

Basic Requirements for Swimming Pool

Construction Permit Applications

Submit completed applications for the work intended; and **2 copies** of plans, all specs including but not limited to: Pumps, filters, heaters, lights, gas riser diagram, fence & latch, etc.

****CSST INSTALLATIONS:**

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

Submit completed applications as described above and include payment for Zoning Permit Fees of \$50.00 payable to "Bernards Township" and **3 copies** of a property survey indicating the location of the pool, fence & equipment on the property. We will forward the application to Engineering for prior approval review.

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

APPENDIX G

SWIMMING POOLS, SPAS AND HOT TUBS

SECTION AG101 GENERAL

AG101.1 General. The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the *lot* of a one- or two-family dwelling.

AG101.2 Pools in flood hazard areas. Pools that are located in flood hazard areas established by Table R301.2(1), including above-ground pools, on-ground pools and in-ground pools that involve placement of fill, shall comply with Sections AG101.2.1 or AG101.2.2.

Exception: Pools located in riverine flood hazard areas which are outside of designated floodways.

AG101.2.1 Pools located in designated floodways. Where pools are located in designated floodways, documentation shall be submitted to the *building official*, which demonstrates that the construction of the pool will not increase the design flood elevation at any point within the *jurisdiction*.

AG101.2.2 Pools located where floodways have not been designated. Where pools 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 will not increase the design flood elevation more than 1 foot (305 mm) at any point within the *jurisdiction*.

SECTION AG102 DEFINITIONS

AG102.1 General. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

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

HOT TUB. See "Swimming pool."

IN-GROUND POOL. See "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached one- or two-family dwelling or a one-family *townhouse* not more than three stories in height.

SPA, NONPORTABLE. See "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating *equipment* are an integral part of the product.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.

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

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

SECTION AG103 SWIMMING POOLS

AG103.1 In-ground pools. In-ground pools shall be designed and constructed in conformance with ANSI/NSPI-5 as listed in Section AG108.

AG103.2 Above-ground and on-ground pools. Above-ground and on-ground pools shall be designed and constructed in conformance with ANSI/NSPI-4 as listed in Section AG108.

AG103.3 Pools in flood hazard areas. In flood hazard areas established by Table R301.2(1), pools in coastal high hazard areas shall be designed and constructed in conformance with ASCE 24.

SECTION AG104 SPAS AND HOT TUBS

AG104.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3 as listed in Section AG108.

AG104.2 Portable spas and hot tubs. Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6 as listed in Section AG108.

SECTION AG105 BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs subject to this code.

AG105.2 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 (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 (51 mm) 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 (102 mm).
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) 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 $1\frac{3}{4}$ 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.
 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 $1\frac{3}{4}$ inches (44 mm) in width.
 6. Maximum mesh size for chain link fences shall be a $2\frac{1}{4}$ -inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than $1\frac{3}{4}$ inches (44 mm).
 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 $1\frac{3}{4}$ inches (44 mm).
 8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:
 - 8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and

8.2. The gate and barrier shall have no opening larger than $\frac{1}{2}$ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

9. Deleted.
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:
 - 10.1. Deleted.
 - 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9.

AG105.3 Indoor swimming pool. Walls surrounding an indoor swimming pool shall comply with Section AG105.2, Items 1 through 7.

AG105.4 Prohibited locations. Barriers shall be located to prohibit permanent structures, *equipment* or similar objects from being used to climb them.

AG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AG107, shall be exempt from the provisions of this appendix.

SECTION AG106 ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA SUCTION OUTLETS

AG106.1 General. Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

SECTION AG107 ABBREVIATIONS

AG107.1 General.

ANSI—American National Standards Institute
11 West 42nd Street
New York, NY 10036

APSP—Association of Pool and Spa Professionals
NSPI—National Spa and Pool Institute
2111 Eisenhower Avenue
Alexandria, VA 22314

ASCE—American Society of Civil Engineers
1801 Alexander Bell Drive
Reston, VA 98411-0700

ASTM—ASTM International
100 Barr Harbor Drive,
West Conshohocken, PA 19428

UL—Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062-2096



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

Harry G. Gerken
Executive Director
Ten Towns Committee
2 Ridgedale Ave
Cedar Knolls, NJ 07927

Phone ... (973)984-2000
Fax (973)984-2235

office@tentowns.org
gerken@tentowns.org

www.tentowns.org

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

“KEY” TO GATES AND FENCES

- ½” The maximum opening in the 18” diameter surround when a latch is on the “inside”. (10.2.2.1)
- 1¼” Max size of chain link fence. (Perpendicular to parallel sides)
- 1¾” Max spacing between vertical members if horizontals are less than 45” apart
- 2” Clearance from bottom of fence to “not solid” surfaces. (Grass, soil, gravel)
- 3” Latch located on pool or spa side must be 3” min below top of gate.
- 4” Max clearance from bottom of fence to solid surface. Also this is maximum horizontal spacing between all vertical pickets and between pickets and posts.
- 6” Latch located on pool or spa side can not be more than 6” below top of gate.
- 18” Latch located on pool or spa side can not have openings more than ½” diameter within 18” of latch release.
- 36” A “clear-zone” must be maintained for at least 36” from a fence to a permanent structure that could be used to climb the fence.
- 45” Horizontal members on a 4” open-space picket fence are acceptable if they are at least 45” apart. Otherwise the pickets must be maximum 1¾” apart.
- 48” The minimum height of a wall or fence must be 48” above grade on the “outside” of the barrier. (Opposite the pool or spa side)
- 54” Outside latch on pedestrian access gates should be minimum of 54” above grade.
- 60” Welded wire fence shall be minimum of 60” above grade (8.1)
- 65% When fencing is provided with a pool, it must have at least 65% visibility from outside to inside the pool area. (11.6)

Appendix A – Examples of barriers and fences

(This appendix is not part of the American National Standard, ANSI/IAF-8 2005, but is included for information only.)

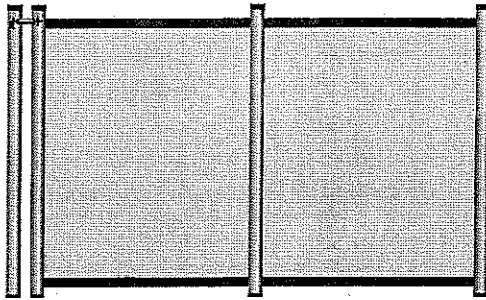


Figure 1 – Example of mesh restraining barrier/fence

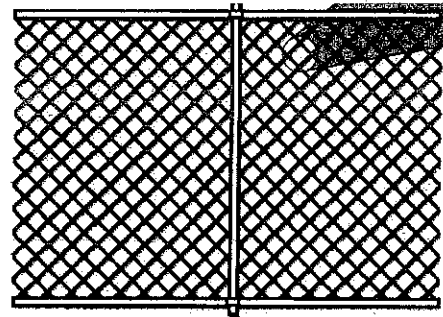


Figure 2 – Example of chain link fence

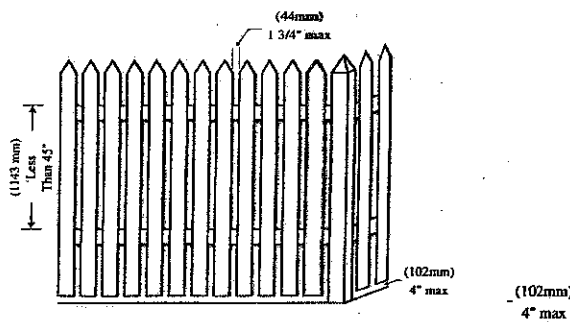


Figure 3 – Picket/ornamental fence
If horizontal members are less than 45" apart, the space between vertical members shall not exceed 1-3/4".

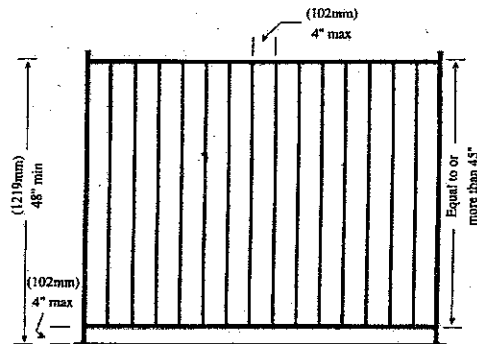


Figure 4
If horizontal members are 45" or more apart, the spacing between vertical members shall not exceed 4".

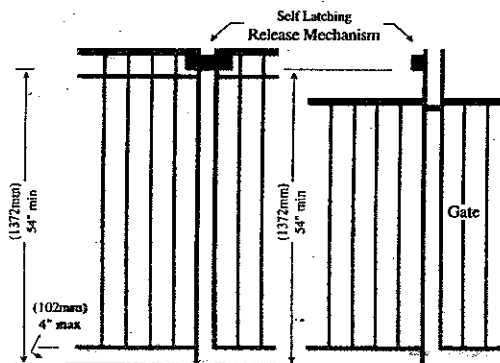


Figure 5 - Release mechanism
This example shows the release mechanism located a minimum of 54" above grade.