).**
- G. The entire swimming pool area shall be fenced. The fence shall be a minimum of 4 (four) feet in height and a maximum of 6 (six) feet in height, and shall be of such design that it controls access to the pool area. Where the pool is installed on a corner lot, and the fence is not a solid fence, the side nearest the street shall be screened with shrubs not less than 4 (four) feet in height and forming a visual barrier.**
- H. A construction permit is required.**



Discharges from Residential Swimming Pools Best Management Practice

Discharges from swimming pools result from the backwashing of filters or from the draining of pools either at the end of the swimming season or for periodic maintenance. This water often contains pool treatment chemicals that can cause damage to the receiving environment. The discharges from commercial and public bathing pools are regulated by a New Jersey Department of Environmental Protection permit. Discharges from residential pools are allowed through the town's stormwater discharge permit but it is expected that residents will follow the best management practices outlined in the state wide permit. These practices include:

1. Making sure the discharge flow is regulated so the amount of water and the rate of flow does no physical damage to the receiving environment. If the discharge is from the filter backwash the amount of water is usually low and the discharge can be kept on the property and the water will filter into the ground and replenish the ground water supply. If the discharge is from emptying the pool, it should be directed to the nearest water course or storm sewer. If the discharge is directed over the ground, the rate should be slow enough that it does not cause erosion of the soil. If the discharge is direct to a stream or storm drain it should be slow enough not to scour the stream bottom and stir up sediments.
2. Making sure the discharge does not contain a high amount of suspended solids. Usually filter backwash is cloudy and full of solids. If the water is being directed to the ground water the soil will filter out the particles. If the water is being directed to a stream or storm drain it should first run through some filtration material like hay bales. Also, a retention or settling pond can be used to remove solids.
3. Making sure the discharge does not contain harmful chemicals. The most common treatment chemical in a residential pool is chlorine, which can be deadly to fish and other organisms in the environment. It is best to avoid adding chlorine to the pool for seven days before emptying the pool; this will allow the chlorine to dissipate. You should test the water with a pool test kit and make sure there is no detectable level of chlorine before allowing any discharge. Other chemicals such as algaecides or additives to adjust pH may not dissipate. It may be necessary to find other ways to make sure these chemicals do no harm to the environment. Pool water being discharged to a stream or storm basin should have a pH in the range between 6.5 and 8.5.

The most important aspect of discharging swimming pool water is proper planning. While the discharge from residential pools is allowed without a specific permit and the best management practices mentioned above are suggestions, if the discharge causes environmental damage, the homeowner and any service persons involved are subject to heavy fines and penalties from the NJ Department of Environmental Protection. For more information, contact your local health department.

TT Special Files -- Discharges from Residential Swimming Pools -- BMP -- 3-06

Bernards Township

Bernardsville Borough

Chatham Township

Harding Township

Long Hill Township

Madison Borough

Mendham Borough

Mendham Township

Morris Township

Morristown

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303.1.2 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- or waste-heat recovery pool heating systems.

303.1.3 Covers. Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover or other *approved* vapor-retardant means in accordance with Section 104.12.

Exception: Where more than 70 percent of the energy for heating, computed over an operating season, is from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

303.2 Portable spas. The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP 14.

303.3 Residential pools and permanent residential spas. The energy consumption of *residential* swimming pools and permanent *residential* spas shall be controlled in accordance with the requirements of APSP 15.

SECTION 304 FLOOD HAZARD AREAS

304.1 General. The provisions of Section 304 shall control the design and construction of pools and spas installed in *flood hazard areas*.

[BS] 304.2 Determination of impacts based on location. Pools and spas located in *flood hazard areas* indicated within the *International Building Code* or the *International Residential Code* shall comply with Section 304.2.1 or 304.2.2.

Exception: Pools and spas located in riverine *flood hazard areas* that are outside of designated floodways and pools and spas located in *flood hazard areas* where the source of flooding is tides, storm surges or coastal storms.

[BS] 304.2.1 Pools and spas located in designated floodways. Where pools and spas are located in designated floodways, documentation shall be submitted to the *code official* that demonstrates that the construction of the pools and spas will not increase the design flood elevation at any point within the jurisdiction.

[BS] 304.2.2 Pools and spas located where floodways have not been designated. Where pools and spas are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool or spa and any associated grading and fill-

ing, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

[BS] 304.3 Pools and spas in coastal high-hazard areas. Pools and spas installed in coastal high-hazard areas shall be designed and constructed in accordance with ASCE 24.

[BS] 304.4 Protection of equipment. Equipment shall be elevated to or above the design flood elevation or be anchored to prevent flotation and protected to prevent water from entering or accumulating within the components during conditions of flooding.

304.5 GFCI protection. Electrical equipment installed below the design flood elevation shall be supplied by branch circuits that have ground-fault circuit interrupter protection for personnel.

SECTION 305 BARRIER REQUIREMENTS

305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable *safety cover* complying with ASTM F1346 and ~~swimming pools are equipped with a powered safety cover that complies with ASTM F1346~~, the areas where those spas, hot tubs ~~or pools~~ are located shall not be required to comply with Sections 305.2 through 305.7.

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305.1.1 Construction fencing required. The construction sites for in-ground swimming pools and spas shall be provided with construction fencing to surround the site from the time that any excavation occurs up to the time that the permanent barrier is completed. The fencing shall be not less than 4 feet (1219 mm) in height.

305.2 Outdoor swimming pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7.

305.2.1 Barrier height and clearances. Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches (1219 mm) 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 (914 mm) 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 (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.

4. 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 the 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 (102 mm).

305.2.2 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

305.2.3 Solid barrier surfaces. 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.

305.2.4 Mesh fence as a barrier. Mesh fences, other than chain link fences in accordance with Section 305.2.7, shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall be not greater than 4 inches (102 mm) from grade or decking.
4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices 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 such as a safety gate hook.
5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground *residential* pools.

305.2.4.1 Setback for mesh fences. The inside of a mesh fence shall be not closer than 20 inches (508 mm) to the nearest edge of the water of a pool or spa.

305.2.5 Closely spaced horizontal members. 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 pool or spa 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.

305.2.6 Widely spaced horizontal members. 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, the interior width of the cutouts shall not exceed $1\frac{3}{4}$ inches (44 mm).

305.2.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than $1\frac{3}{4}$ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than $1\frac{3}{4}$ inches (44 mm).

305.2.8 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 (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

305.2.9 Clear zone. Where equipment, including pool equipment such as pumps, filters and heaters, is on the same lot as a pool or spa and such equipment is located outside of the barrier protecting the pool or spa, such equipment shall be located not less than 36 inches (914 mm) from the outside of the barrier.

305.3 Doors and gates. Doors and gates in barriers shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access doors and gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

305.3.1 Utility or service doors and gates. Doors and gates not intended for pedestrian use, such as utility or service doors and gates, shall remain locked when not in use.

305.3.2 Double or multiple doors and gates. Double doors and gates or multiple doors and gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device.

305.3.3 Latch release. For doors and gates in barriers, the door and gate latch release mechanisms shall be in accordance with the following:

1. Where door and gate latch release mechanisms are accessed from the outside of the barrier and are not of the self-locking type, such mechanism shall be located above the finished floor or ground surface in accordance with the following:
 - 1.1. At public pools and spas, not less than 52 inches (1219 mm) and not greater than 54 inches (1372 mm).
 - 1.2. At residential pools and spas, not less than 54 inches (1372 mm).
2. Where door and gate latch release mechanisms are of the self-locking type such as where the lock is operated by means of a key, an electronic opener or the entry of a combination into an integral combination lock, the lock operation control and

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the latch release mechanism shall be located above the finished floor or ground surface in accordance with the following:

- 2.1. At public pools and spas, not less than 34 inches and not greater than 48 inches (1219 mm).
- 2.2. At residential pools and spas, at not greater than 54 inches (1372 mm).
3. At private pools, where the only latch release mechanism of a self-latching device for a gate is located on the pool and spa side of the barrier, the release mechanism shall be located at a point that is at least 3 inches (76 mm) below the top of the gate.

305.3.4 Barriers adjacent to latch release mechanisms.

Where a latch release mechanism is located on the inside of a barrier, openings in the door, gate and barrier within 18 inches (457 mm) of the latch shall not be greater than $\frac{1}{2}$ inch (12.7 mm) in any dimension.

305.4 Structure wall as a barrier. Where a wall of a dwelling or structure serves as part of the barrier and where doors, gates or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor, doors and gates shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be listed and labeled as a water hazard entrance alarm in accordance with UL 2017.
2. In dwellings not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located at not less than 54 inches (1372 mm) above the finished floor.
3. In dwellings that are required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
4. In structures other than dwellings, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1220 mm) above the finished floor.
5. A safety cover that is listed and labeled in accordance with ASTM F1346 is installed for the pools and spas.
6. An approved means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

305.5 Onground residential pool structure as a barrier. An onground residential pool wall structure or a barrier mounted on top of an onground 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 (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer 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 (1219 mm) above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.

~~2. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.~~ NJ Deletion/Amendment

4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102 mm) diameter sphere.
5. Barriers that are mounted on top of onground residential pool walls are installed in accordance with the pool manufacturer's instructions.

305.6 Natural barriers. In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches (457 mm), a barrier is not required between the natural body of water shoreline and the pool or spa.

305.7 Natural topography. Natural topography that prevents direct access to the pool or spa area shall include but not be limited to mountains and natural rock formations. A natural barrier approved by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by the requirements of Sections 305.2 through 305.5.

305.8 Means of egress. Outdoor public pools provided with barriers shall have means of egress as required by Chapter 10 of the *International Building Code*.

SECTION 306 DECKS

306.1 General. The structural design and installation of decks around pools and spas shall be in accordance with the *International Residential Code* or the *International Building Code*, as applicable ~~in accordance with Section 102.7~~ and this section.

306.2 Slip resistant. Decks, ramps, coping, and similar step surfaces shall be slip resistant and cleanable. Special features in or on decks such as markers, brand insignias, and similar materials shall be slip resistant.

~~306.3 Step risers and treads.~~ Step risers for decks of public pools and spas shall be uniform and have a height not less than $3\frac{3}{4}$ inches (95 mm) and not greater than $7\frac{1}{2}$ inches (191 mm). The tread distance from front to back shall be not less than 11 inches (279 mm). Step risers for decks of residential pools and spas shall be uniform and shall have a height not exceeding $7\frac{1}{2}$ inches (191 mm). The tread

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~~NJ Deletion/Amendment~~ distance from front to back shall be not less than 10 inches (254 mm).

~~306.4 Deck steps handrail required.~~ Public pool and spa deck steps having three or more risers shall be provided with a handrail.

306.5 Slope. The minimum slope of decks shall be in accordance with Table 306.5 except where an alternative drainage method is provided that prevents the accumulation or pooling of water. The slope for decks, other than wood decks, shall be not greater than $\frac{1}{2}$ inch per foot (1 mm per 24 mm) except for ramps. The slope for wood and wood/plastic composite decks shall be not greater than $\frac{1}{4}$ inch per 1 foot (1 mm per 48 mm). Decks shall be sloped so that standing water will not be deeper than $\frac{1}{8}$ inch (3.2 mm), 20 minutes after the cessation of the addition of water to the deck.

TABLE 306.5
MINIMUM DRAINAGE SLOPES FOR DECK SURFACES

SURFACE	MINIMUM DRAINAGE SLOPE (INCH PER FOOT)
Carpet	$\frac{1}{2}$
Exposed aggregate	$\frac{1}{4}$
Textured, hand-finished concrete	$\frac{1}{8}$
Travertine/brick-set pavers, public pools or spas	$\frac{3}{8}$
Travertine/brick-set pavers, residential pools or spas	$\frac{1}{8}$
Wood	$\frac{1}{8}$
Wood/plastic composite	$\frac{1}{8}$

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

306.6 Gaps. Gaps shall be provided between deck boards in wood and wood/plastic composite decks. Gaps shall be consistent with *approved* engineering methods with respect to the type of wood used and shall not cause a tripping hazard.

306.6.1 Maximum gap. The open gap between pool decks and adjoining decks or walkways, including joint material, shall be not greater than $\frac{3}{4}$ inch (19.1 mm). The difference in vertical elevation between the pool deck and the adjoining sidewalk shall be not greater than $\frac{1}{4}$ inch (6.4 mm).

306.7 Concrete joints. Isolation joints that occur where the pool coping meets the concrete deck shall be water tight.

306.7.1 Joints at coping. Joints that occur where the pool coping meets the concrete deck shall be installed to protect the coping and its mortar bed from damage as a result of the anticipated movement of adjoining deck.

306.7.2 Crack control. Joints in a deck shall be provided to minimize visible cracks outside of the control joints caused by imposed stresses or movement of the slab.

306.7.3 Movement control. Areas where decks join existing concrete work shall be provided with a joint to protect the pool from damage caused by relative movement.

306.8 Deck edges. The edges of decks shall be radiused, tapered, or otherwise designed to eliminate sharp corners.

306.9 Valves under decks. Valves installed in or under decks shall be accessible for operation, service, and maintenance. Where access through the deck walking surface is required, an access cover shall be provided for the opening in the deck. Such access covers shall be slip resistant and secured.

306.9.1 Hose bibbs. Hose bibbs shall be provided for rinsing down the entire deck and shall be installed in accordance with the ~~International Plumbing Code or International Residential Code, as applicable in accordance with Section 102.7.1~~, and shall be located not greater than 150 feet (45 720 mm) apart. Water-powered devices, such as water-powered lifts, shall have a dedicated hose bibb water source.

Exception: Residential pools and spas shall not be required to have hose bibbs located at 150-foot (45 720 mm) intervals, or have a dedicated hose bibb for waterpowered devices.

SECTION 307 GENERAL DESIGN

307.1 General design requirements. Sections 307.1.1 through 307.1.4 shall apply to all pools and spas.

307.1.1 Glazing in hazardous locations. Hazardous locations for glazing shall be as defined in the ~~International Building Code or the International Residential Code, as applicable in accordance with Section 102.7.1~~ of this code. Where glazing is determined to be in a hazardous location, the requirements for the glazing shall be in accordance with those codes, as applicable.

307.1.2 Colors and finishes. For other than residential pools and residential spas, the colors, patterns, or finishes of the pool and spa interiors shall not obscure objects or surfaces within the pool or spa.

307.1.2.1 Munsell color value. Finishes shall be not less than 6.5 on the Munsell color value scale.

Exceptions: The following shall not be required to comply with this section:

1. Competitive lane markings.
2. Floors of dedicated competitive diving wells.
3. Step or bench edge markings.
4. Pools shallower than 24 inches (609.6 mm).
5. Water line tiles.
6. Wave and surf pool depth change indicator tiles.
7. Depth change indicator tiles where a rope and float line is provided.
8. Features such as rock formations, as *approved*.

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307.1.3 Roofs or canopies. Roofs or canopies over pools and spas shall be in accordance with the *International Building Code* or *International Residential Code*, as applicable ~~in accordance with Section 102.7.1~~ and shall be constructed so as to prevent water runoff into the pool or spa.

307.1.4 Accessibility. An accessible route to public pools and spas shall be provided in accordance with the *International Building Code*. Accessibility within public pools and spas shall be provided as required by the accessible recreational facilities provisions of the *International Building Code*. Pool and spa lifts providing an accessible means of entry into the water shall be *listed* and labeled in accordance with UL 60335-2-1000 and be installed in accordance with ICC A117.1 and NFPA 70.

307.2 Specific design and material requirements. Sections 307.2.1 through 307.2.4 shall apply to all pools and spas except for *listed* and *labeled* portable *residential* spas, and *listed* and *labeled* portable *residential* exercise spas.

307.2.1 Materials. Pools and spas and appurtenances thereto shall be constructed of materials that are nontoxic to humans and the environment; that are generally or commonly regarded to be impervious and enduring; that will withstand the design stresses; and that will provide a watertight structure with a smooth and easily cleanable surface without cracks or joints, excluding structural joints, or that will provide a watertight structure to which a smooth, easily cleaned surface/finish is applied or attached. Material surfaces that come in contact with the user shall be finished, so that they do not constitute a cutting, pinching, puncturing or abrasion hazard under casual contact and intended use.

307.2.1.1 Beach pools. Clean sand or similar material, where used in a beach pool environment, shall be used over an impervious surface. The sand area shall be designed and controlled so that the circulation system, maintenance, safety, sanitation, and operation of the pool are not adversely affected.

307.2.1.2 Compatibility. Assemblies of different materials shall be chemically and mechanically compatible for their intended use and environment.

307.2.2 Materials and structural design. Pools and spas shall conform to one or more of the standards indicated in Table 307.2.2. The structural design of pools and spas shall be in accordance with the *International Building Code* or the *International Residential Code*, as applicable ~~in accordance with Section 102.7.1~~ of this code.

307.2.2.1 Installation. Equipment for pools and spas shall be supported to prevent damage from misalignment and settling and located so as to allow access for inspection, servicing, removal and repair of component parts.

307.2.3 Freeze protection. In climates subject to freezing temperatures, outdoor pool and spa shells and appurte-

nances, piping, filter systems, pumps and motors, and other components shall be designed and constructed to provide protection from damage from freezing.

307.2.4 Surface condition. The surfaces within public pools and spas intended to provide footing for users shall be slip resistant and shall not cause injury during normal use.

307.2.5 Plaster. The plastering of pools and permanently installed concrete spas shall be in accordance with APSP/NPC/ICC-12.

SECTION 308 DIMENSIONAL DESIGN

308.1 Floor slope. The slope of the floor from the point of the first slope change to the deep area shall not exceed one unit vertical in three units horizontal (33-percent slope).

Exception: Portable *residential* spas and portable *residential* exercise spas.

308.2 Walls. Walls shall intersect with the floor at an angle or a transition profile. Where a transitional profile is provided at water depths of 3 feet (914 mm) or less, a transitional radius shall not exceed 6 inches (152 mm) and shall be tangent to the wall and is permitted to be tangent to or intersect the floor.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storable* pools.

308.3 Shape. This code is not intended to regulate the shape of a pool or spa other than to take into account the effect that a given shape will have on the safety of the occupants and to maintain the minimum required level of circulation to ensure sanitation.

308.4 Waterline. The *design waterline* shall have a maximum construction tolerance at the time of completion of the work of plus or minus $\frac{1}{4}$ inch (6.4 mm) for pools and spas with adjustable weir surface skimming systems, and plus or minus $\frac{1}{8}$ inch (3.2 mm) for pools and spas with nonadjustable surface skimming systems.

TABLE 307.2.2
RESERVOIRS AND SHELLS

MATERIAL	STANDARD
Fiberglass reinforced plastic	IAPMO Z124.7
Plastic	IAPMO Z124.7
Stainless steel (Types 316, 316L, 304, 304L)	ASTM A240
Tile	ANSI A108/A118/A136.1
Vinyl	ASTM D1593

NJ Deletion/
Amendment

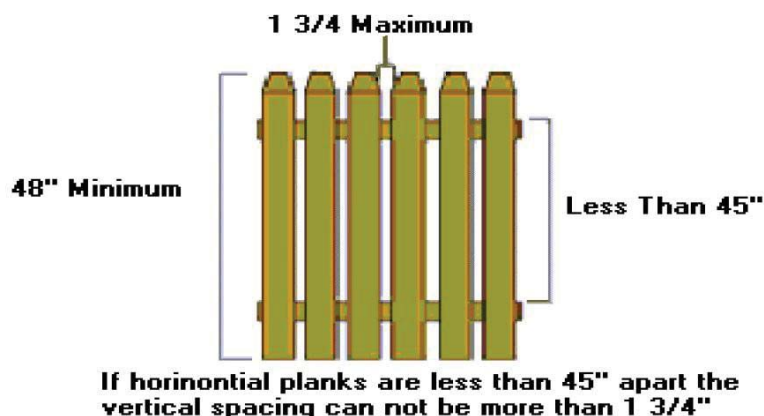
Pool Fence Requirements

Private swimming pools must be surrounded by a barrier, such as a fence or wall. The barrier must meet the following requirements. Each swimming pool shall have its own barrier. Using a portion of an adjoining properties barrier is not permitted.

- The top of the barrier shall be at least 48 inches above finished ground level measured on the side of the barrier, which faces away from the swimming pool. The maximum vertical clearance between finished ground level and the bottom of the barrier shall be 2 inches measured on the side of the barrier, which faces away from the swimming pool.
- Solid barriers shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

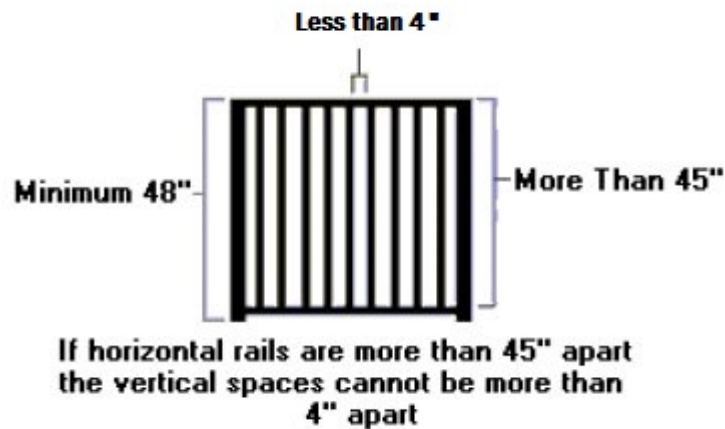
Fences with horizontal rails less than 45" apart

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 swimming pool side of the fence. Spacing between vertical members shall not exceed 1- $\frac{3}{4}$ inches in width. Decorative cutouts shall not exceed 1- $\frac{3}{4}$ inches in width.



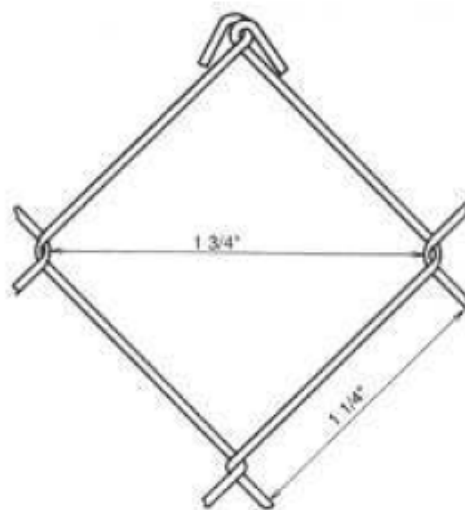
Fences with horizontal rails more than 45"aparts

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Decorative cutouts shall not exceed 1-¾ inches in width.



Chain link Fence Mesh Size Limit

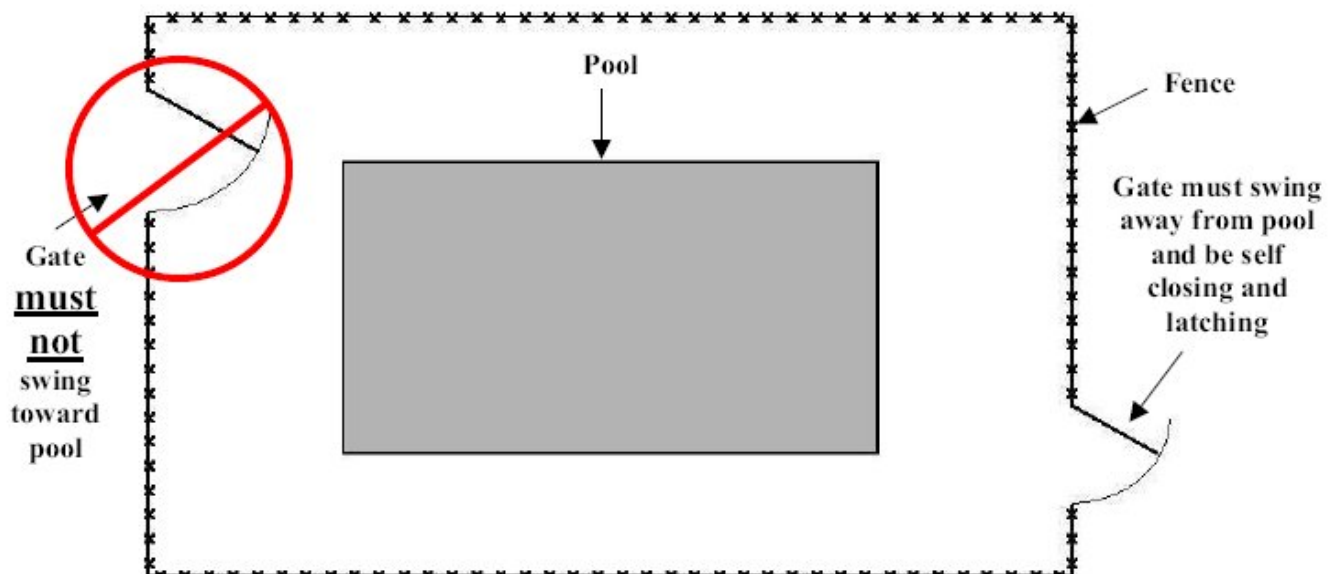
Maximum mesh size for chain link fences shall be a 1 ¼-inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1 ¾-inches. (Figure 3)



Important: The maximum mesh size for a pool fence is smaller than the standard chain link mesh

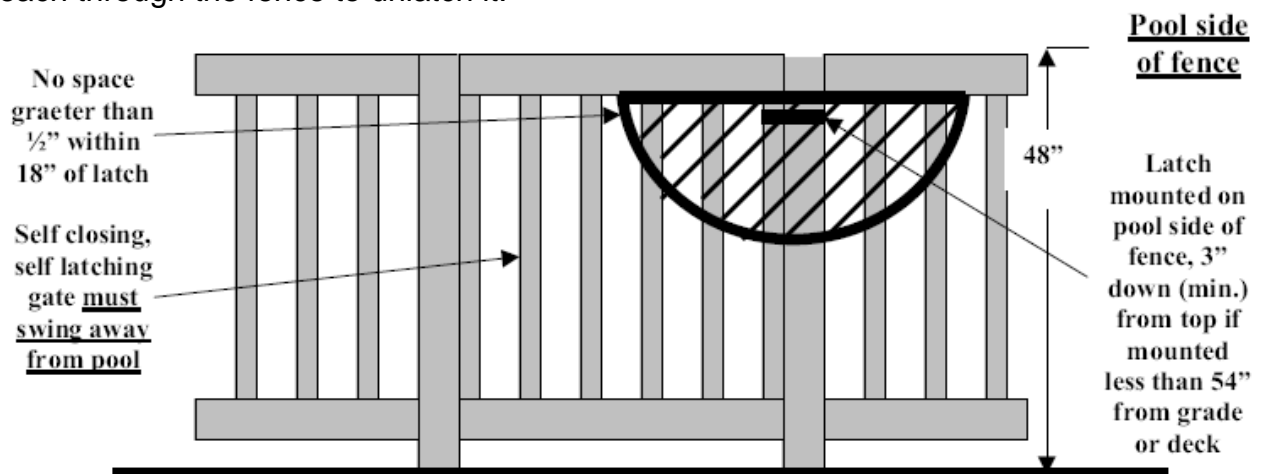
Gate Swing

Gates shall comply with the requirements of a fence for height, picket spacing or chain link mesh size and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outwards away from the pool and shall be self-closing and have a self-latching device. Gates must swing out only so that even if the gate is not completely latched, a young child pushing on the gate in order to enter the pool area will at least close the gate and may actually engage the latch.



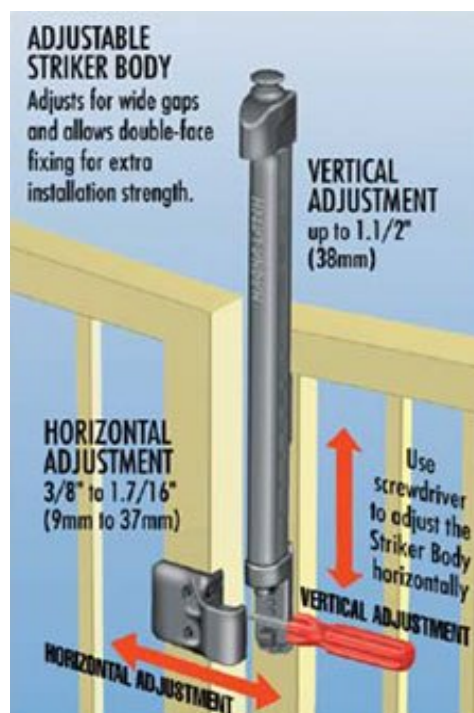
48" high gates with latches mounted less than 54" from the ground

If the latch is mounted less than 54" from grade, it must be mounted on the pool side of the gate, a minimum of 3" down from the top of the gate so you must reach over the fence to unlatch and have no space greater than $\frac{1}{2}$ " within 18" of the latch so a child can not reach through the fence to unlatch it.



48" high gates with the latch mounted above the top of the gate.

Several manufactures make latches that can be mounted on a 48" high gate and have the operating mechanism above the top of the gate. The operating mechanism must be mounted at least **54"** above the bottom of the gate.



Gates more than 48" high

Gates that are more than 48" high must have the latch mounted at least 54" above the bottom of the gate.



Above ground pools

Barrier are required for above ground pools, **a removable ladder is not an acceptable barrier** for an above ground pool. The barrier may be a compliant fence that surrounds the entire pool or yard. Pools that have a wall that is at least 48" do not require a fence around the entire pool and may have a fence just around the ladder area or a ladder with a built in self closing latching gate.

Above ground pools with walls at least 48" above grade



Ladder with built-in gate



Fence around ladder area

Above ground pools on sloped site

Where the walls of an above-ground pool are used as the barrier, are on a sloped site, which will make a portion of the top of the pool structure to be less than 48" to grade, a minimum of 3-foot level surface around the portion of the pool structure that is less than 48" to grade should be provided. The level surface should be measured away from the pool wall to the excavation edge and should be tapered away from the pool at a minimum of 45- degree angle for a distance of one half the level surface.

Above ground pools on sloped site where the pool wall is used as the barrier

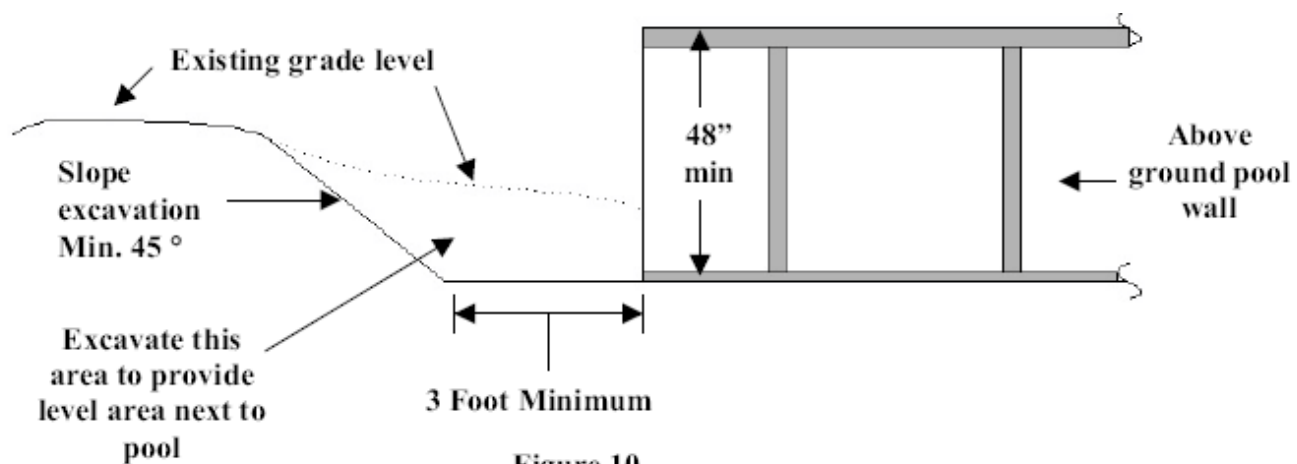


Figure 10