

**VILLAGE OF MIDDLEPORT
OFFICE OF CODE ENFORCEMENT**

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POOL OWNERS

THE RESIDENTIAL CODE OF NEW
YORK STATE , SECTION RAG105,
BARRIER REQUIREMENTS, REQUIRES
SWIMMING POOLS BE ENCLOSED
WITH AT LEAST A 48" HIGH BARRIER.

THESE REQUIREMENTS ARE
INTENDED TO PROVIDE PROTECTION
AGAINST POTENTIAL DROWNINGS
AND NEAR-DROWNINGS BY
RESTRICTING ACCESS TO SWIMMING
POOLS, SPAS, AND HOT TUBS.

THE CODE REQUIREMENTS ARE AS
FOLLOWS:

**§RAG105
BARRIER REQUIREMENTS**

§RAG105.1 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.

\$RAG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, aboveground or on-ground pool, hot tub or spa shall be provided with 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 aboveground 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 1.75 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 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 1.75 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 1.25-inch (32 mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1.75 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 1.75 inches (44 mm).
8. Access gates shall comply with the requirements of \$RAG105.2, Items 1 through 7, and shall be securely locked with a key, combination or other child-proof lock sufficient to prevent access to the swimming pool through such gate when the swimming pool is not in use or supervised. 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 greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier one of the following conditions shall be met:

9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F1346; or 9.2. All doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and its screen, if present, are opened. The alarm shall sound continuously for a minimum of 30 seconds immediately after the door is opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

10. Where an aboveground 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, then:

10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access, or 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of §RAG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

§RAG105.3 Indoor swimming pool. All walls surrounding an indoor swimming pool shall comply with §RAG105.2, Item 9.

§RAG105.4 Prohibited locations. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

§RAG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in §RAG107, shall be exempt from the provisions of this appendix.

CONTACT THE CODE ENFORCEMENT
OFFICE AT 735-3303 IF THERE
ARE ANY QUESTIONS



PERMANENTLY INSTALLED SWIMMING POOLS

ELECTRICAL WIRING REQUIREMENTS

2008 National Electrical Code / 2010 Residential Code of New York State
www.iaei-rochester.com

PERMANENTLY INSTALLED SWIMMING POOLS ARE THOSE THAT ARE CONSTRUCTED IN THE GROUND OR PARTIALLY IN THE GROUND, AND ALL OTHERS CAPABLE OF HOLDING WATER WITH A DEPTH GREATER THAN 42 INCHES (1067 MM)

1) Pool Pump Receptacle (Outlet) and Wiring Method

- a. If a pump motor receptacle is located between 6' – 10' from the inside pool wall, the receptacle must be a single twist-lock outlet, grounded, and Ground Fault Circuit Interrupter (GFCI) protected.
- b. Receptacle must have a weatherproof cover that can be closed when the cord is plugged in. (In-use type cover)
- c. An Automatic Timer (Time Switch) must be installed on swimming pool pumps.
- d. The circuit line for the pump motor must be a continuous line going directly to the panel box, and is to be isolated from all other receptacles.
- e. Wire for the pump motor shall not be less than #12 AWG insulated copper grounded wire, and must be in conduit. (except when entering a building the wire can change to NM) (Cannot use NM wire in conduit)
- f. Conduit
 - i. PVC – All PVC conduit* must be buried at least 18" deep (12" if GFCI protected)
 - ii. Metal – All Rigid Metal Conduit* must be at least 6" deep

* Wires used in conduit must be single strand wires (ex: THWN, etc - NO NM or UF CABLE in Conduit)

2) Convenience Receptacle (Outlet) and Wiring Method

- a. At least one (1) 15- or 20-ampere convenience receptacle must be located not closer than 6' but not further than 20' from the outside pool wall (Can be existing and/or wired with any approved wiring method)
- b. Convenience receptacle must be Ground Fault Circuit Interrupter (GFCI) protected.
- c. Must have a weatherproof cover where exposed to the weather (In-use type cover required on used, unattended, receptacles in wet locations)
- d. Must be separate from the pool pump receptacle wiring.
- e. Wiring
 - i. UF cable if buried must be at least 24" deep
 - ii. PVC – All PVC conduit* must be buried at least 18" deep (12" if GFCI protected)
 - iii. Metal – All Rigid Metal Conduit* must be at least 6" deep

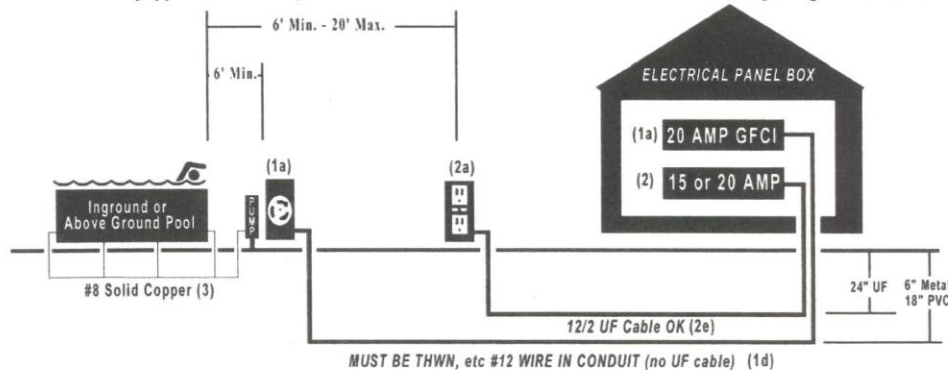
* Wires used in conduit must be single strand wires (ex: THWN, etc - NO NM or UF CABLE in Conduit)

3) Bonding The Pool

- a. All metal parts must be bonded together using a #8 (or larger) solid copper wire.
- b. Must use non-corrosive clamps.
- c. Conductive pool shells must be bonded in a minimum of four (4) equal points uniformly spaced around the pool
- d. Nonconductive pool shells must have a #8 (or larger) solid, bare copper wire 18"-24" from the inside pool wall under the perimeter surface 4"-6" below the final grade.
- e. A minimum of nine (9) square inches of metal must be in the water to bond the water

4) Other

- a. Building Permits are required. Secure a Building Permit prior to beginning work from your municipality
- b. Pool Alarms are required (Check with your local Building Department for additional information)
- c. If a Pool Heater is present, an Automatic Timer (Time Switch) must be installed on the pool heater and must be equipped with a readily accessible on-off switch to shut off the heater without adjusting the thermostat setting.



PLEASE CONTACT YOUR LOCAL INSPECTOR IF YOU HAVE ANY QUESTIONS

www.iaei-rochester.com
~ 2011 ~

barrier shall have no opening greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier one of the following conditions shall be met:

9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F1346; or 9.2. All doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and its screen, if present, are opened. The alarm shall sound continuously for a minimum of 30 seconds immediately after the door is opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

10. Where an aboveground 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, then:

10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access, or 10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of §RAG105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

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FOR REFERENCE ONLY

COMMONWEALTH ELECTRICAL INSPECTION SERVICE INC.
4587 BROADWAY 3B, DEPEW, NY 14043

1/2010

SUMMER 2010 RULES

See web site below also.

**ELECTRICAL CODE RULES BASED ON 2002 N.F.P.A -70
THE RESIDENTIAL CODE OF New York STATE 2007**

**ALL IN-GROUND POOLS AND ABOVE GROUND POOLS CAPABLE OF HOLDING 42" OR
MORE OF WATER ARE CONSIDERED PERMANETLY INSTALLED POOLS**

1. If pump motor is located **from 5' to 10'** from outside pool wall. The receptacle must be **single, twistlock, 20amp, GFCI protected with watertight inuse cover. 680.22(A) (1-4) / E4103.1.1**
2. A receptacle used unattended in a wet location shall have a **watertight inuse cover. 410-57 / E3902.9**
3. Pump motor cord to facilitate the removal or disconnection for maintenance or repair. The cord **shall not exceed 3' long** and shall have a grounding wire of not smaller than **# 12 AWG** copper. **680.7 / E4102.2 (1)**
4. Circuit line for pump motor shall be a continuous circuit going directly to panel box and **shall have no other receptacles. 430-22 / E3301.1**
5. Wiring for pump motor receptacle **shall not have less than # 12 AWG insulated** copper grounding wire, and to be in conduit, except when entering building can change to #12 AWG romex. **680.25 (5) (C) / E4105.2**
6. All underground UF wire and PVC conduits must be 18" deep, unless circuit is protected by GFCI upstream then 12" deep. **300.5 / E3703.1** Only electric specific to the pool is allowed less than 5" feet to the water's edge and must be **18" deep** and be installed in a approved raceway.
7. At least one convenience **receptacle must be located between 10 and 20** feet from the waters edge and must be GFCI protected. **680-6(a) (2) / E4103.1.2** Existing receptacles between 10 and 20 feet shall be GFCI protected. **E4103.1.3**
8. No UF cable can be used except for **convenience receptacles only. 680-25(f) / E4102.1**
9. All metal parts must be **bonded together with a No. 8 or** larger solid copper wire must be used. (Motor, ladders pool frame, diving board, lights, etc.) **680-22 / E4104.1**
10. When bonding pool frame or any metal parts to main bonding wires or wire mesh, you must **use non-corrosion clamps. 680-22(A) (B) / E4104.1**
11. For dry niche, wet niche, no niche lighting fixtures. **680-20, 680-25 (B) / E4106**
12. For any lighting fixtures outside of pool. **680-6 (b) (1) (2) (3) / E4103.4.3**

NOTE: A building permit is required in **ALL** localities, secure permits **before starting.**

Required pool alarms on all new pools see below link.

<http://www.dos.state.ny.us/code/part1228.htm>

Call for inspection 716-681-0107
FAX 716-706-0202

POOL FENCE

AN INVESTMENT WORTH MAKING ...

AND A REQUIREMENT OF THE CODE!

Swimming pools, spas, and hot tubs are becoming more frequent in the back yards of homes across the State. While very enjoyable to the users, these places of comfort are very alluring to young children. Protection against unsupervised children is paramount in avoiding a household disaster.



Barriers like pool fences are working! In 1985, New York State started requiring pool fences when the rate of child deaths (newborn to 4 years old) soared to 17 drownings per million. By 1999, that number dropped by 95%.

When do I need a barrier?

Barriers, such as fences, are required around swimming pools, hot tubs and spas. This includes both fixed and portable units, including pre-formed or inflatable pools. The only exception is when a swimming pool is not able to contain more than 24" of water.

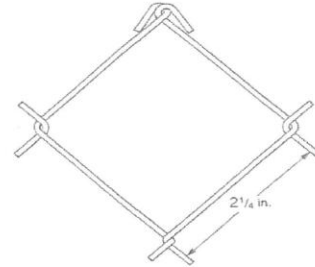
Are existing swimming pools exempt from barrier requirements?

No. All swimming pools, no matter how old, are required to have a barrier around them. The Property Maintenance Code of New York State requires an approved barrier around all swimming pools, regardless of their age.

What are the requirements for barriers?

The *Residential Code of New York State* and the *Building Code of New York State* regulate the construction parameters of barriers. Several options are available.

1. A 48" barrier shall surround the pool area. The barrier can be made using various methods including masonry, wood, or metal. Whatever method is used, it must not allow passage of children through the barrier as well as be constructed to prevent climbing.
2. For above ground pools, the side wall can be used as part of the barrier as long as the walls are 48" above the ground and the access ladder is secured. A barrier can be placed on top of the pool if it doesn't quite make the 48" by itself.
3. When the wall of a building serves as the barrier, or a portion thereof, a power operated top can be used or alarms can be placed on the doors leading to the pool area.

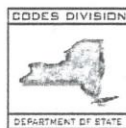
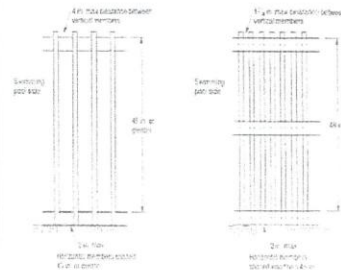


Do I need to put a barrier up to protect my hot tub or spa?

No. Hot tubs and spas are exempt from the barrier if equipped with a safety cover complying with the ASTM F1346 safety standard.

Do fences, gates and folding ladders need to be locked?

Yes. Pool gates and folding ladders do need to be locked when unsupervised. This needs to be achieved by a key, combination, or child-proof lock.



For more information, contact the Department of State Division of Code Enforcement and Administration 41 State St. Albany, NY 12231
Phone: (518)-474-4073
Fax: (518)-486-4487
<http://www.dos.state.ny.us>



Specifics on fence construction and permitted gates are found in the *Residential Code of New York State* and the *Building Code of New York State*