TOWNSHIP OF HILLSBOROUGH

COUNTY OF SOMERSET

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RESIDENTIAL SWIMMING POOLS rev 2-8-2019

Based on the 2021 INTERNATIONAL RESIDENTIAL CODE NEW JERSEY EDITION

THIS GENERIC GUIDE IS FOR ONE AND TWO FAMILY DWELLINGS. THIS NOT AN ALL INCLUSIVE AND DOES NOT ADDRESS ALL CONDITIONS

Call before you dig! 1-800-272-1000 New Jersey One Call. Utility Mark Out.

Definitions:

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water over 24 inches deep. This includes in-ground, above-ground and on-ground seasonal pools, hot tubs, and spas.

BARRIER: A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

Required inspections: Dependent on the type of pool installed, you may need the following:

Building: Footing, Sub grade preparation, Steel, Pre-collar, Post collar, Final and Barrier Inspection.

Electric: Trench, Bonding, Equipotential Bonding & Final

Plumbing: Bottom Drain Rough and Final.
Pools with heaters: Gas Pipe Rough, Final and Solar cover

Fire: Final for indoor pools with Gas Heaters

PLANS MUST BE PREPARED BY A NEW JERSEY LICENSED DESIGN PROFESSIONAL
CONTRACTORS CAN NOT PREPARE PLANS FOR POOLS

Section 1

All proposed on-ground, above-ground, in-ground pools or seasonal pools require approval from the Zoning Department prior to the submission of a construction permit application. For an **IN GROUND POOL** provide proof of Zoning Approval prior to filing.

All proposed in-ground pools require approval from the Township Engineer as well as zoning.

All proposed on ground, above ground, in-ground pools or seasonal pools require a Construction Permit issued by the Township Construction Official. Swimming pools are to comply with the 2021 INTERNATIONAL RESIDENTIAL CODE N.J. and the 2021 ISPSC

Pool Standards:

In-ground pools shall be designed and constructed in conformance with 2021 ISPSC

- Above ground and on-ground pools shall be designed and constructed in conformance with 2021 ISPSC
- Permanently installed spas and hot tubs shall be designed and constructed in conformance with 2021 ISPSC
- Portable spas and hot tubs shall be designed and constructed in conformance with 2021 ISPSC

Section 2

The following must be submitted with the Construction Permit Application

Completed CONSTRUCTION PERMIT APPLICATION FOLDER, TECHNICAL FORMS: BUILDING, ELECTRIC, PLUMBING as applicable, and FIRE for indoor pools with gas heaters

Plans with the following information:

- Two site plans
    a. Size, shape and location of the pool.
    b. Size, shape and location of all other permanent structures.
    c. Location of pool compliant barrier with gate locations.
    d. Location and description of the filtration and pool heating systems.

Section 3 IN-GROUND POOLS

Provide two (2) 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. Vertical elevations and sections through the pool showing depth of water.
- Manufacturer's specifications on prefabricated pools including sub-soil materials requirements.
- For concrete pools, structural steel design, rebar size and spacing.
- Electrical bonding of the steel.
- Type of concrete finish material, P.S.I. of concrete.
- Type of coping material.
- Egress from the pool both shallow and deep end (steps, swim outs).
- Rope and Float location where the point of the slope changes.
- Slide locations and attachment.

- Diving boards.
    a. Length of board and projection into the pool.
    b. Height above the water line and the water depth at the diving board end of the pool.
- Two copies of the manufacturer's specifications and installation instructions for any diving boards, stairways, slides, or ladders to be installed.
- Please see Plumbing and Electrical requirements for further details.

Section 4 ON or ABOVE GROUND POOLS and SEASONAL POOLS

Plans to include:

- Provide two (2) sets of manufacturer's installation instructions for the pool, filtration system, ladder, slide and accessories.
- Please 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.
- Please see POOL BARRIERS to see if the proposed pool meets the barrier requirements.

Section 5 POOL BARRIERS

2021 ISPSC SECTION 305 BARRIER REQUIREMENTS

Application.
The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs subject to this code. These design controls are intended to provide protection against potential drowning and near-drowning by restricting access to swimming pools, spas and hot tubs.

Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches 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 measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, 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.

2. Openings in the barrier shall not allow passage of a 4-inch diameter sphere.

3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

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 1¾ inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches in width

5. 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. Where

there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1¾ inches in width.

6. Chain link dimensions. The maximum opening formed by a chain link fence shall not be more than 1¾ inches (44mm). Where the fence is provided with slats fastened at the top and bottom which reduce the openings, such openings shall not be more than 1¾ inches (44mm).

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1¾ inches.

8. Clear zone. There shall be a clear zone of not less than 36 inches (914mm) 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.

9. Poolside barrier setbacks. The pool or spa side of the required barrier shall not be less than 20 inches (508mm) from the water's edge.

10. Gates. Access gates shall comply with the requirements of Sections 305.3.1 through 305.3.3 of the 2015 ISPSC, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool or spa, shall be self-closing and have a self-latching device.

- ***Utility or service gates.*** Gates not intended for pedestrian use, such as utility or service gates, shall remain locked when not in use.
- ***Double or multiple gates***. Double gates or multiple gates shall have at least 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 ½ inch (12.7mm) within 18 inches (457mm) of the latch release mechanism. The self latching device shall comply with the requirements of section 305.3.3.
- ***Latches***. Where the release mechanism of the self latching device is located less than 54 inches (1372mm) from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches (76mm) below the top of the gate, and the gate and barrier shall not have openings greater than ½ inch (12.7mm) within 18 inches (457mm) of the release mechanism.

11. Onground residential pool structure as a barrier. An onground 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:

- 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 (1219mm) above grade for the entire perimeter of the pool, the wall complies with requirements of section 305.2 and the pool manufacturer allows the wall to serve as a barrier.
- Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches (1219mm) 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.
- Ladders or steps used as a means of egress to the pool are surrounded by a barrier that meets the requirements of section 305.
- Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102mm) diameter sphere.
- Barriers that are mounted on top of onground residential pool walls are installed in accordance with the pool manufacturer's instructions.

Barrier Exceptions

Spas or hot tubs with a lockable safety cover that complies with ASTM F 1346, as listed in Section 305.1, shall be exempt from the provisions of this section.

Section 6: STAIRCASES

1. If staircases are incorporated in the pool barrier all parts of the staircase must comply with the above information and at no time be climbable.
2. All staircases must comply with the 2021 International Residential Code. New Jersey Edition.

Section 7: POOL BARRIER LOCATIONS

Check with the Township Zoning Department prior to planning the barrier location. Pool barriers shall be placed so as to completely encompass the whole pool (The home may be used as the barrier). The barrier may be placed at any point on the property up to the limits set by the Township Zoning Department. Pool barriers on a lot must be independent of adjoining properties' barriers, pool compliant or not. **Barriers not located on the lot with the installed pool can not be used as a barrier.** Sufficient distance should be set between one's lot pool compliant barrier and another lots barrier compliant or not. Refer to 2015 ISPSC Must be reviewed on a case by case basis.

Section 8: ELECTRICAL REQUIREMENTS (Must comply with the 2021 NEC)

- Direct burial cable is not permitted for pool pump wiring. Metal or PVC conduit systems are required outside the dwelling unit. A wet location wire with insulated green ground is required. Interior may be any wiring method recognized in chapter 3 of the 2021 NEC.
- Minimum filter motor attachment cord size #12 AWG (max 3 feet in length).
- Minimum wire size #12 AWG. A 20 ampere locking type outlet is required for filter motor connection for above ground pools. This receptacle shall be located not closer than 6 feet from the pool wall. It shall be ground fault protected and shall employ an In-Use cover. This circuit shall be dedicated to the filter motor.
- A convenience outlet shall be located not less than 6 feet and not more than 20 feet from the inside wall of the pool. It shall be ground fault protected and shall be connected to a general purpose branch circuit in the dwelling. In-Use cover is required
- All metal parts within 5 feet of the pool shall be bonded together with a #8 solid copper wire and shall be bonded to the filter motor. i.e. Fences, Bilco doors,Etc.
- Burial depth is routinely 18 inches for conduit (6 inches for rigid galvanized metal conduit)
- A #8 solid copper wire is required to be installed between the pool chassis and a lug provided on the filter motor. A proper lug, nut, bolt and lock washer is required on the pool chassis. (stainless or brass) An equipotential bonding grid must be formed around the pool with a minimum #8 solid copper wire and connected to the pool pump in at least 4 points equally spaced around a metal pool frame.
- The filter pump may be hard wired but a disconnecting means is required. A timer is required for the filter pump motor.
- Pool water must be bonded electrically (call for more information). A minimum 9 square inch in direct contact with the water.
- For pool spas and hot tubs, refer to the 2021 NATIONAL ELECTRIC CODE Article 680. (Other codes may apply)

Section 9: **PLUMBING REQUIREMENTS** (Must comply with the 2021 NSPC and 2021 ISPSC)

Please confirm the following information is provided on the submitted plans. Plans must be submitted by a New Jersey Licensed Architect/Engineer, Licensed New Jersey Master Plumber or the homeowner living at the residence where the pool is being installed. Two (2) copies of plans and all required paperwork must be submitted--(Signed and Sealed if prepared by a Design Professional).

Please supply the following:

- Location and number of bottom drains
- Make and Model number of the bottom drains and bottom drains grate
- Size of the interconnecting piping and the system branch piping
- Size of the circulation system piping
- Make/model number for the pump and filter to be installed
- Total system flow rate

All required information can be shown on the drawings or in note form on the drawings.