

CITY OF BRISTOL

POOL PERMIT APPLICATION GUIDE

ACCORDING TO THE 2009 IRC WITH THE CT AMMENDMENTS

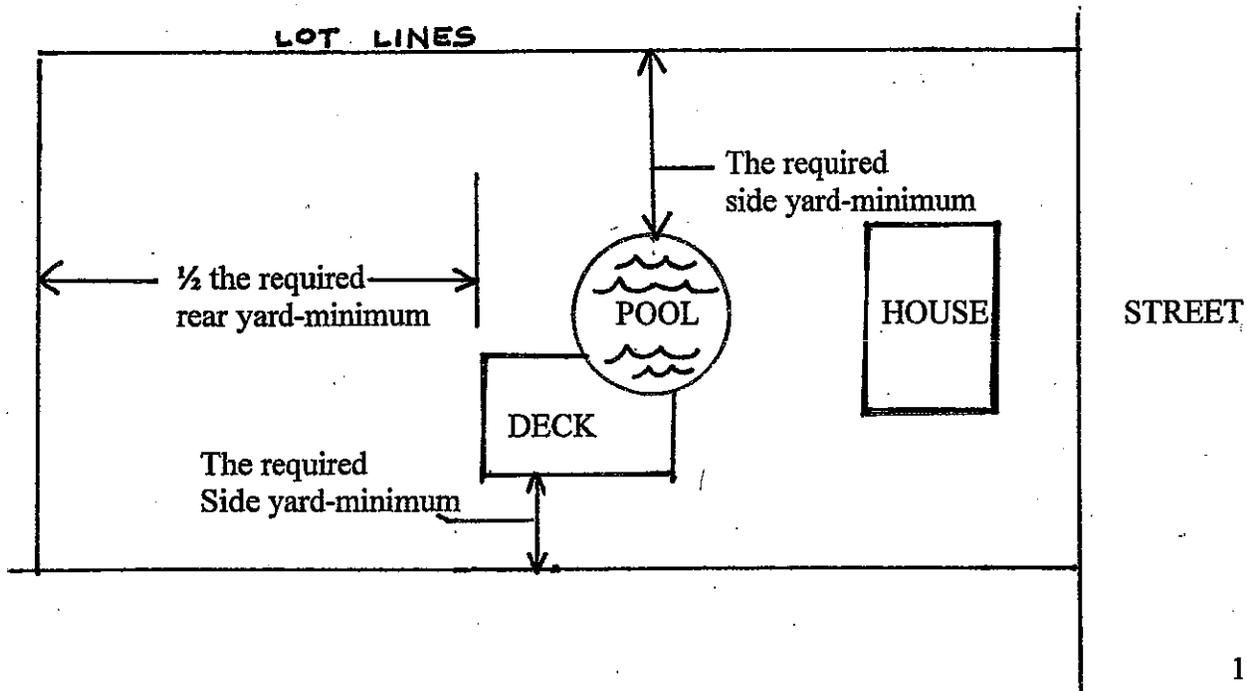
To apply for a pool permit with the City Of Bristol you must submit the following:

- 1) Building Permit Application Form, the top half filled out which includes the owner's name, phone number, the contractor, name, address, phone number and license number, the estimated cost of the pool including the cost of its installation. Sign and date the form.
- 2) Electrical Permit Application Form- No pool permit can be issued without an electrical permit application being completed-you can't install a pool without the appropriate filter and electrical hook ups.
- 3) Show the location of the pool on the included "Pool Location Form" or on a plot plan supplied by this office or on a copy supplied by you.
- 4) If you are proposing to build an above ground deck to enter an above ground pool-see the included pool deck construction handout included with this packet.

ZONING REGULATION REGARDING SWIMMING POOLS

Swimming Pools are allowed to be placed on a property under the following guidelines:

- (1) Setbacks shall be measured from the nearest lot line to the edge of any deck or platform structure adjacent to the pool, or otherwise to the exterior lip of the pool; and
- (2) The pool and any appurtenant structures (decks, filters, filter buildings, changing sheds) associated therewith shall not be located within the required front or side yards or closer to the rear lot line than one-half the required rear yard. See Illustration Below:

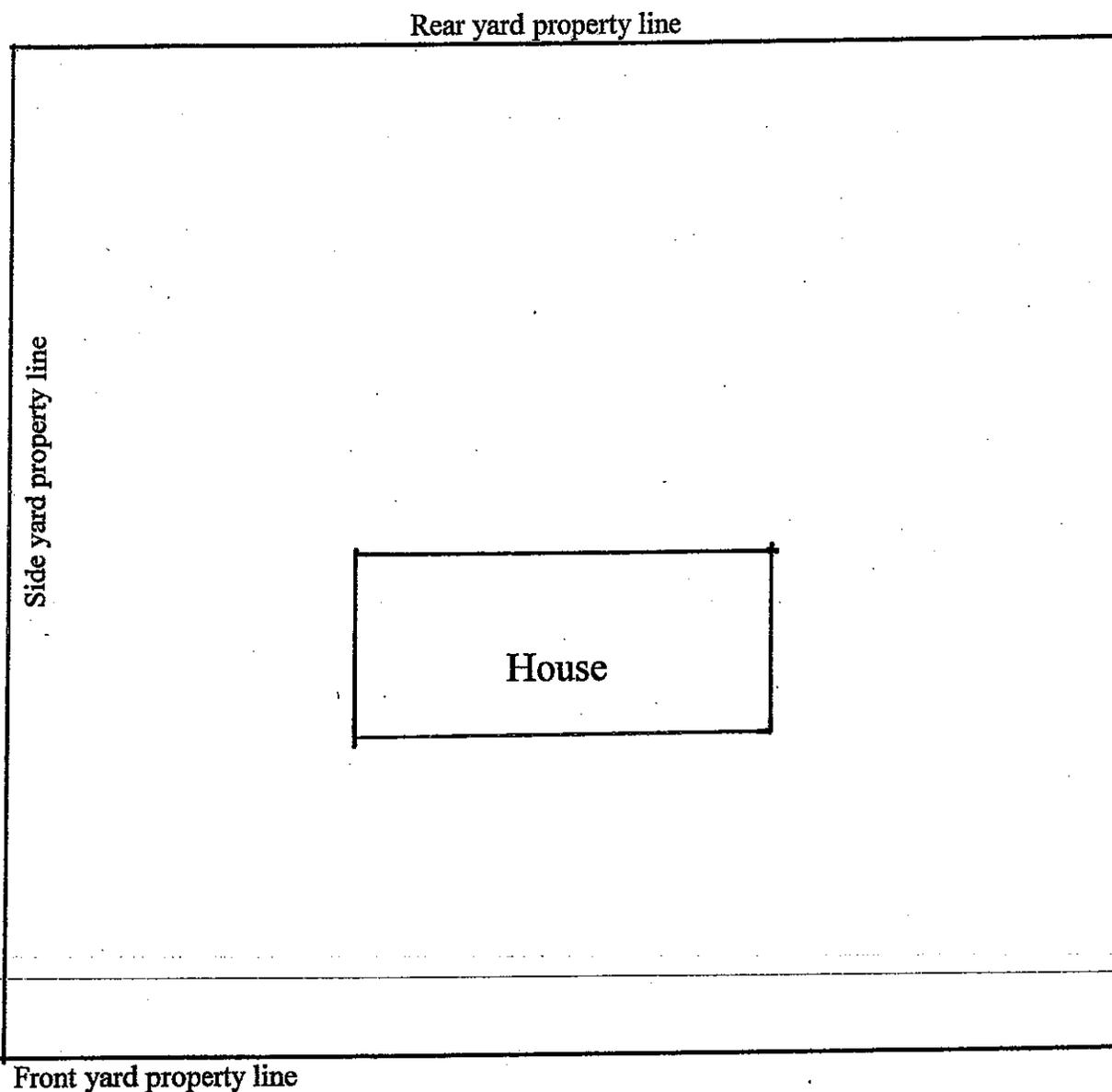


ZONING SETBACKS TABLE

| ZONE | SIDE YARD | REAR YARD | ½ REAR YARD |
|-------------|------------------|------------------|--------------------|
| RM | 6 | 15 | 7.5 |
| R-10 | 8 | 20 | 10 |
| R-15 | 10 | 25 | 12.5 |
| R-25 | 15 | 40 | 20 |
| R-40 | 20 | 50 | 25 |

Draw Below:

Location of proposed pool show distance to side and rear yards.



STREET NAME: _____

Guidelines for Residential Swimming Pools, Spas and Hot Tubs

The following is an excerpt from Appendix G of the current State Building Code

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.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including in-ground, above-ground or on-ground pool, hot tub and spa shall be surrounded by a barrier that 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 that 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 that do not have openings, such as masonry or stone walls, 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, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 13/4 inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 13/4 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 13/4 inches in width.
6. Maximum mesh size for chain link fences shall be 21/4 square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 13/4 inches.
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 13/4 inches.

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 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 below the top of the gate; and

8.2. The gate and barrier shall have no opening larger than 1/2 inch within 18 inches 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 F 1346; or

9.2. 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/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch(es) shall be located 54 inches 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 as 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 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, then 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, Item 9.

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

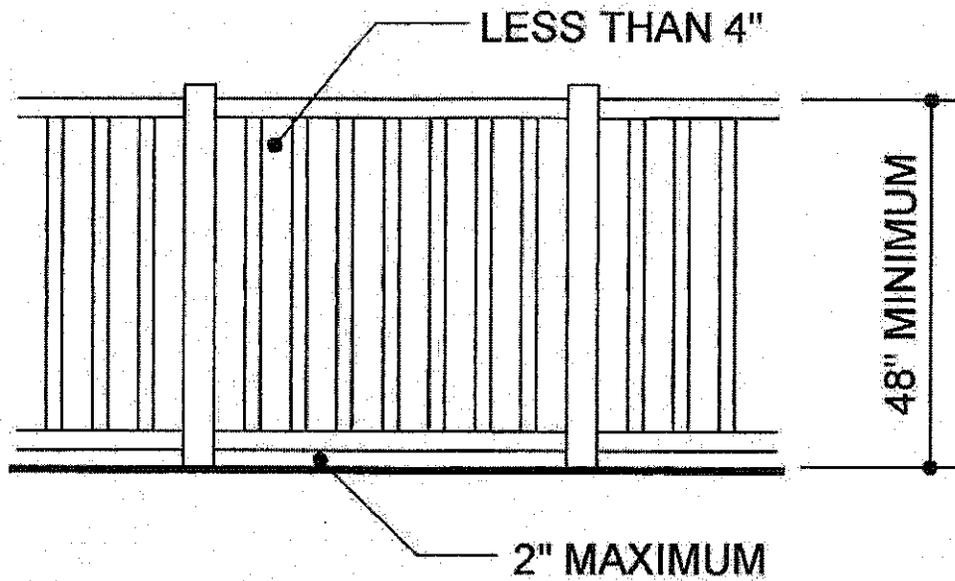
AG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AG107, shall be exempt from the provisions of this appendix.

AG105.6 Temporary enclosure. A temporary enclosure shall be installed prior to the electrical bonding inspection of any in-ground swimming pool unless the permanent barrier

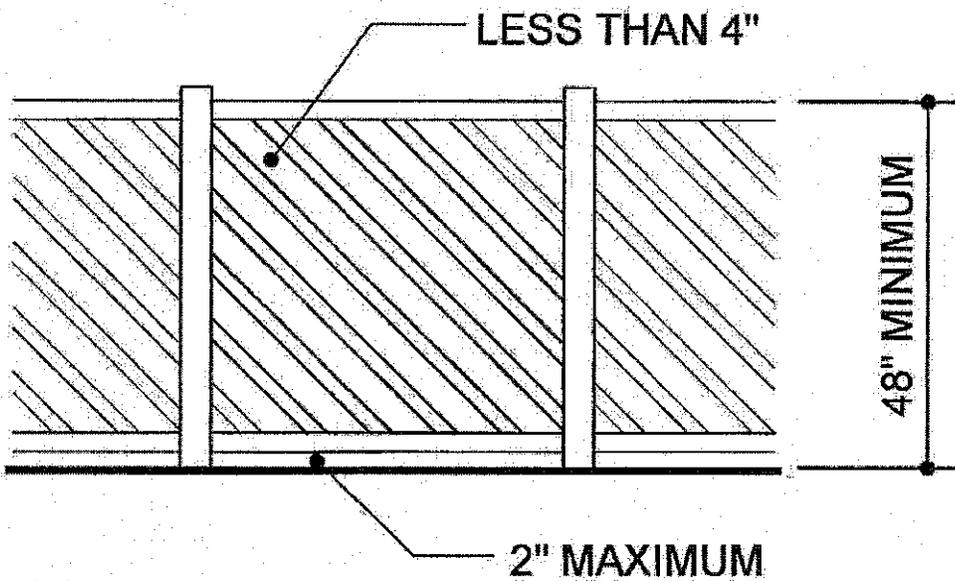
specified in Section AG105.2 is in place prior to the commencement of the installation. The temporary enclosure shall be a minimum of 4 feet in height, shall have no openings that will allow passage of a 4-inch sphere and shall be equipped with a positive latching device on any openings.

AG105.7 Pool alarm. Pursuant to section 29-265a of the Connecticut General Statutes, no building permit shall be issued for the construction or substantial alteration of a swimming pool at a residence occupied by, or being built for, one or more families unless a pool alarm is installed with the swimming pool. As used in this section, "pool alarm" means a device that emits a sound of at least 50 decibels when a person or an object weighing 15 pounds or more enters the water in a swimming pool.

Exception: Hot tubs and portable spas shall be exempt from this requirement.

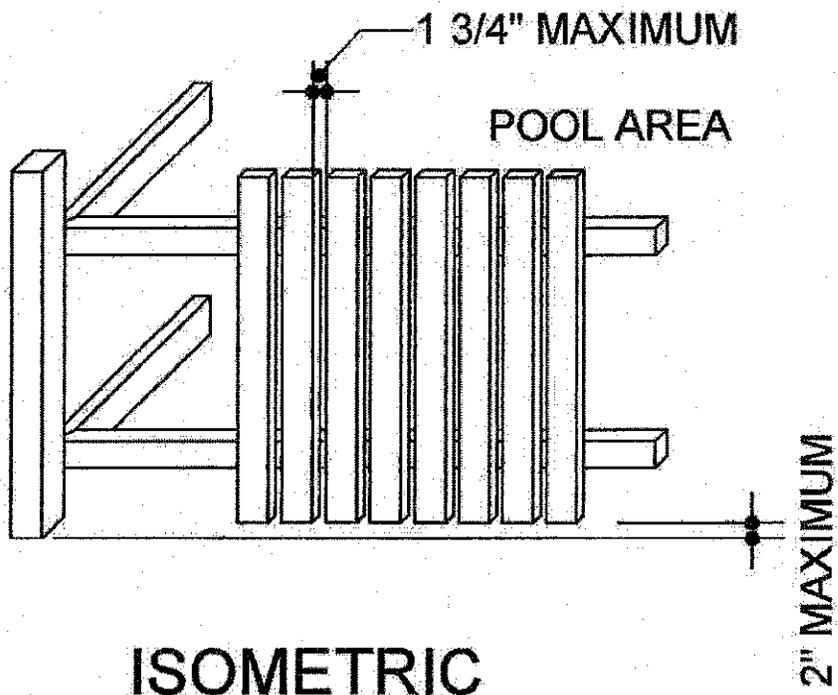
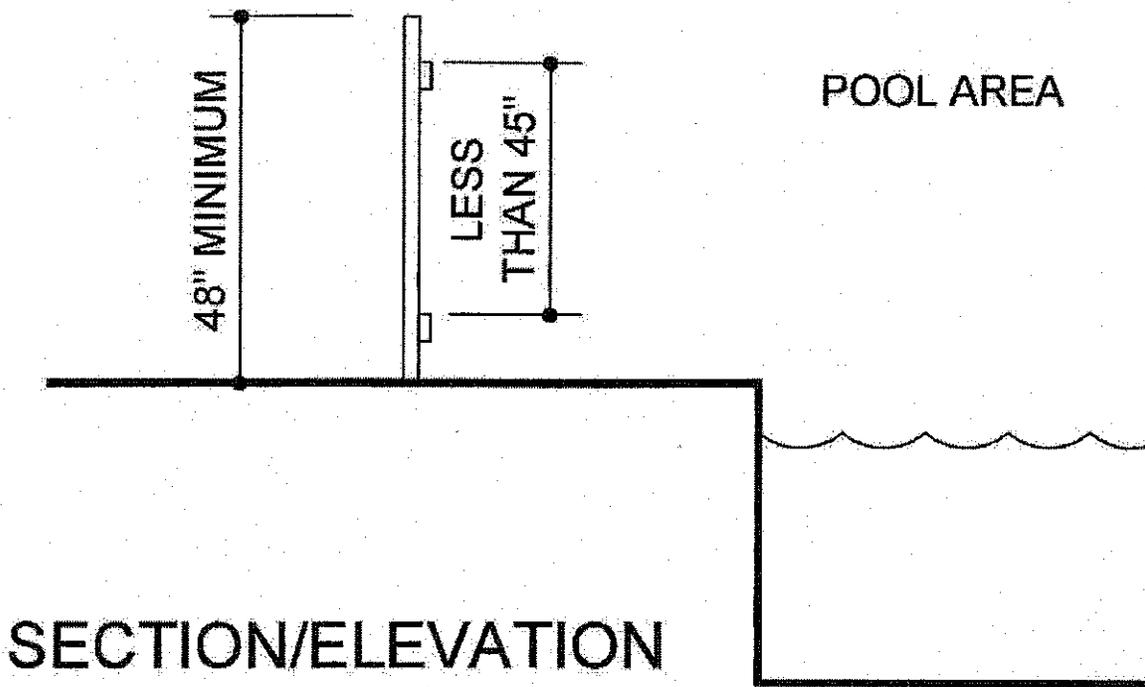


ELEVATION

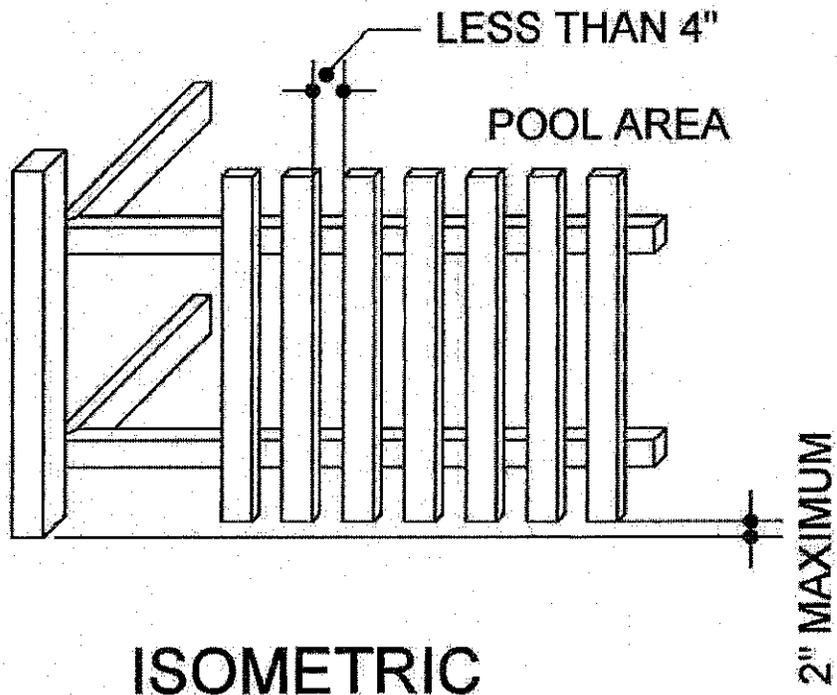
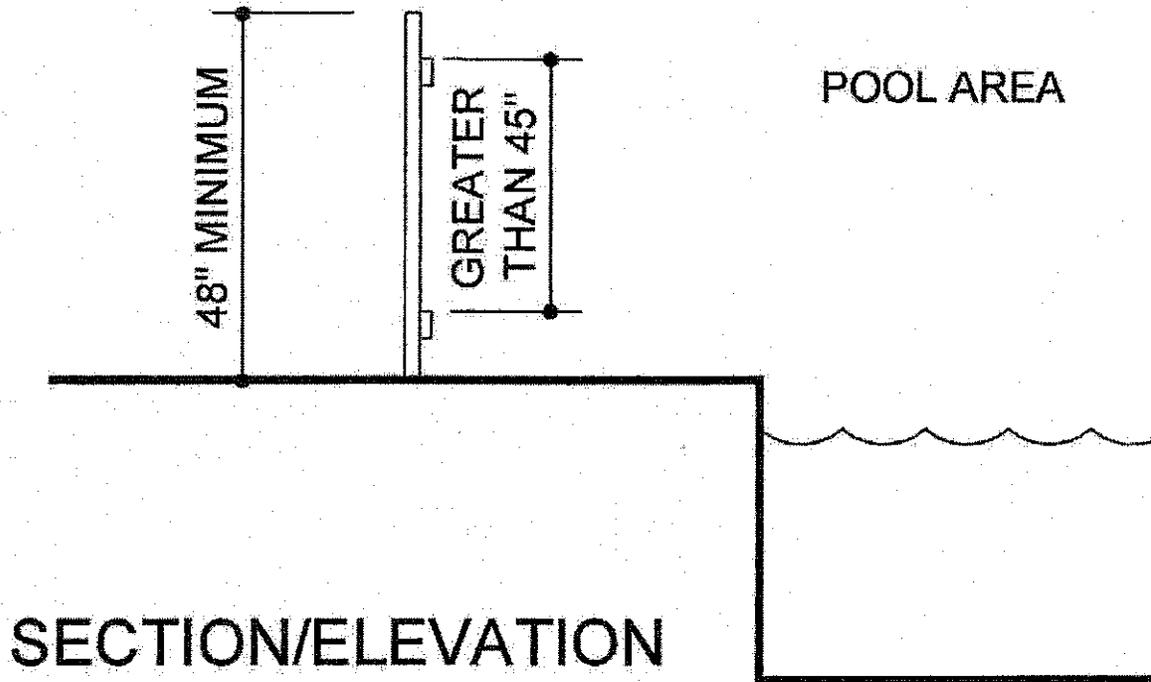


ELEVATION

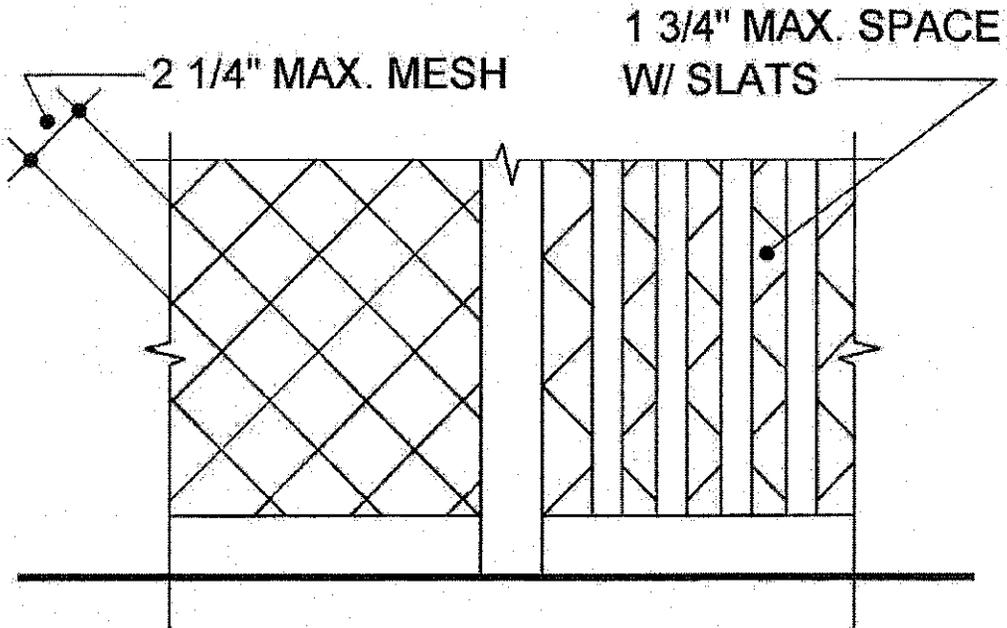
SECTION AG105.2, ITEM 2



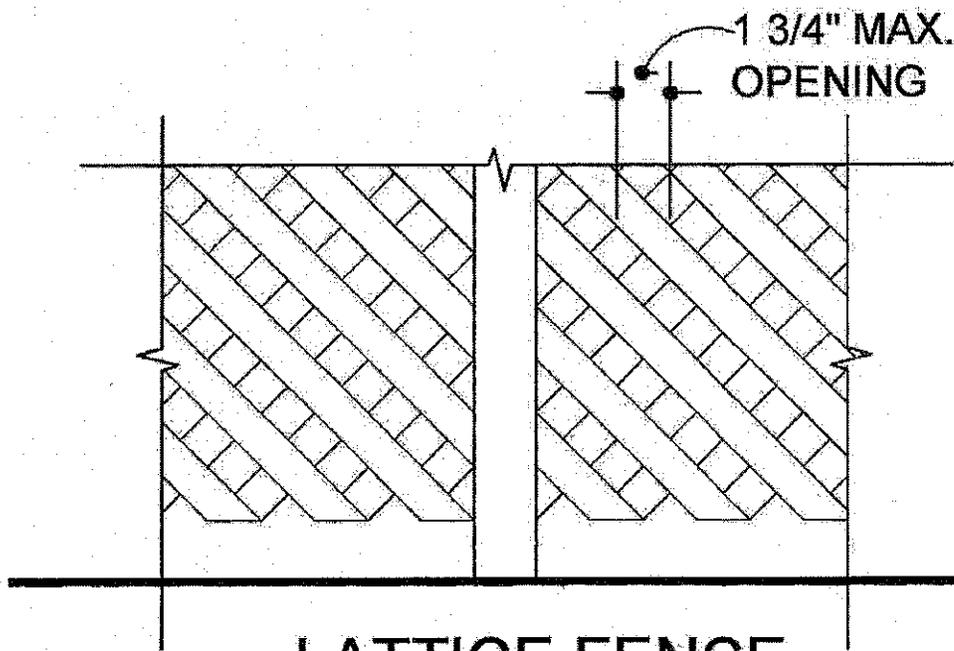
SECTION AG105.2, ITEM 4



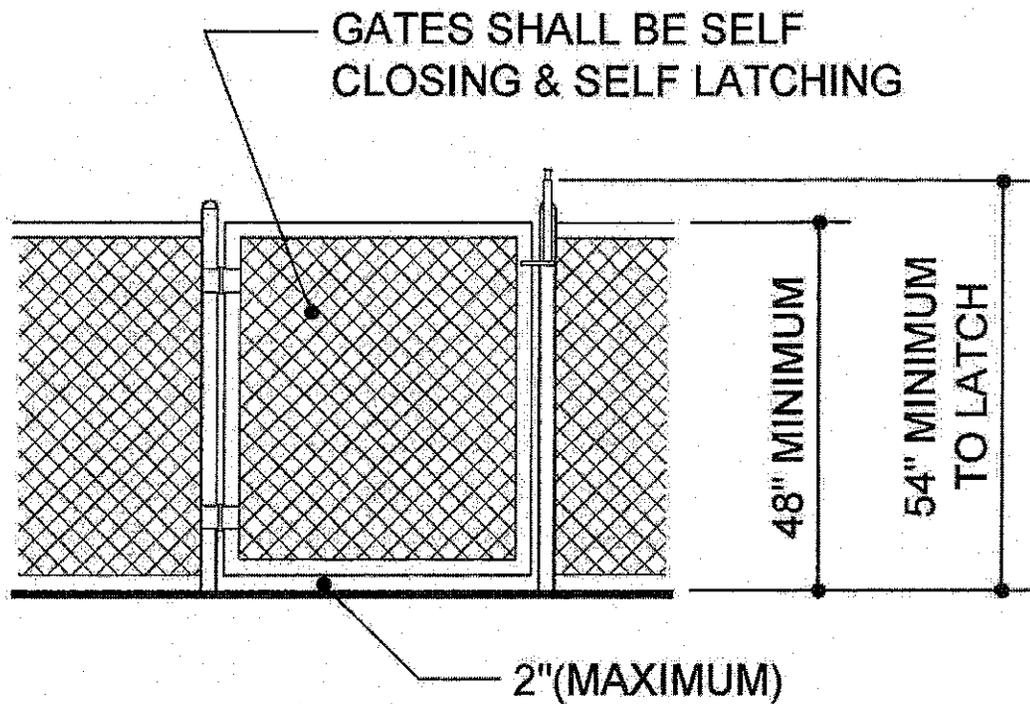
SECTION AG105.2, ITEM 5



CHAIN LINK FENCE
SECTION AG105.2, ITEM 6



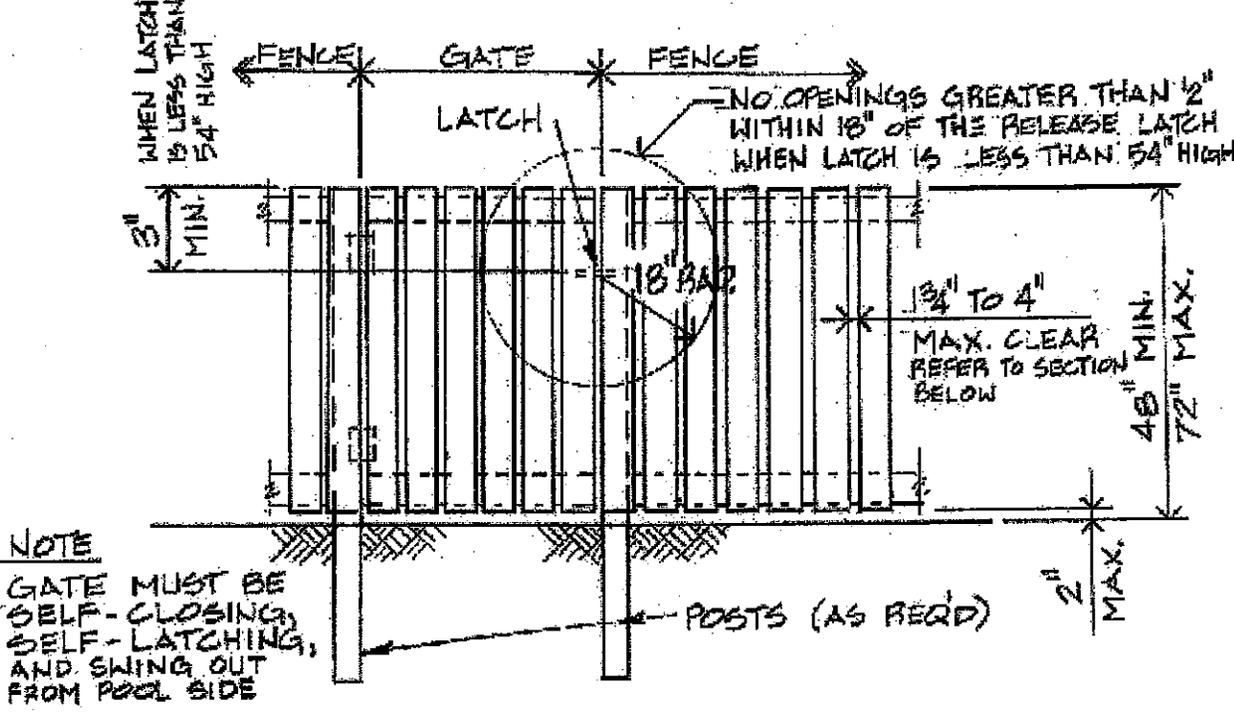
LATTICE FENCE
SECTION AG105.2, ITEM 7



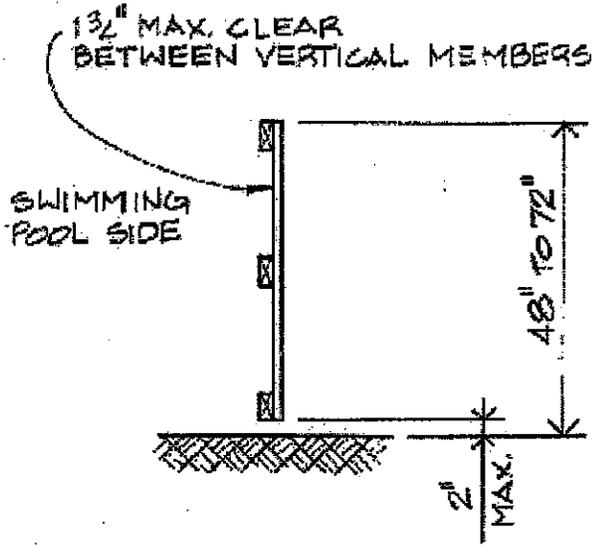
ELEVATION

PEDESTRIAN ACCESS GATE

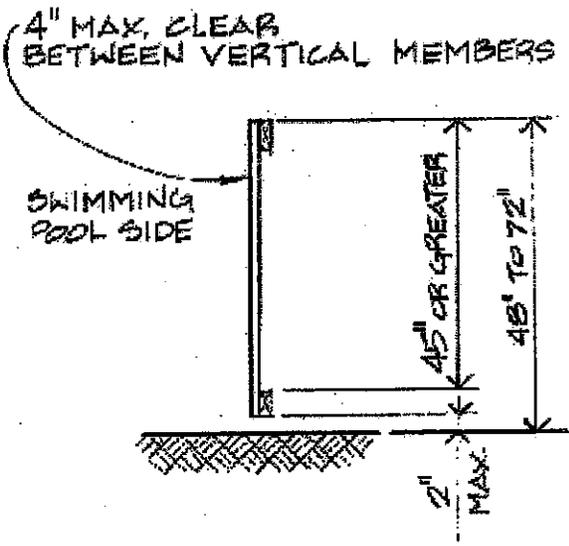
SECTION AG105.2, ITEM 8



POOL GATE AND BARRIER ELEVATION



HORIZONTAL MEMBERS SPACED LESS THAN 45"



HORIZONTAL MEMBERS SPACED 45" OR GREATER.

POOL BARRIER SECTIONS

Building Department (860) 584-6215
Inspector's Direct Line (860) 584-6212

BUILDING DEPARTMENT
BRISTOL, CONNECTICUT

Permit Hours Monday to Friday
8:00 a.m. to 4:15 p.m.

APPLICATION & PERMIT TO DO ELECTRICAL WIRING

E

(All work shall comply with the State of Connecticut Building Code and any other applicable codes.)

Permit No: _____ Application Date _____

The undersigned hereby applies for a permit to install, alter, electrical wiring as per the following specifications:

JOB LOCATION: Lot # _____ St. # _____ Address: _____

Owner: _____ Address _____ Phone _____

Builder: _____ Address _____ Phone _____

INTENDED USE OF PREMISES: _____ Will this work create another tenement? _____

TYPE OF JOB: Residential _____ Commercial _____ Industrial _____
CODE EDITION: 2003 IRC _____ 2005 NEC _____

DESCRIPTION OF WORK _____

TYPE OF SERVICE:
New _____ Change _____ Temporary _____ Overhead _____ Underground _____

Phase _____ Wire _____ Voltage _____ Switch No. /Size _____

Conduit Size _____ Meters Required _____ No. of Outlets _____ No of Switches _____

Number of Dwellings _____ Number of Stores _____

PRIMARY SOURCE OF HEAT: IF Electric, Required Load Calculations Provided YES _____ NO _____

Electric _____ Total Wattage _____ Gas _____ Oil _____ Solar _____ Other _____

Heat Loss Calculations: Attached _____ As Per Plans _____ Other _____

SWIMMING POOLS TYPE: Above ground _____ Inground _____ Heated _____ Unheated _____

PHOTOVOLTAIC: See Inspector for Additional Requirements.

BUSINESS: (Print Name) _____ ADDRESS _____

LICENSE TYPE: _____ NUMBER _____ EXP DATE _____

CONTRACTOR :(Print Name) _____ ADDRESS _____

TELEPHONE: _____ ESTIMATED COST OF JOB: _____

I hereby certify that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as an authorized agent and we agree to conform to all of the requirements of the laws of the State of Connecticut.

Signature: _____ Date Signed _____

OFFICE USE ONLY \$22 for 1st \$1,000 plus \$15 each additional \$1,000 (State Ed. Fee Included)

Building Permit # _____ Permit Type _____ Permit Description _____

Fee _____ + Late Fee _____ = Total _____ Date Issued _____ Approved _____

WIRING REQUIREMENTS FOR SWIMMING POOLS

2011 National Electrical Code

PERMANENTLY INSTALLED SWIMMING POOLS;

National Electrical Code definition are those pools that are constructed or partially in the ground all others pools capable of holding water with a depth greater than 42" inches..

1) Pool Pump Receptacle (Outlet) and Wiring Methods

- a. For permanent pools pump motor receptacle shall located between 6' to 10' feet from the inside pool wall, the receptacle must be a single twist-lock outlet, and always a GFCI (Ground Fault) protected. Article 680.22(A)(1)
- b. The outdoor pump receptacle must have a weatherproof cover that can be closed when the pump cord is plugged in. Article 406.9(B)(1)
- c. The electrical circuit line for a permanently installed pool pump motor must go directly to a panel box, and is to be isolated from all other receptacles. Article 110.3
- d. The wire for the pump motor shall not be less than #12 AWG insulated copper and must be in conduit Article 680.21(A)(1)
- e. In the interior of a one family dwelling Type NM cable may be used. Article 680.21(A)(4)
- f. The cord on the pump must be 3' long max. and a minimum of #12 AWG. Article 680.21(A)(5)

Conduit depth

- Electrical PVC at least 18" deep. (12" if all conductors are GFCI protected, rated 120 volts or less with maximum overcurrent protection of 20 amps)
- Metal conduit*- at least 6" deep. *

*wires used in conduit must be single strand wire, (ex: THWN,XHHN Etc. NO NM or UF cable in conduit)

2) Convenience Receptacle (outlet) and Wiring Methods

- a. At least one (1) 15 – 20 ampere convenience receptacle must be located no closer than 6' feet but no further than 20' feet from the outside of the pool wall. May be existing and/or wired with any approved wiring method. Article 680.22(A)(3)
- b. Convenience receptacle shall separate from the pool pump receptacle wiring. Article 110.3
- c. Convenience receptacle must be GFCI (Ground Fault) protected. 680.22(A)(4)
- d. Convenience receptacle shall an in use (bubble) cover where located outdoors. 406.9(B)(1)

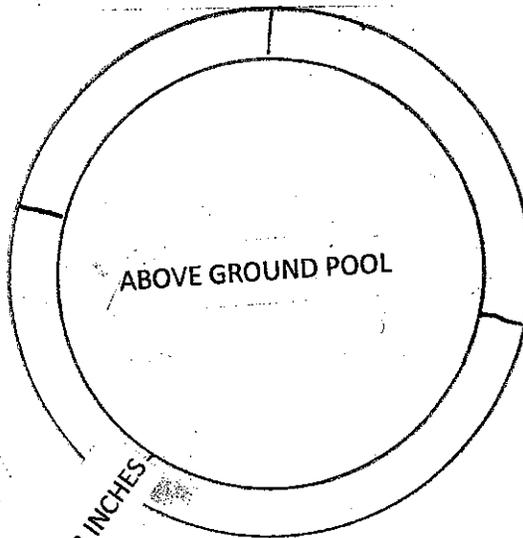
3) Bonding The Pool

- a. All metal parts must be bonded together using a #8 (or larger) solid copper wire.
- b. Conductive pool shells must be bonded in a minimum of four (equal) points uniformly spaced around the pool.
- c. Above ground pools must have a #8 (or larger) solid copper wire buried 4" - 6" below finished grade with such bond wire placed from 18" – 24" from the inside pool wall around the pool, (equipotential bonding) that which starts and returns/ terminates at the pool pump.
- d. Bonding points or attachment must use listed non-corrosive beaver tooth lugs.
- e. A minimum of nine (9) square inches of metal must be provided to bond the water.

4) Other

- a. All permanently and seasonal pools with a water depth greater than 24" inches as well all outdoor located spas and hot tubs require building permits. Permanently installed pools require permanent electrical wiring and are to be inspected.
- b. Pools alarms are required. [UL Listed or tested]
- c. Circulating equipment must be controlled by an energy saving timer.

BEAVER TOOTH LUGS AT 4 LOCATIONS



RING OF #8 SOLID COPPER WIRE

4 TO 6 INCHES BELOW GRADE

18 TO 24 INCHES FROM EDGE OF POOL

ABOVE GROUND POOL

48 INCHES

POOL PUMP

#12 POOL PUMP CORD/MAX 3 FT LONG

POST 6 FT FROM POOL

TWIST-LOCK RECEPTACLE

CONVENIENCE RECEPTACLE

TRENCH 18" DEEP/PERHAPS 12"

PVC CONDUIT IN TRENCH

#12 MINIMUM BLK/WHT/GREEN THWN WIRE OR EQUIVALENT

TIME CLOCK FOR PUMP