

POOL INFORMATION

The following may not be all-inclusive of your project.
Always reference the latest adopted State Building Code.

GENERAL/ENCLOSURE:

1. Obtain zoning, sewer, tax approvals (etc.)
2. Provide at least one means of egress (exit) from the pool enclosure. See attached ANSI/NSPI-4-1999.
3. Pool equipped with filtration system.
4. Barrier (fence, pool wall, etc.) shall not be less than 48" in height.(AG105)
5. Openings shall not allow passage of a 4" sphere.
6. No indentations/protrusions in solid barriers.
7. Horizontal rails less than 45" apart on inside barrier; No greater than 1-3/4" vert. Spacing.
8. Horizontal rails spaced 45" or more vertical/pickets less than 4".
9. Maximum 2 1/4" square chain link mesh openings.
10. Maximum 1 3/4" diagonal openings (lattice, chain link w/ slats, etc.)

PEDESTRIAN ACCESS GATES, DOOR ALARMS, OTHER GATES (105.2-8)

11. Gates shall open outward, away from pool.
12. Gates shall be self-closing/ self-latching.
13. Gate latches less than 54" above ground shall be inside gate and gate materials shall have openings 1/2" maximum within 18" of the latch, and the latch shall not be less than 3" below the top of gate.
14. Other gates shall have a self- latching device.
15. Alarms for doors leading directly into the pool – shall be listed and labeled in accordance with UL 2017. (Ag105.2, 9.2)
16. Touch pads & switches located 54" minimum above floor.
17. Provide pool alarm: (AG 105.7)

ELECTRICAL

18. At least one 125 v. convenience receptacle between 6' to 20' from pool walls and GFCI protected.
19. Pump receptacle within 6'- 10' from inside walls of the pool shall be GFCI, single, grounding, locking types.
20. Pump receptacle grounding conductor not less than #12AWG; insulated. (Romex not allowed outside of structure). 4 separate THHW insulated min #12 AWG conductors.
21. All light fixtures 5-10' from pool shall be GFCI.
22. Switches shall be not less than 5' horizontally from pool. *Exception:* when located behind a solid barrier.
23. Maximum pool equipment flex cord length is 3' (20A or less). *Exception:* for underwater lighting fixtures.
24. Wiring method type/ burial depths
 - a) Rigid metal conduit (RMC) not less than 6"
 - b) Intermediate metal conduit (IMC) not less than 6"
 - c) Rigid non-metallic conduit (NMC) not less than 18"
25. Bonding required; #8 AWG solid copper, for the following:
 - a) Structural reinforcing (rebar) of concrete pool.
 - b) Walls of bolted or welded metal pools.
 - c) All metallic parts of pool structure.
 - d) All fixed metal parts within 5' horizontally from pool edge.
 - e) All pump motors, filter casings and other metal electrical equipment associated with the pool.
 - f) Provide bonding grid with four uniformly spaced points of attachment. #8 solid copper conductor 18" to 24" from pool wall 4" to 6" below grade.
 - g) Pool water heaters as bonded/ installed per manufacturer.
 - h) Pool water bond with conductive area 9 square inches in contact with pool water.
26. Pool heaters – Provide a on/off switch. If gas, no continuously burning pilot lights. (N1103.8.1, 2009 IRC)
27. Time clock for pool filter motor (N1103.8.2, 2009 IRC)

ENERGY CODE REQUIREMENTS FOR POOL

N1103.9 (R403.9) Pools and in-ground permanently installed spas (Mandatory). Pools and in-ground permanently installed spas shall comply with Sections N1103.9.1 through N1103.9.3.

N1103.9.1 (R403.9.1) Heaters. All heaters shall be equipped with a readily *accessible* on-off switch that is mounted outside of the heater to allow shutting off the heater without adjusting the thermostat setting. Gas-fired heaters shall not be equipped with constant burning pilot lights.

N1103.9.2 (R403.9.2) Time switches. Time switches or other control method that can automatically turn off and on heaters and pumps according to a preset schedule shall be installed on all heaters and pumps. Heaters, pumps and motors that have built in timers shall be deemed in compliance with this requirement.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Where pumps are required to operate solar-and-waste-heat-recovery pool heating systems.

N1103.9.3 (R403.9.3) Covers. Heated pools and in-ground permanently installed spas shall be provided with a vapor-retardant cover.

Exception: Pools deriving over 70 percent of the energy for heating from site-recovered energy, such as a heat pump or solar energy computed over an operating season.

SECTION AG108 STANDARDS

AG108.1 General.

ANSI/NSPI

ANSI/NSPI-3-99 Standard for
Permanently Installed Residential Spas.....AG104.1

ANSI/NSPI-4-99 Standard for Above-ground/
On-ground Residential Swimming Pools.....AG103.2

ANSI/NSPI-5-2003 Standard for
Residential In-ground Swimming Pools.....AG103.1

ANSI/NSPI-6-99 Standard for
Residential Portable Spas.....AG104.2

ANSI/APSP

ANSI/APSP-7-06 Standard for Suction
Entrapment avoidance in Swimming Pools,
Wading Pools, Spas, and Hot Tubs and
Catch Basins.....AG106.1

ASCE

ASCE/SEI-24-05 Flood Resistant
Design and Construction.....AG103.3

ASTM

ASTM F 1346-91 (2003) Performance
Specification for Safety Covers and Labeling
Requirements for all Covers for swimming Pools,
Spas and Hot Tubs.....AG105.2, AG105.5

UL

UL 2017-2000 Standard for General-purpose
Signaling Devices and Systems- with Revisions
Through June 2004.....AG105.2

**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

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 AG108, shall be exempt from the provisions of this appendix.

(ADD) 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 installation. The temporary enclosure shall be a minimum of 4 feet (1219 mm) 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.

(ADD) 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 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.

SECTION AG105 BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this appendix 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.

(AMD) 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 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 ¾ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ 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 ¾ inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 2 ¼-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 ¾ 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 ¾ 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 ½ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.
9. Where a wall of 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 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 as long as the degree of protection afforded is not less than protection afforded by Item 9.1 or 9.2 described above.
10. CT AMD. Where an above-ground or on 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, the ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9, inclusive.

SECTION AG103 SWIMMING POOLS

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

AG103.2 Above-ground pools and on-ground pools. Above-ground and on-ground pools shall be designed and constructed in compliance 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 AG102 DEFINITIONS

AG102.1 General. For the purposed 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."

(Amd) **RESIDENTIAL.** For the purpose of this Section, "Residential" means situated on the premises of a detached one- or two-family dwelling or which is accessory to an individual one-family townhouse for the exclusive use of its residents and invited guests. (CT 2016)

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 enclosed structure.

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

2016 CONNECTICUT STATE BUILDING CODE
EFFECTIVE DATE: OCTOBER 1, 2016

Appendix G
SWIMMING POOLS, SPAS, AND HOT TUBS

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 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.

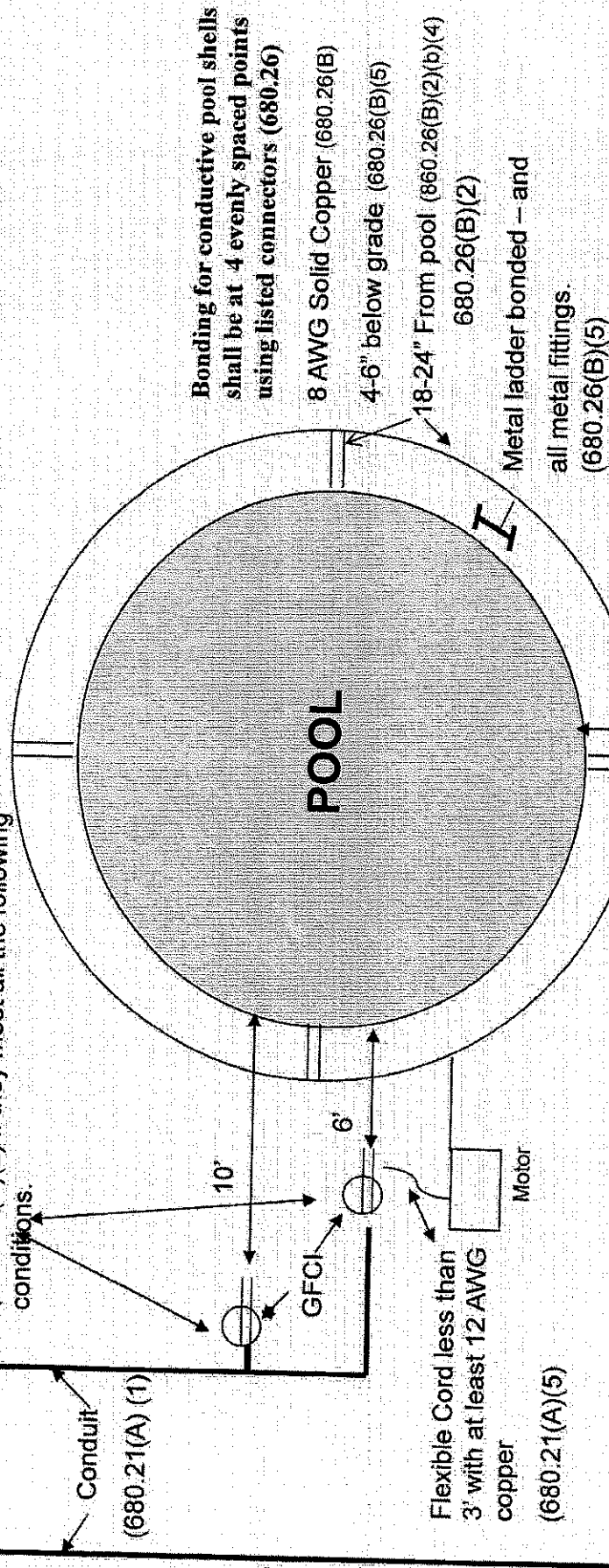
AG101.2.2 Pools located where floodways have not been designated. Where pools are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

Above Ground Pools (2014 NEC)

3/27/17

Pump receptacle: Single, locking, grounding type, GFCI, at least 10' or nor less than 6' from the inside of pool wall (680.22 (A)(2) if they meet all the following conditions.

The following may not be all-inclusive of your project. Always reference the latest adopted State Building Code.



125 volt 15- or 20-ampere receptacle on general purpose branch circuit, more than 6', and less than 20' from inside wall of pool. Must be GFCI protected. (680.22(A) (3))

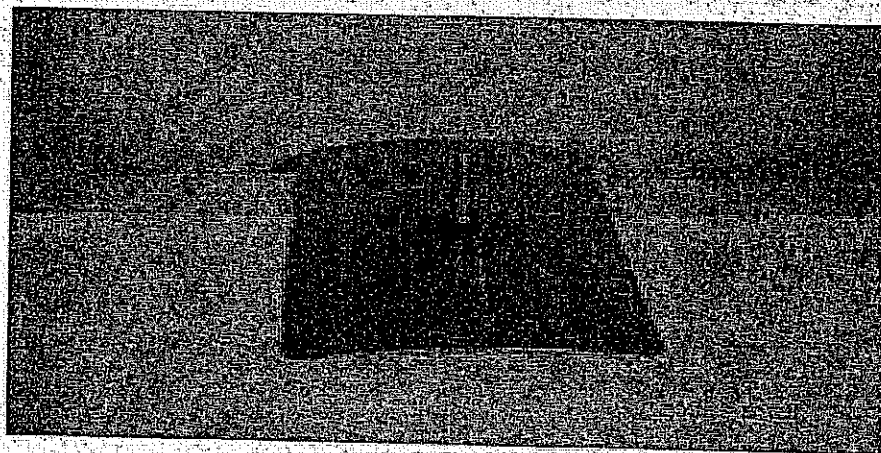
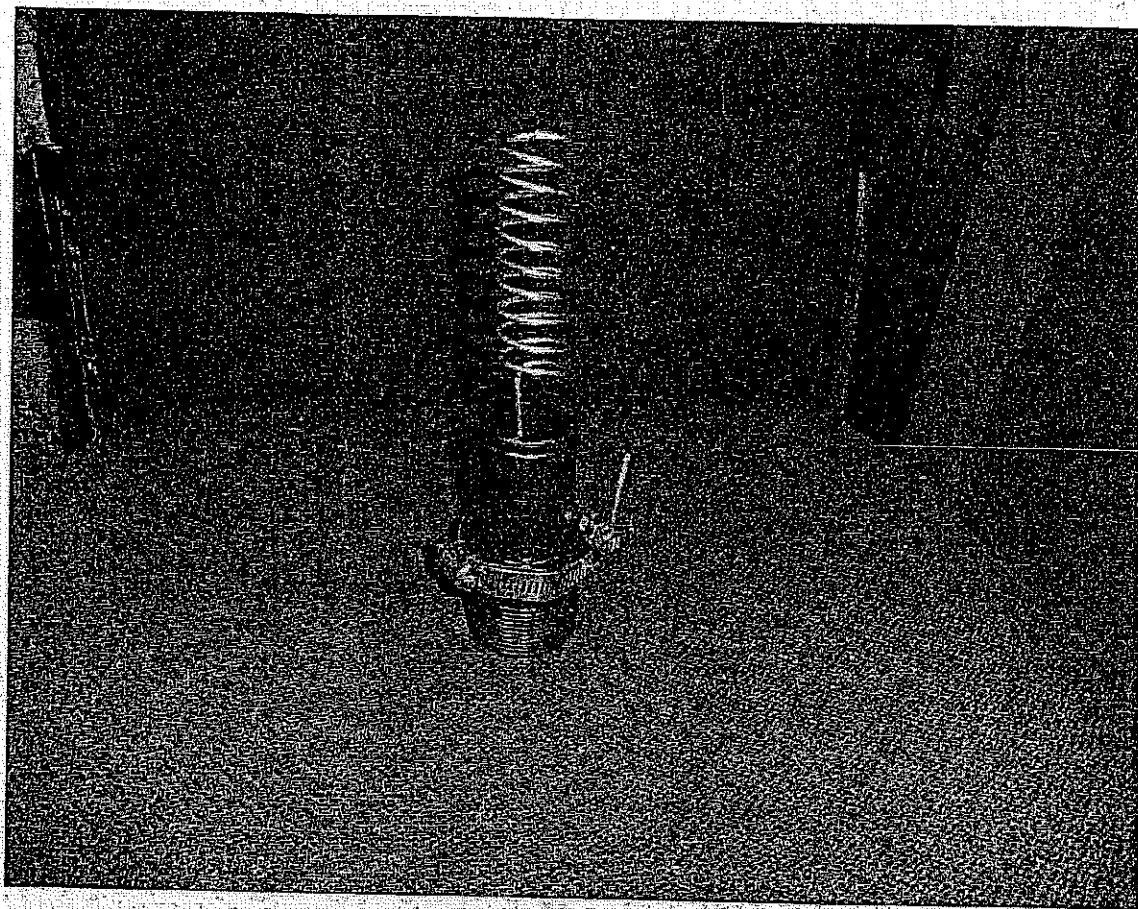


Equipotential Bonding

You'll bury a continuous loop of 8 AWG solid copper conductor around the pool ^{680.26(B)(2)(b)(1 & 2)}. The loop should be 4-6" deep ^{680.26(B)(2)(b)(5)}, and between 18-24" from the pool ^{680.26(B)(2)(b)(4)}. You'll then bond the frame of the pool to this loop, at 4 uniformly spaced points ^{680.26(B)(2)}. Next you'll bond the pool water to the loop, using a special bracket on the filter basket ^{680.26(C)}. Finally, the loop is bonded to the filter motor ^{680.26(B)(6)}.

Additional items to be bonded

- Metal ladder ^{680.26(B)(5)}
- Concrete pads within 3' of the pool ^{680.26(B)(2)}
 - Underwater Lighting ^{680.26(B)(4)}
 - Underwater Audio Equipment ^{680.27(A)}
 - Electrically Operated Pool Covers ^{680.27(B)}
 - Deck Area Heating ^{680.27(C)}



Water motion pool alarm

8/2001

1/2006

Pool

Pool ladder

Less than 4"

45" minimum

3" min. from top of gate to the release mechanism located on the pool side.

1/2" MAXIMUM opening within 18" of the release mechanism

1/2" maximum

48" minimum

Less than 4"

2" maximum

Chain Link Fence
- 2-1/4" maximum square
- 1-3/4" maximum square opening with slats

Lattice Fence
- 1-3/4" maximum opening

Self-closing, self-latching gate that swings one way - away from the pool.

ISOMETRIC VIEW

Water motion pool alarm

8/2001
1/2006

Pool

Pool ladder

Pool wall

Less than 4"

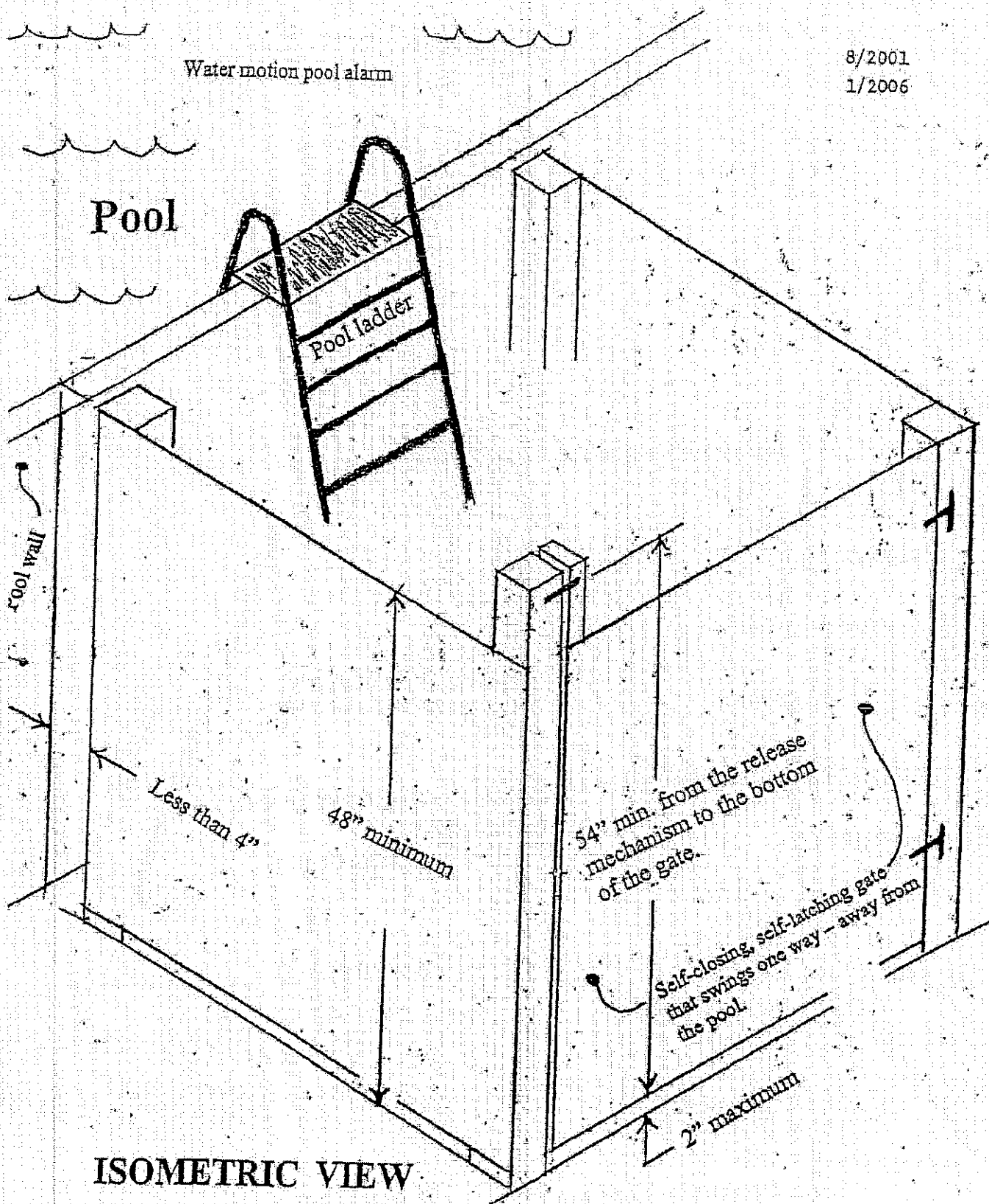
48" minimum

54" min. from the release
mechanism to the bottom
of the gate.

Self-closing, self-latching gate
that swings one way - away from
the pool

2" maximum

ISOMETRIC VIEW

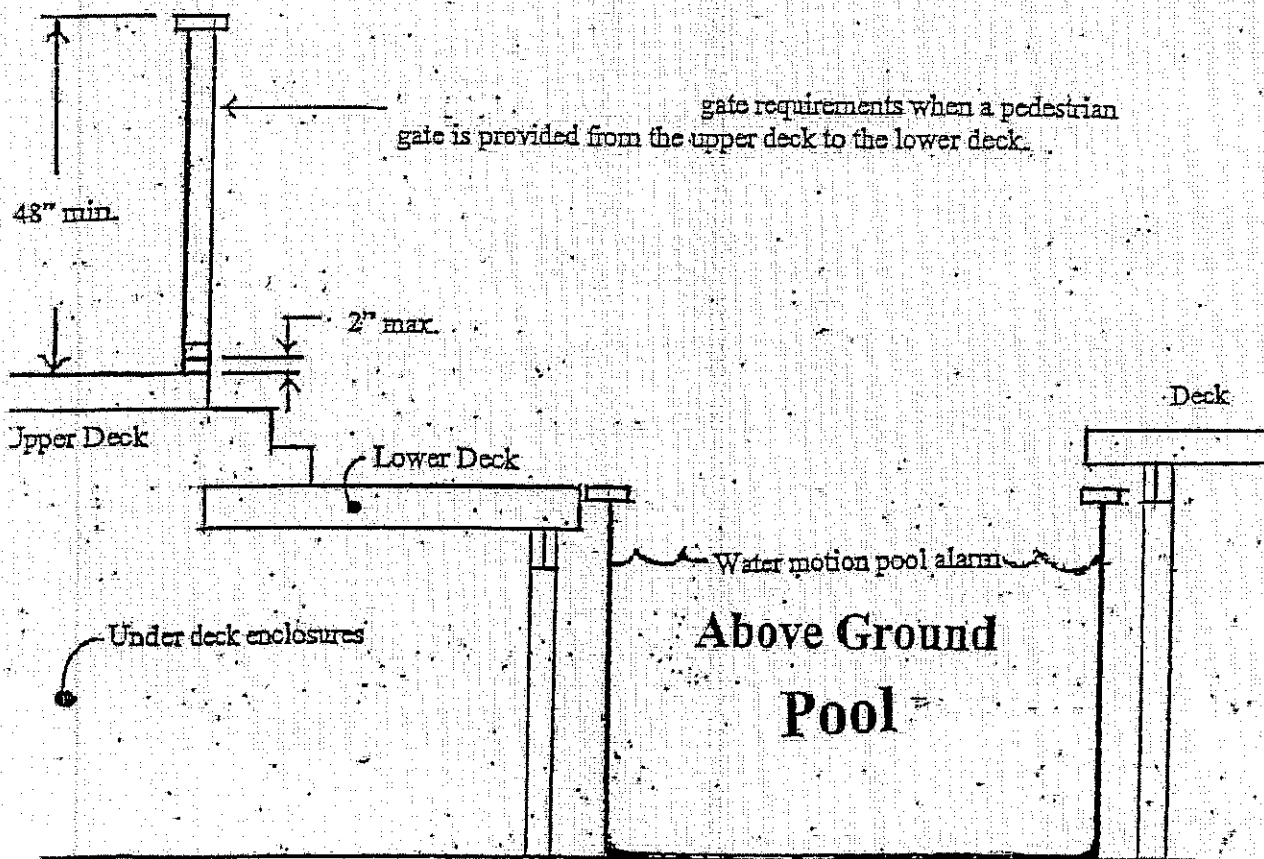


1/2006



8/2001
1/2006

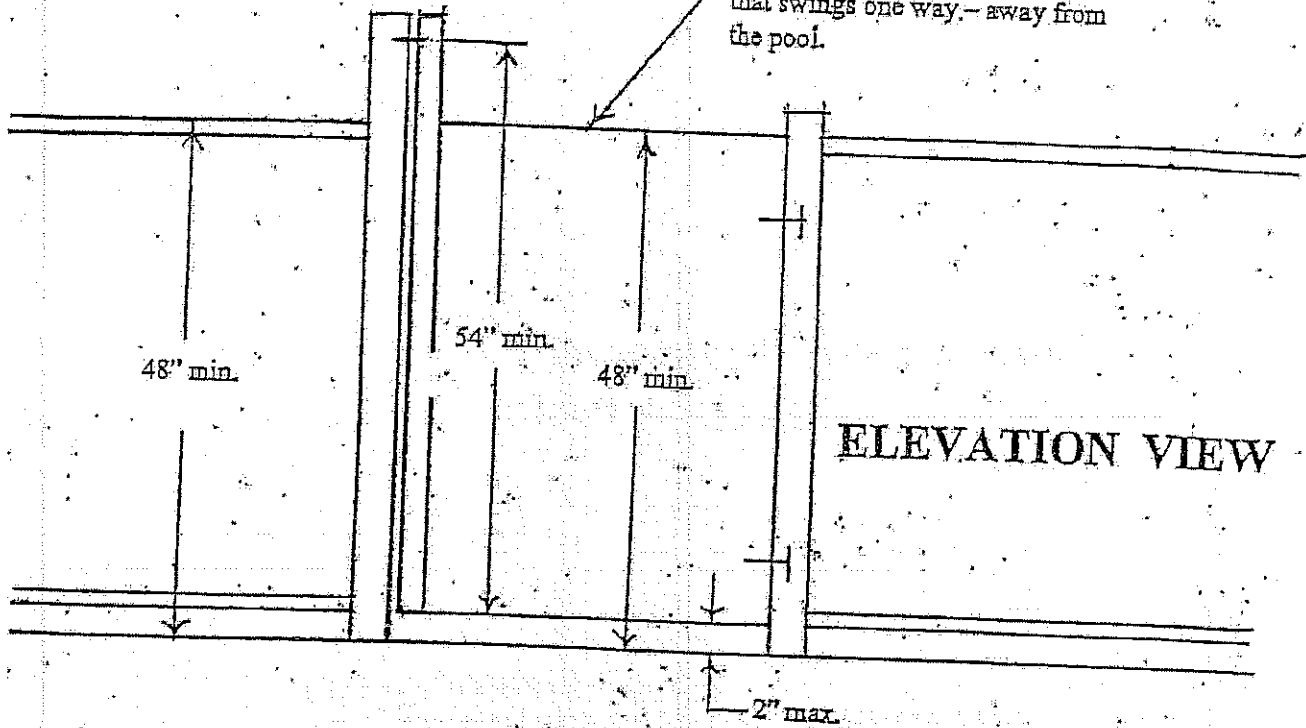
Cross-section – Multi-level Decks & Pool



8/2001

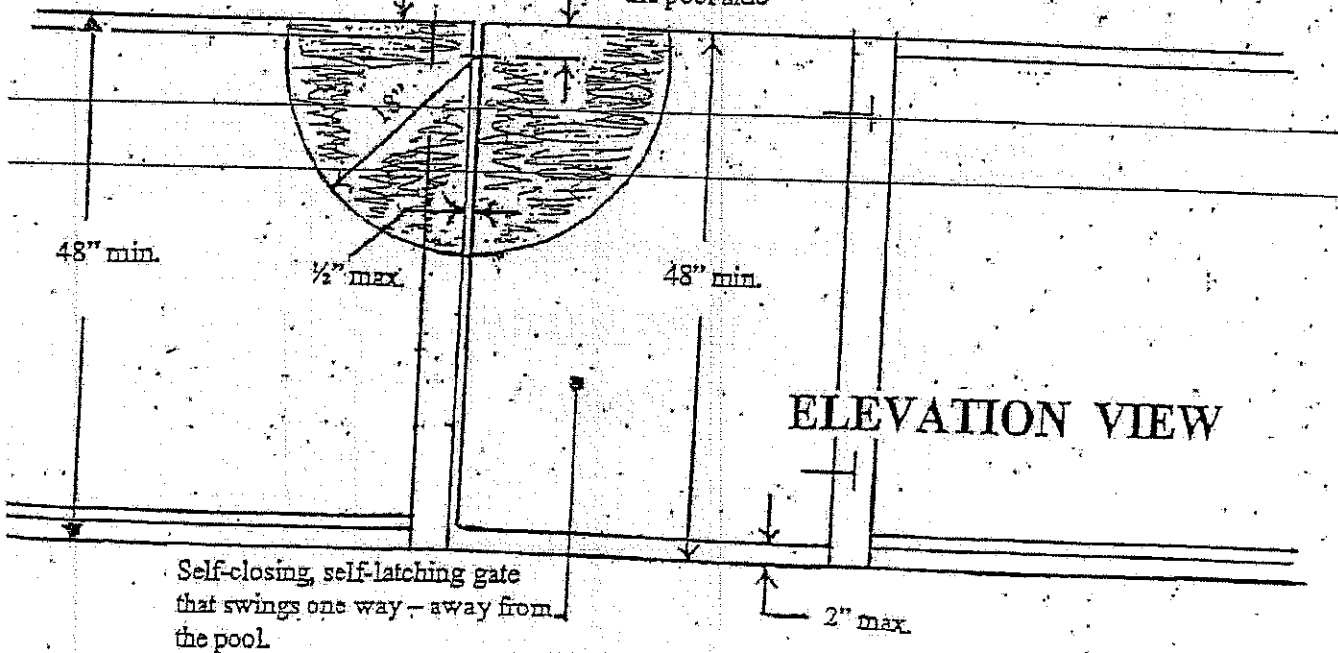
1/2006

Self-closing, self-latching gate
that swings one way - away from
the pool.

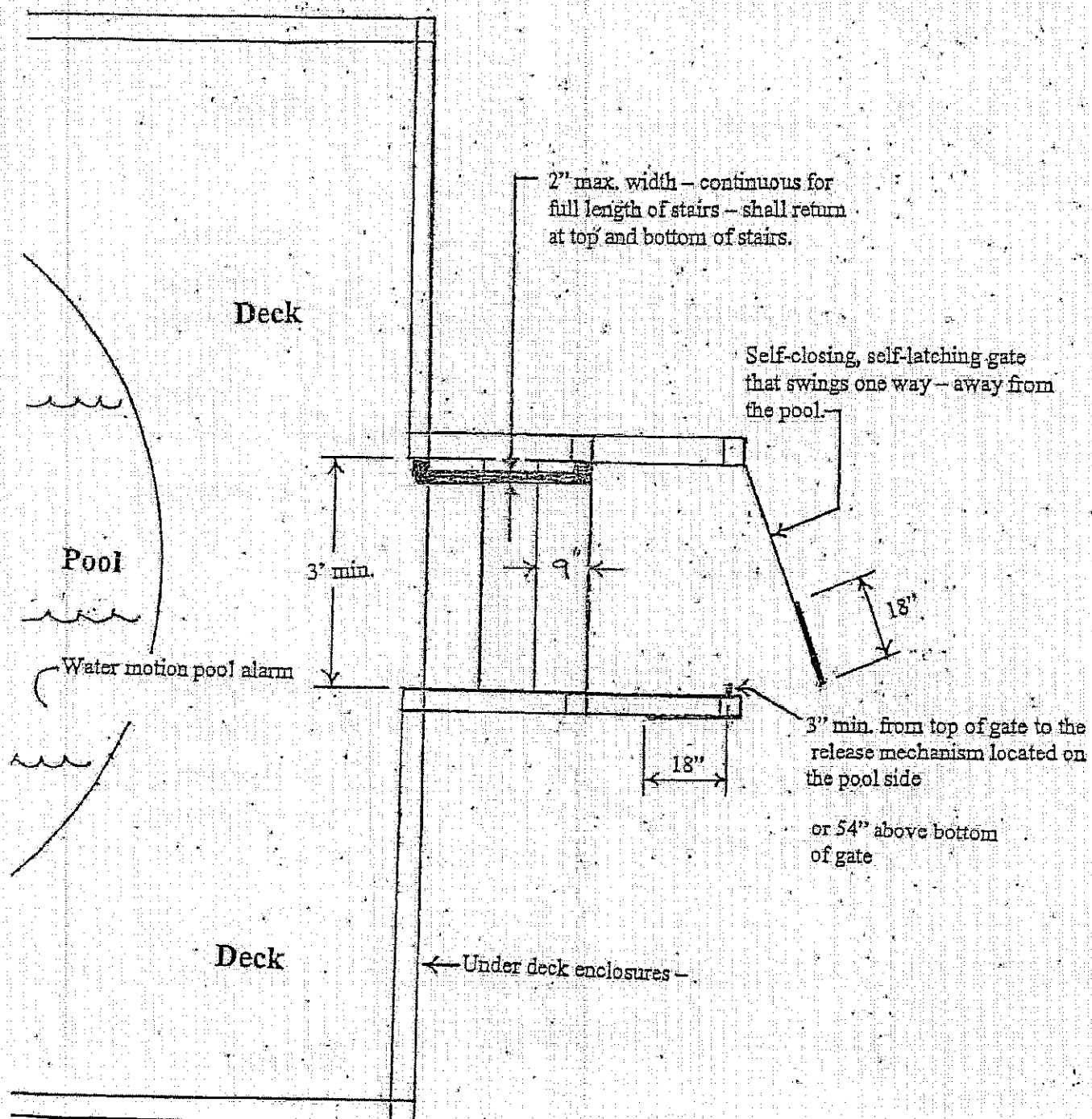


$\frac{1}{2}$ " max. opening within 18" of
the release mechanism

3" min. from top of gate to the
release mechanism located on
the pool side

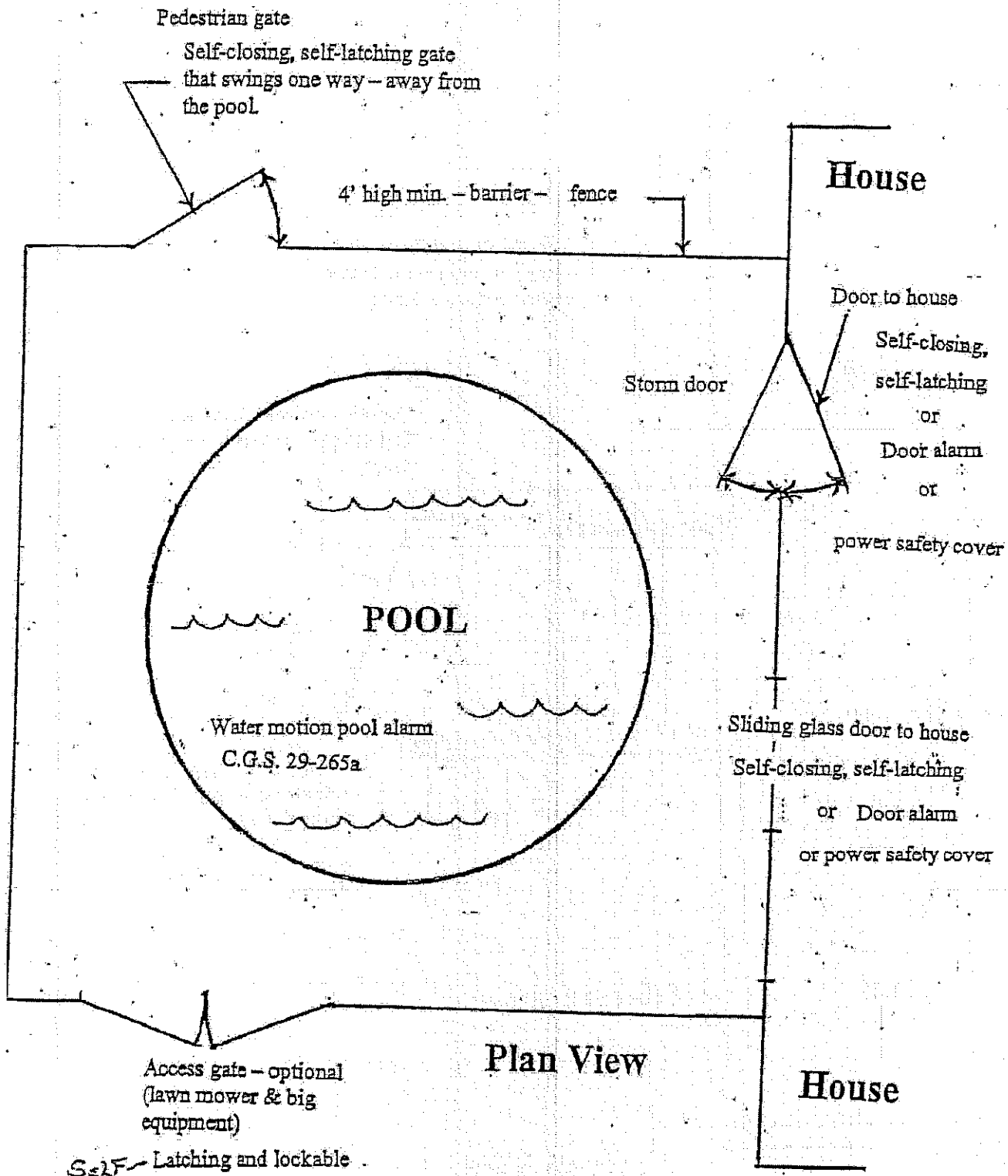


8/2001
1/2006

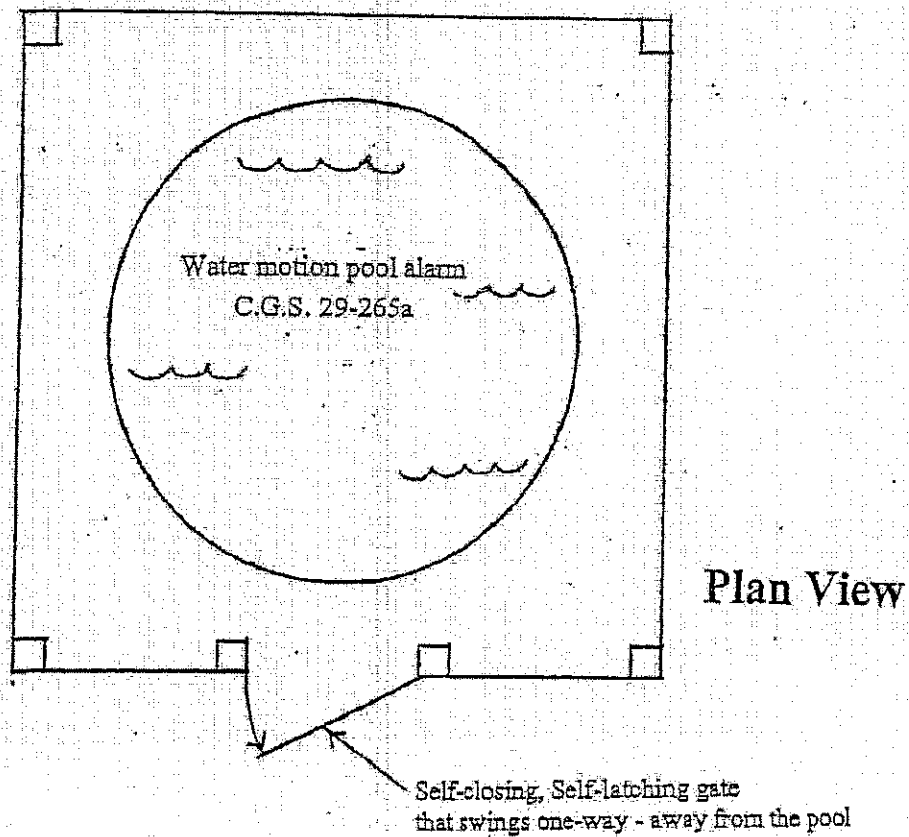
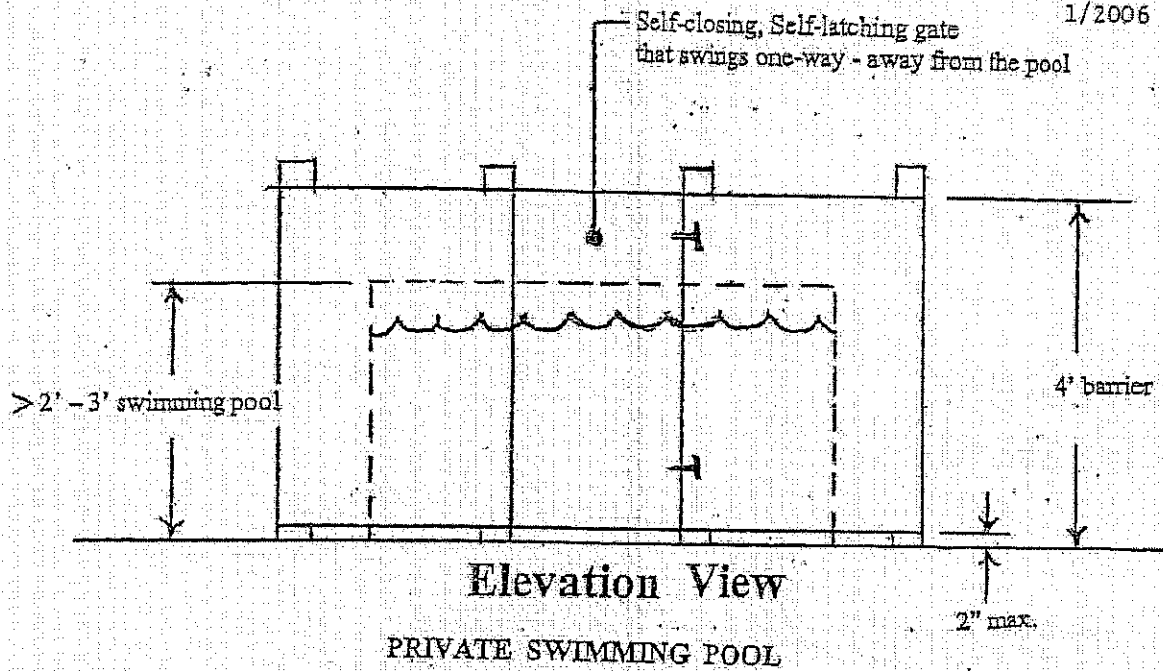


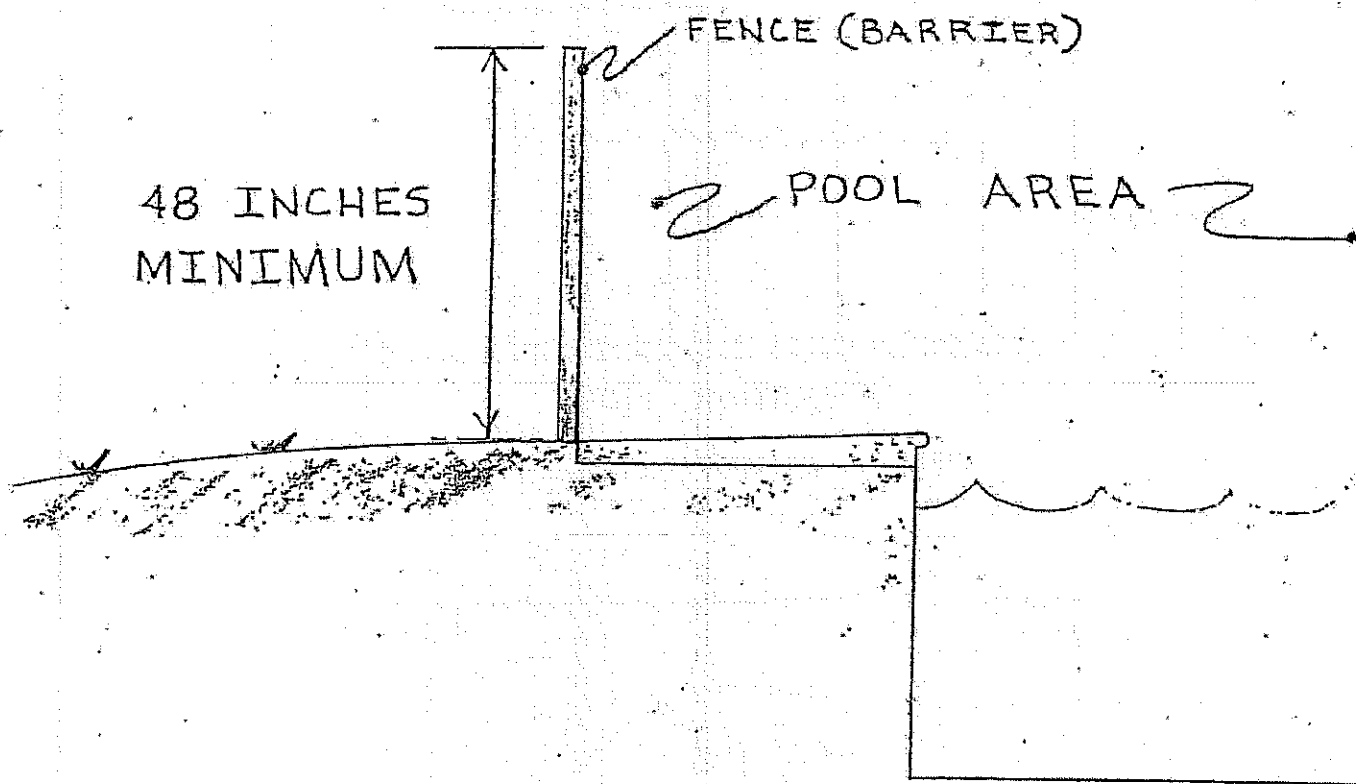
Plan View

8/2001
1/2006

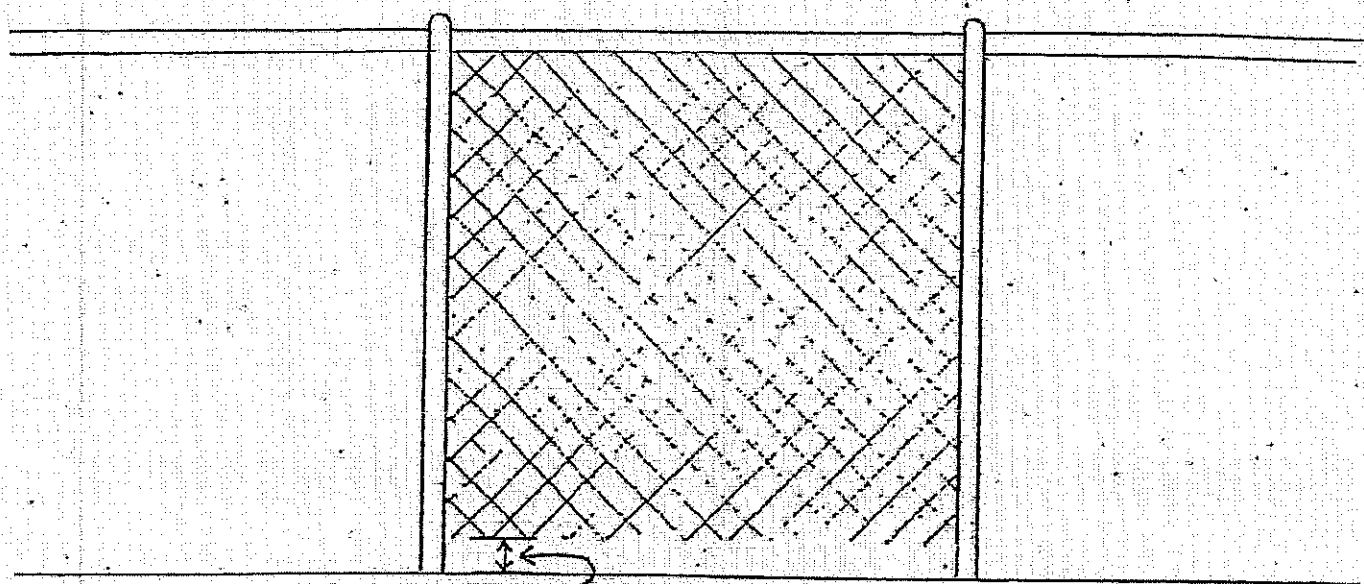


8/2001
1/2006





CROSS SECTION

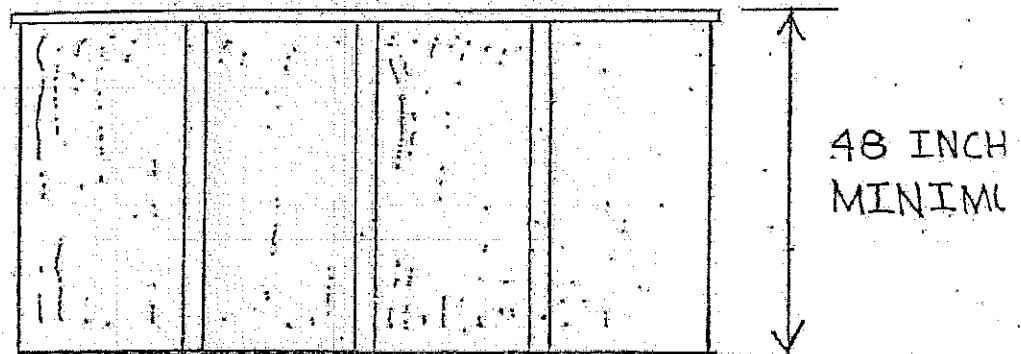


2 INCHES MAXIMUM

OUTSIDE OF THE POOL ENCLOSURE

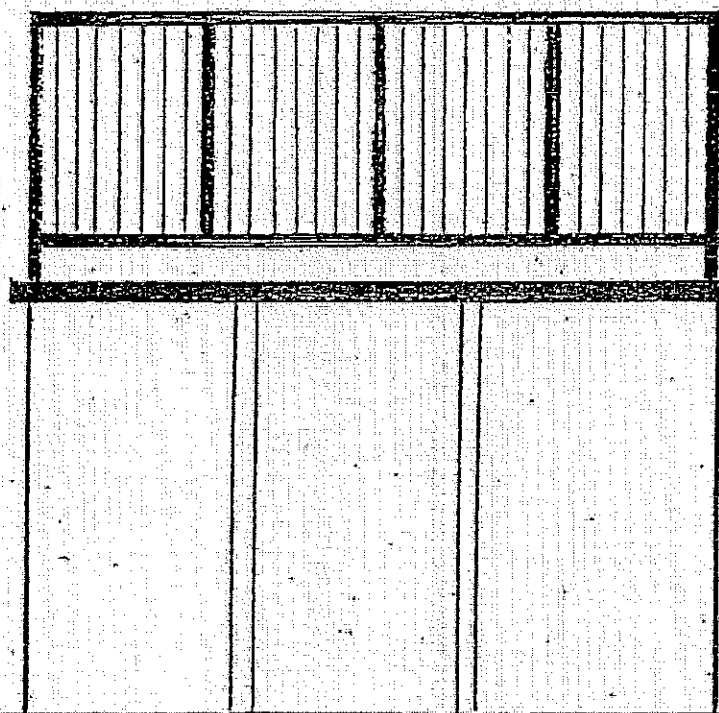
ELEVATION

THE ABOVE GROUND SWIMMING POOL STRUCTURE
COULD BE THE BARRIER IF:



ABOVE GROUND POOL

ELEVATION



ABOVE GROUND POOL

ELEVATION

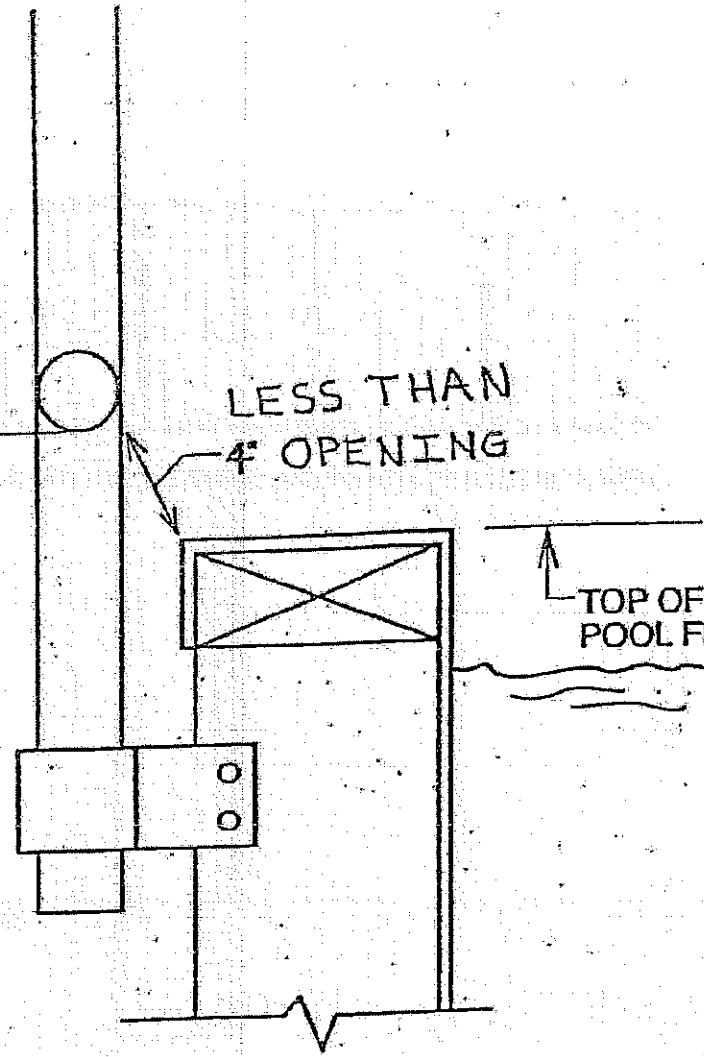
BOTTOM OF
BARRIER

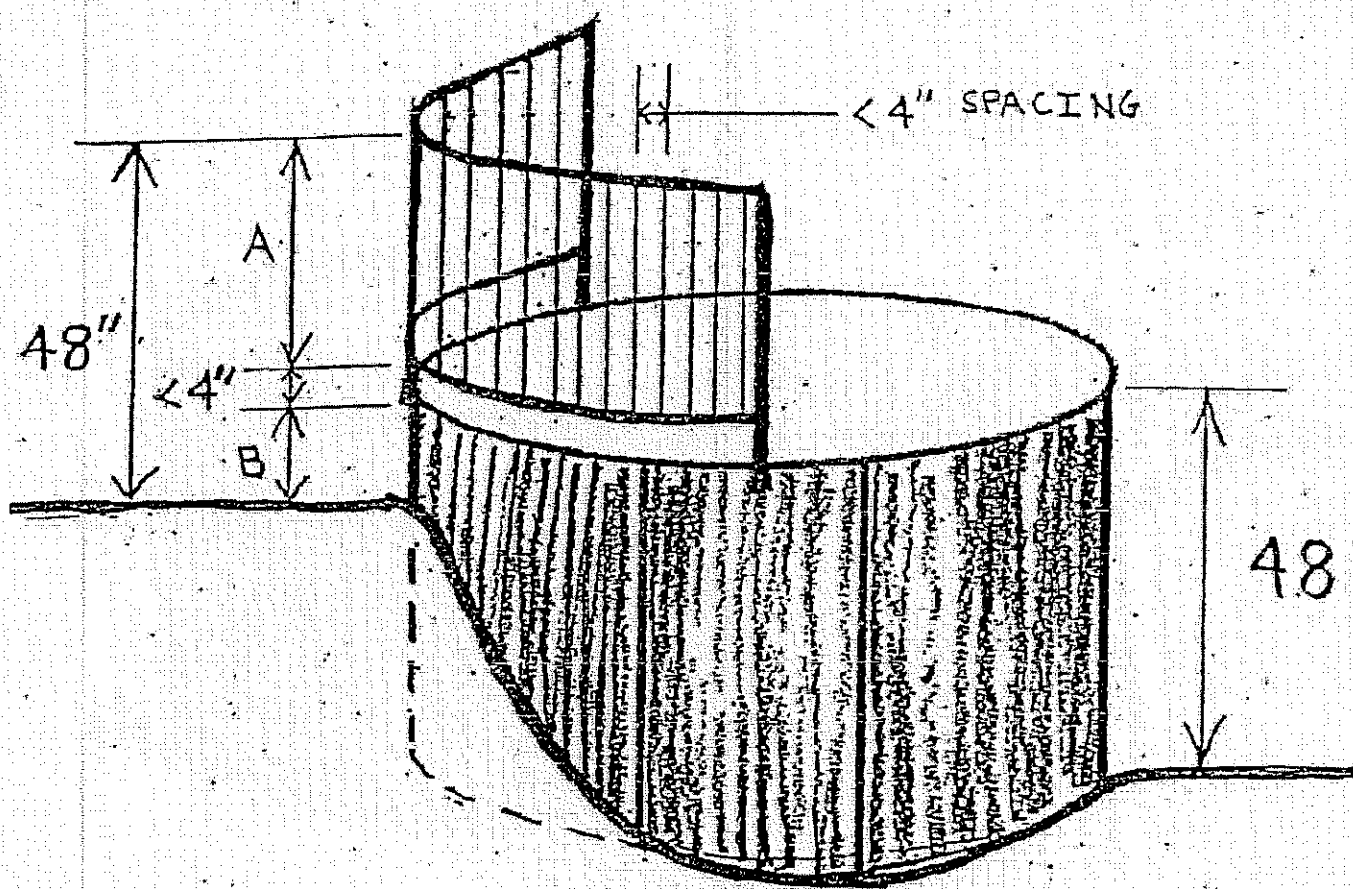
LESS THAN
4" OPENING

TOP OF
POOL FRAME

BARRIER MOUNTED ON THE POOL STRUCTURE

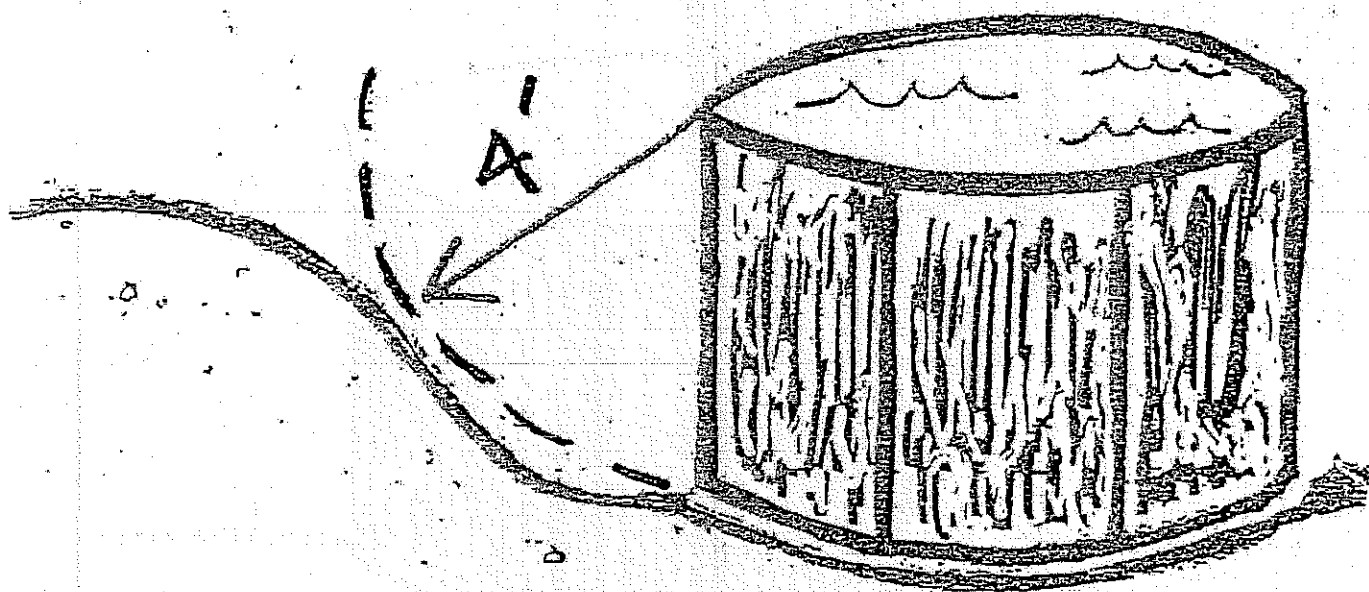
CROSS SECTION





ELEVATION

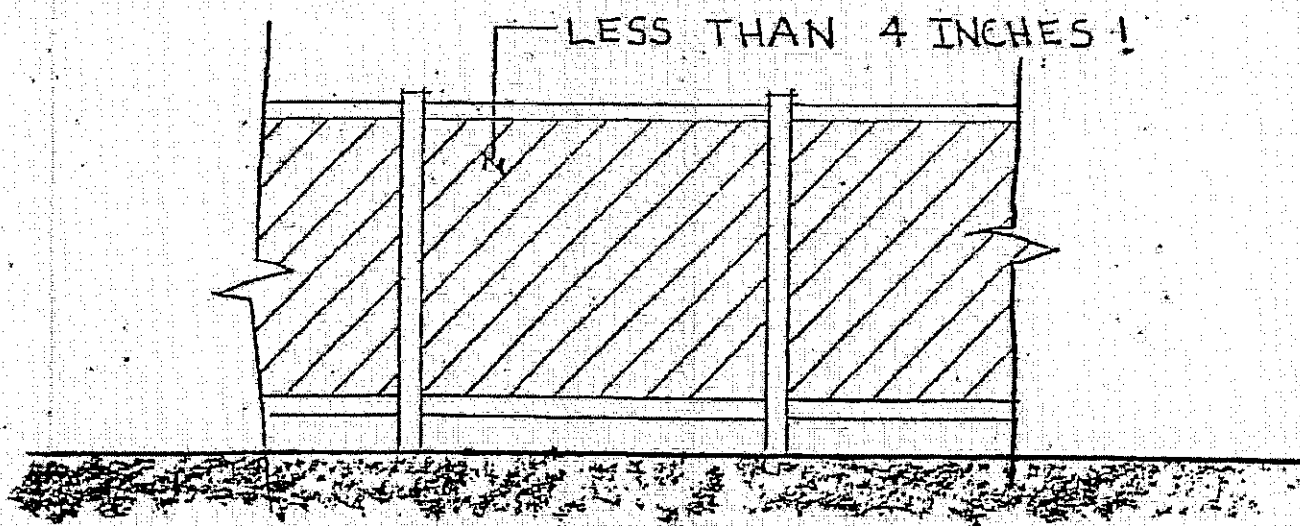
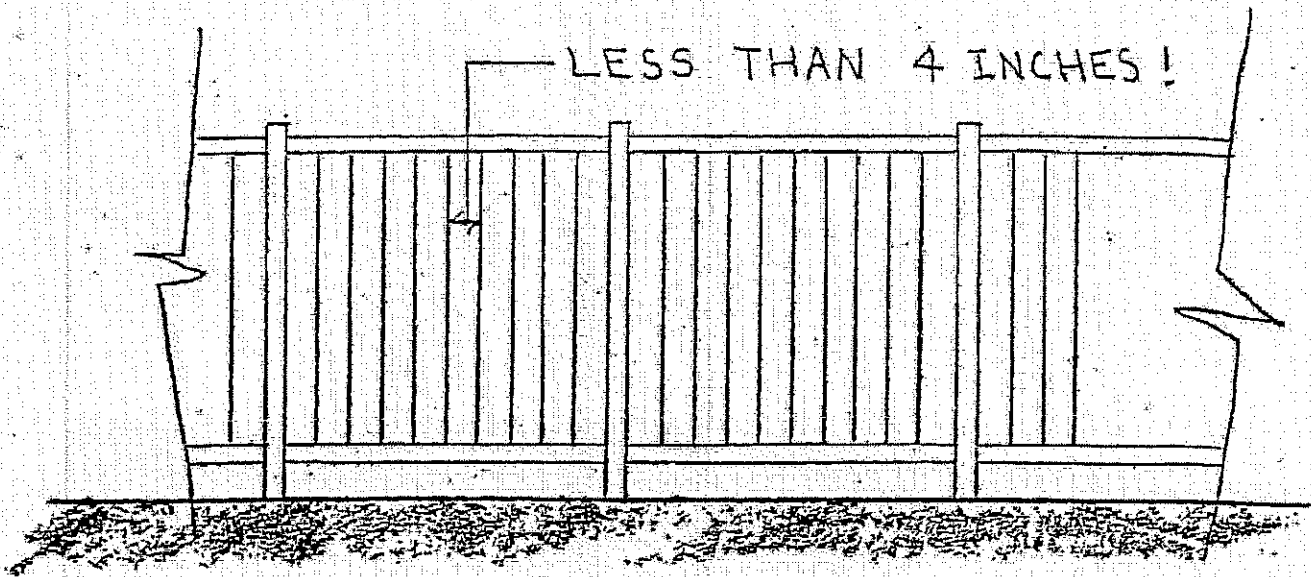
NOT AN ACCEPTABLE SWIMMING POOL BARRIER. VERTICAL AND HORIZONTAL SPACING REQUIREMENTS ARE NOT IN COMPLIANCE. ONE POSSIBLE SOLUTION IS TO HAVE THE BARRIER ON TOP OF THE POOL A MINIMUM OF 48" WITH PROPER VERTICAL SPACING.



ELEVATION

ACCEPTABLE SWIMMING POOL BARRIER. PROVIDED THE ABOVE GROUND SWIMMING POOL IS A MINIMUM 4 FEET ABOVE THE GROUND. REMOVE ANY GROUND WITHIN A 4 FOOT RADIUS.

ADDED - 5/10/02



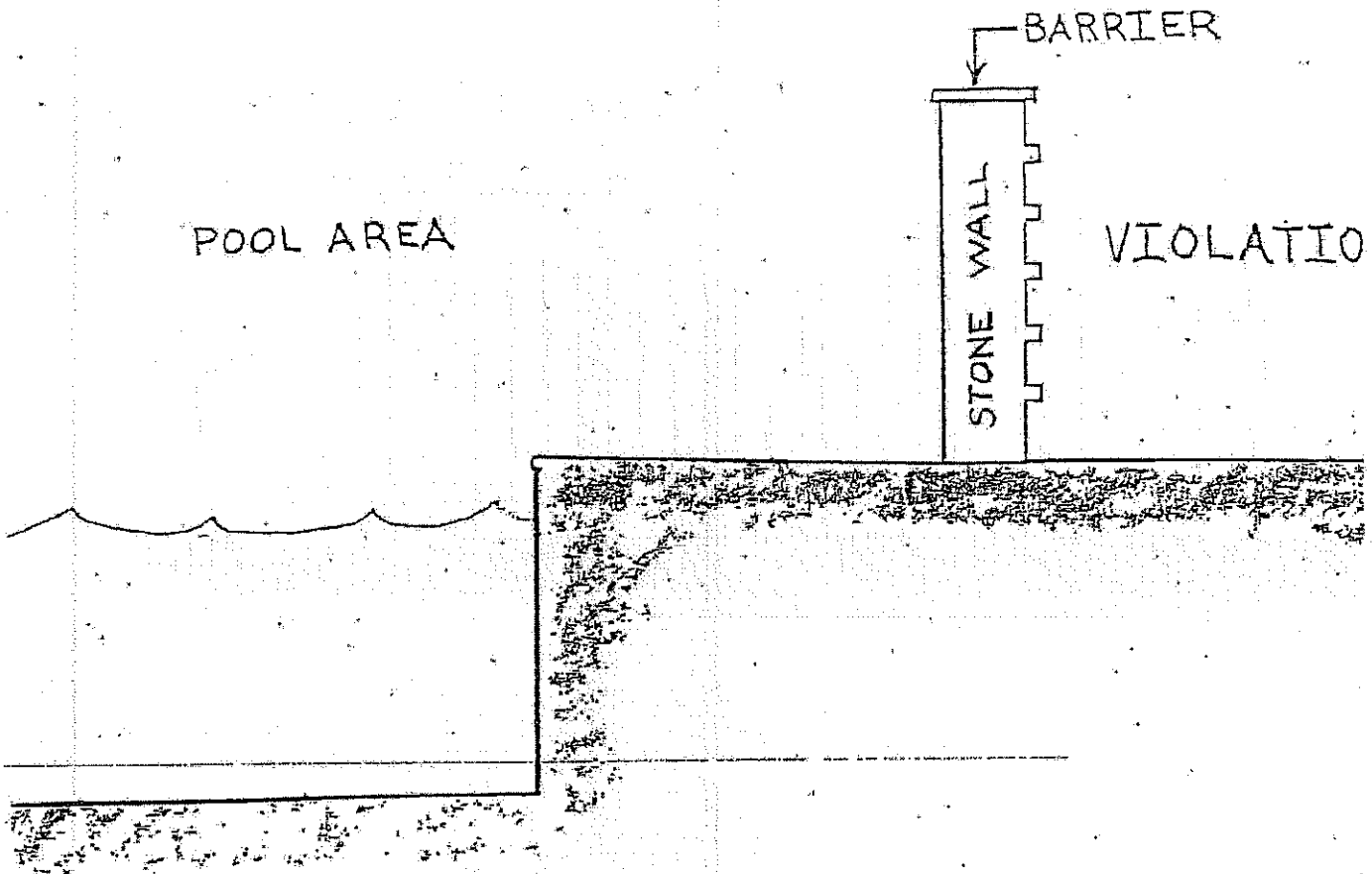
ELEVATION

BARRIER

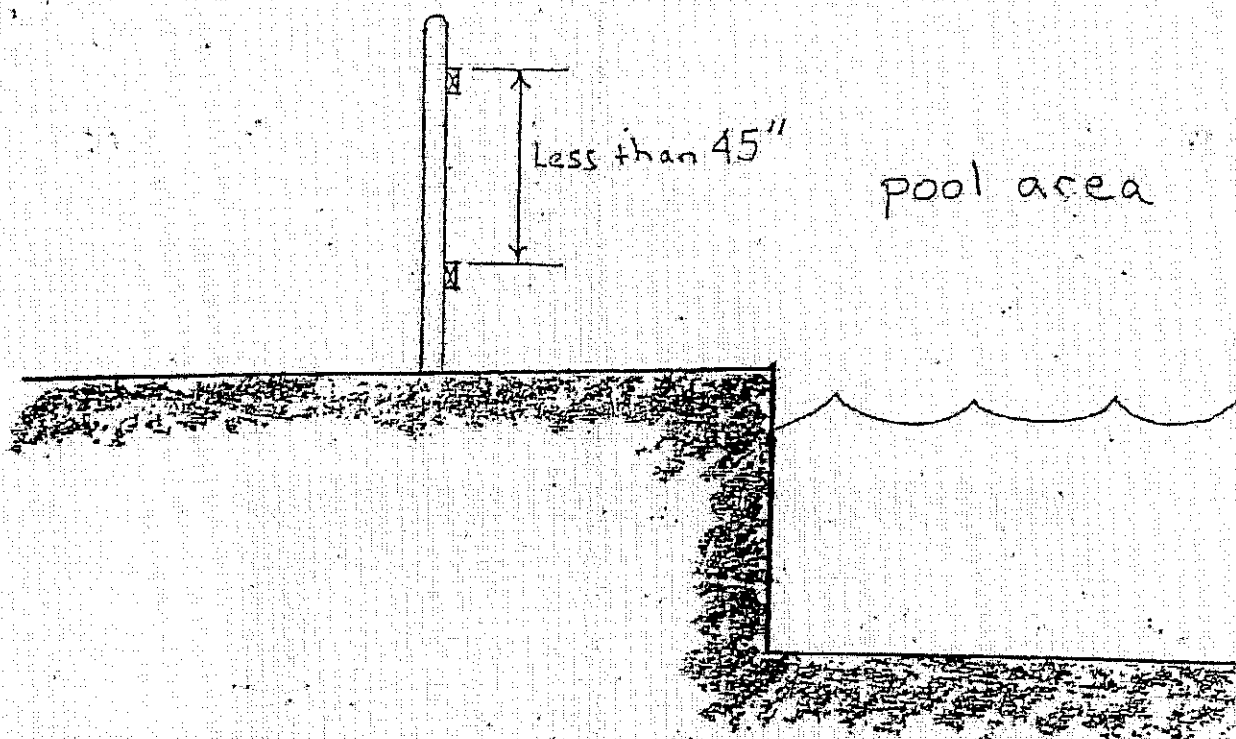
POOL AREA

STONE WALL

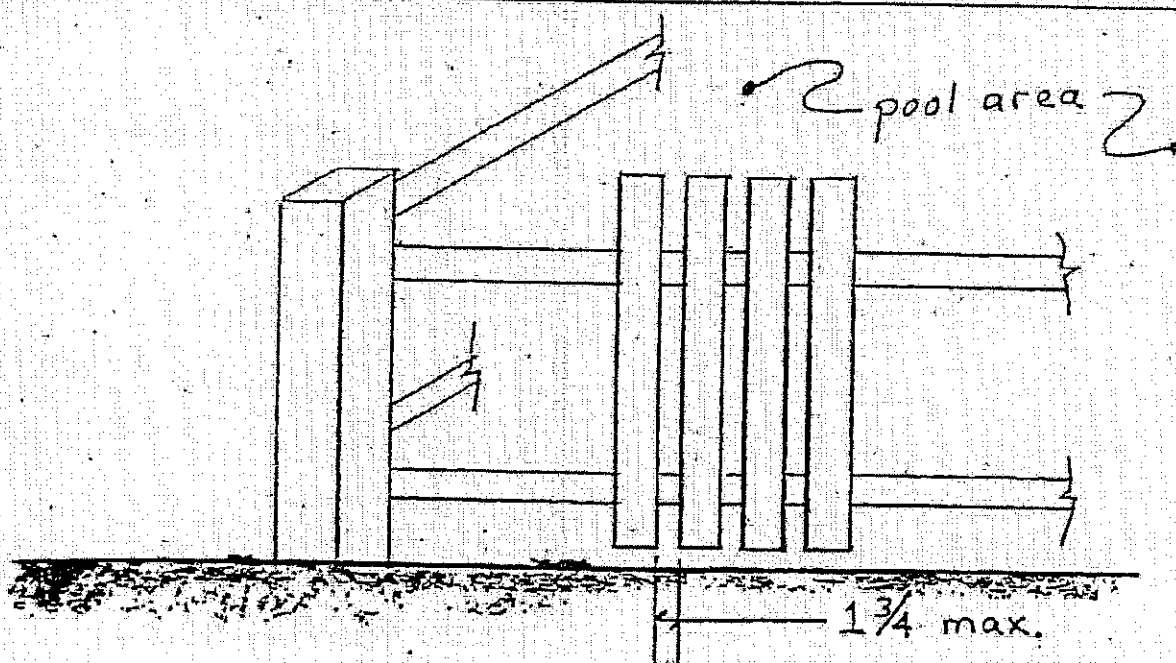
VIOLATION



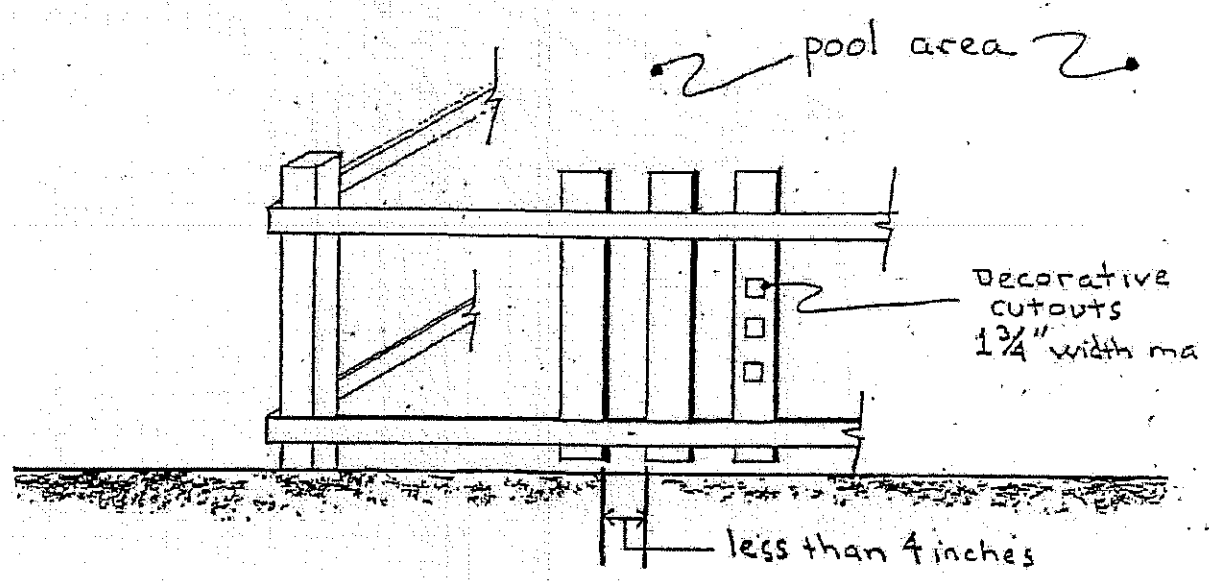
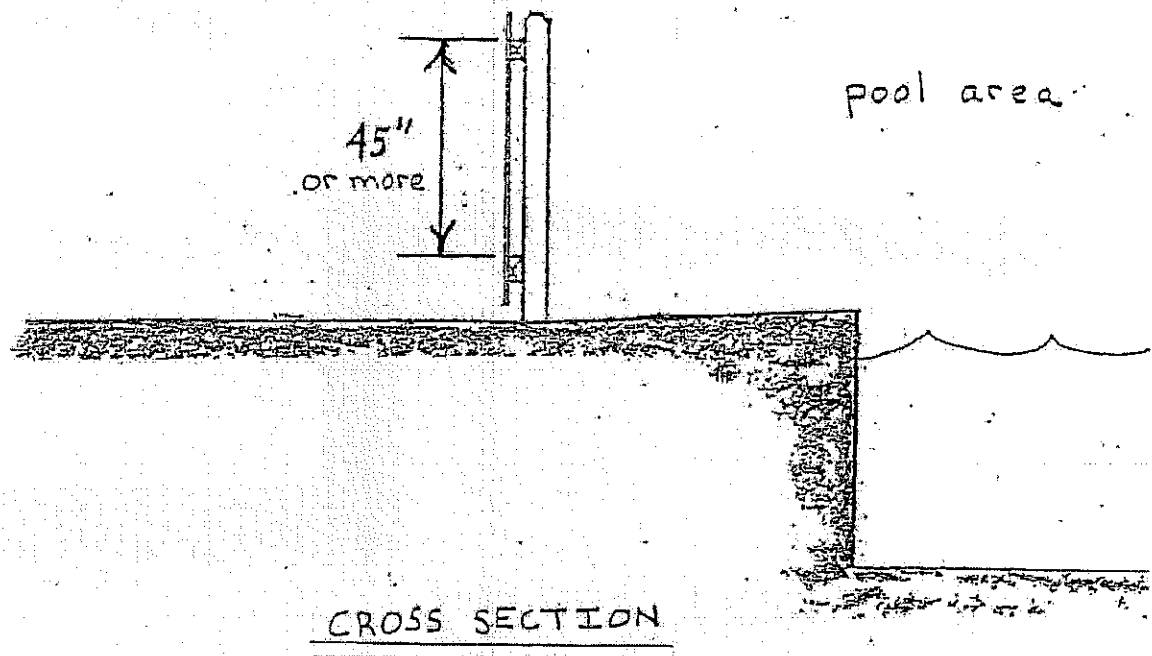
CROSS SECTION



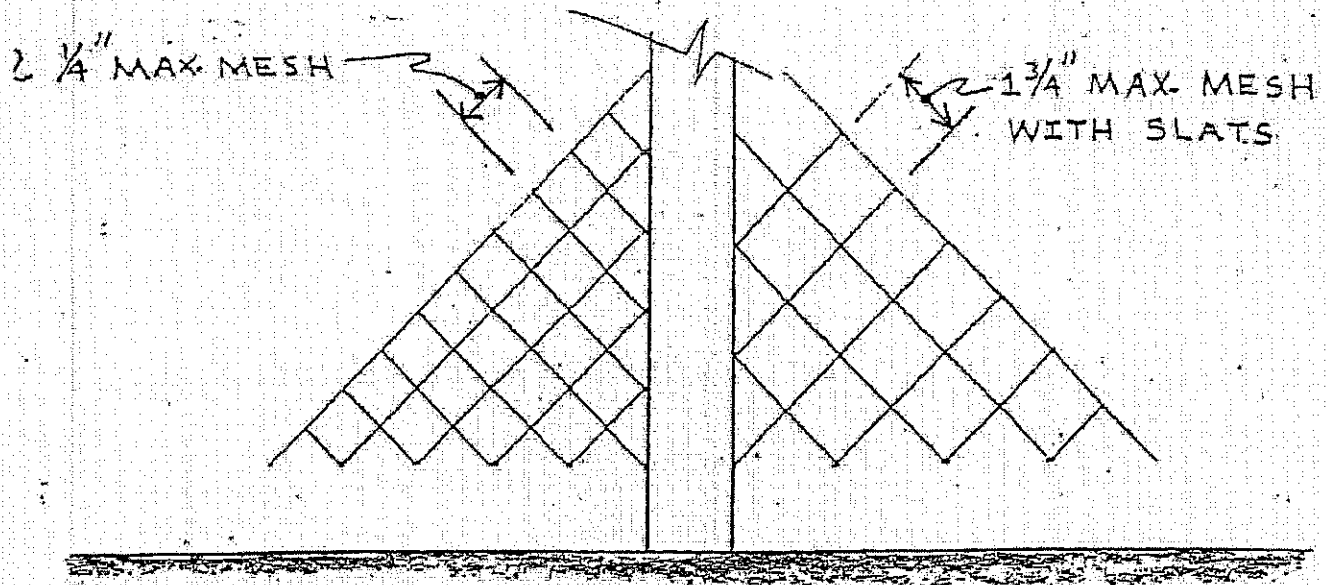
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ISOMETRIC

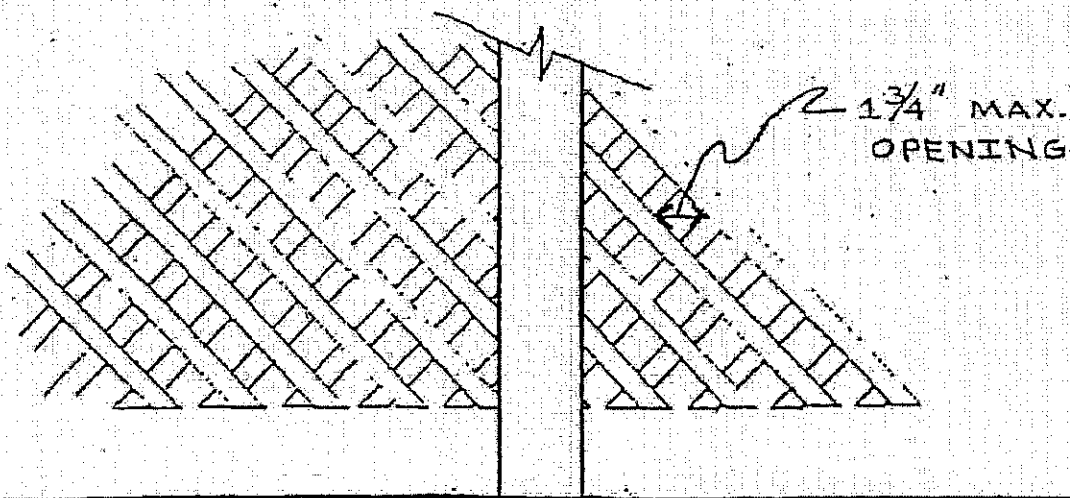


CHAIN LINK FENCE



ELEVATION

LATTICE FENCE



ELEVATION

ACCESS GATE OTHER
THAN PEDESTRIAN
ACCESS GATE

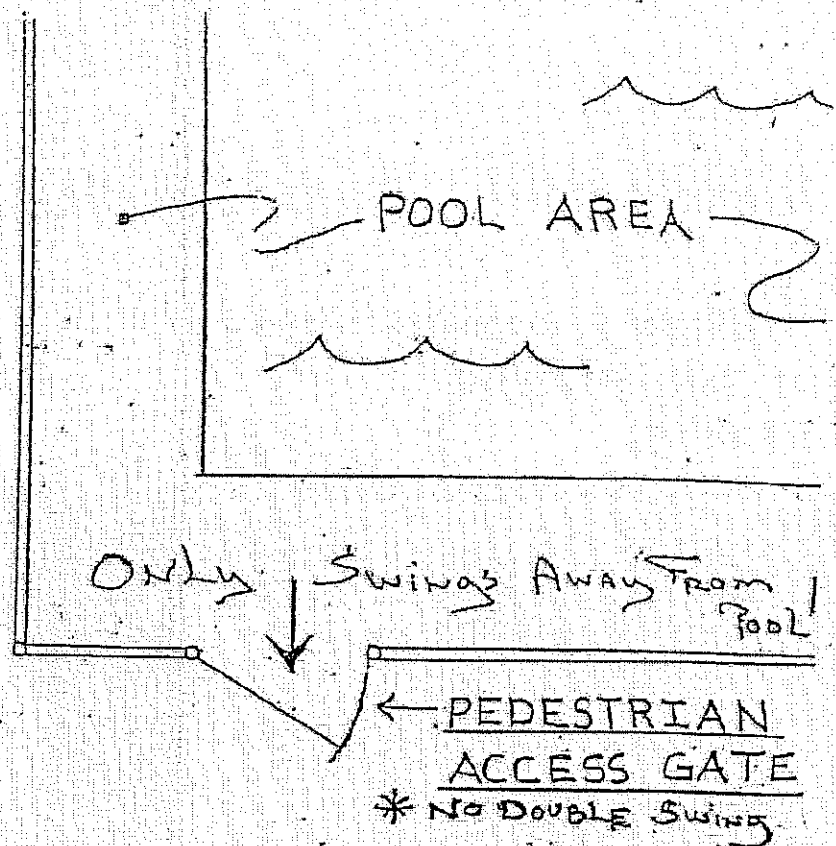


HOUSE

POOL AREA

SHALL: COMPLY
- EQUIPPED TO ACCOMODATE A
LOCKING DEVICE,
- SELF-LATCHING.

SITE PLAN



SHALL: COMPLY

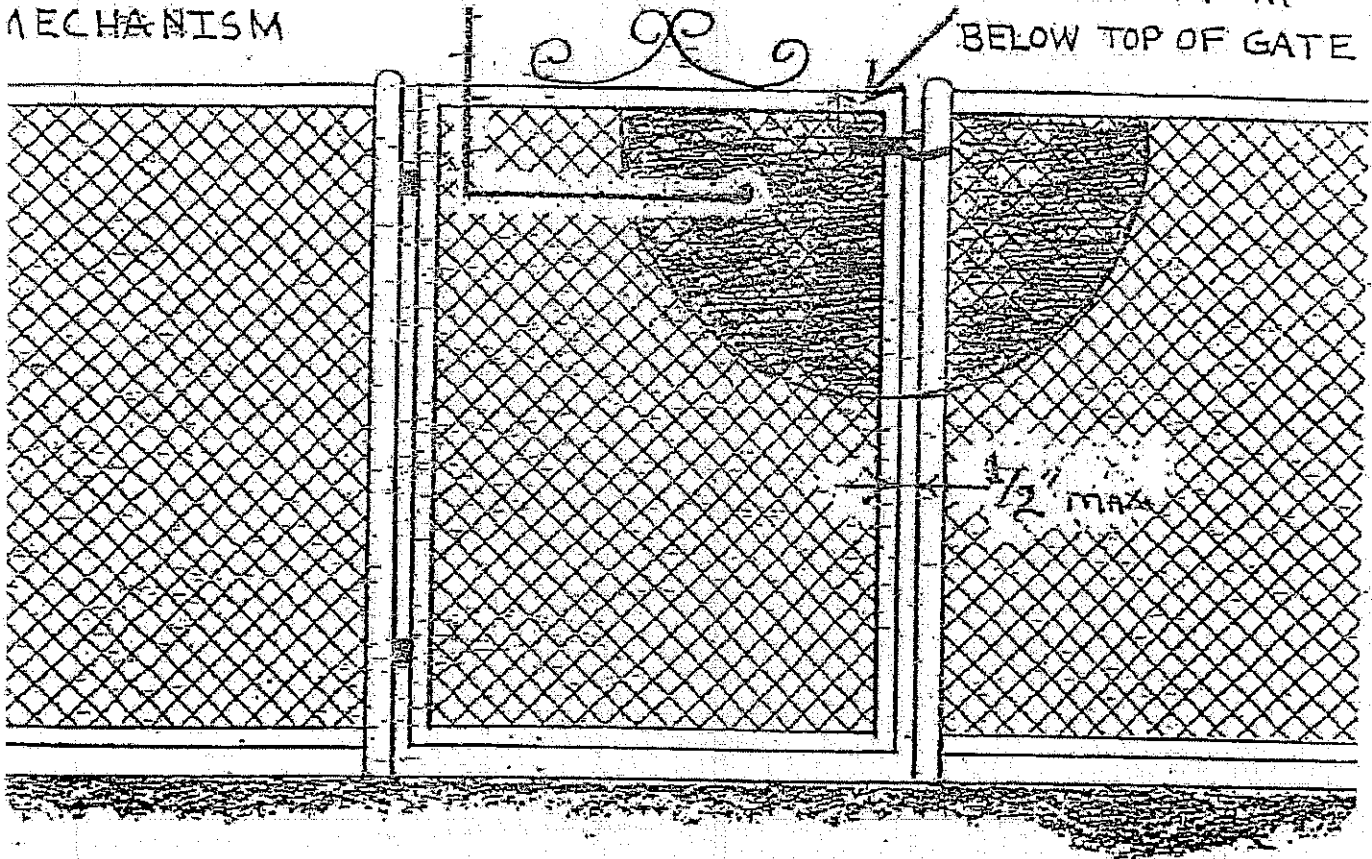
- EQUIPPED TO ACCOMODATE A LOCKING DEVICE,
- OPEN OUTWARDS AWAY FROM POOL,
- SELF-CLOSING,
- SELF-LATCHING.

SITE PLAN

ACCESS GATE OR PEDESTRIAN ACCESS GATE

1/2" MAXIMUM OPENING WITHIN
18" OF THE RELEASE
MECHANISM

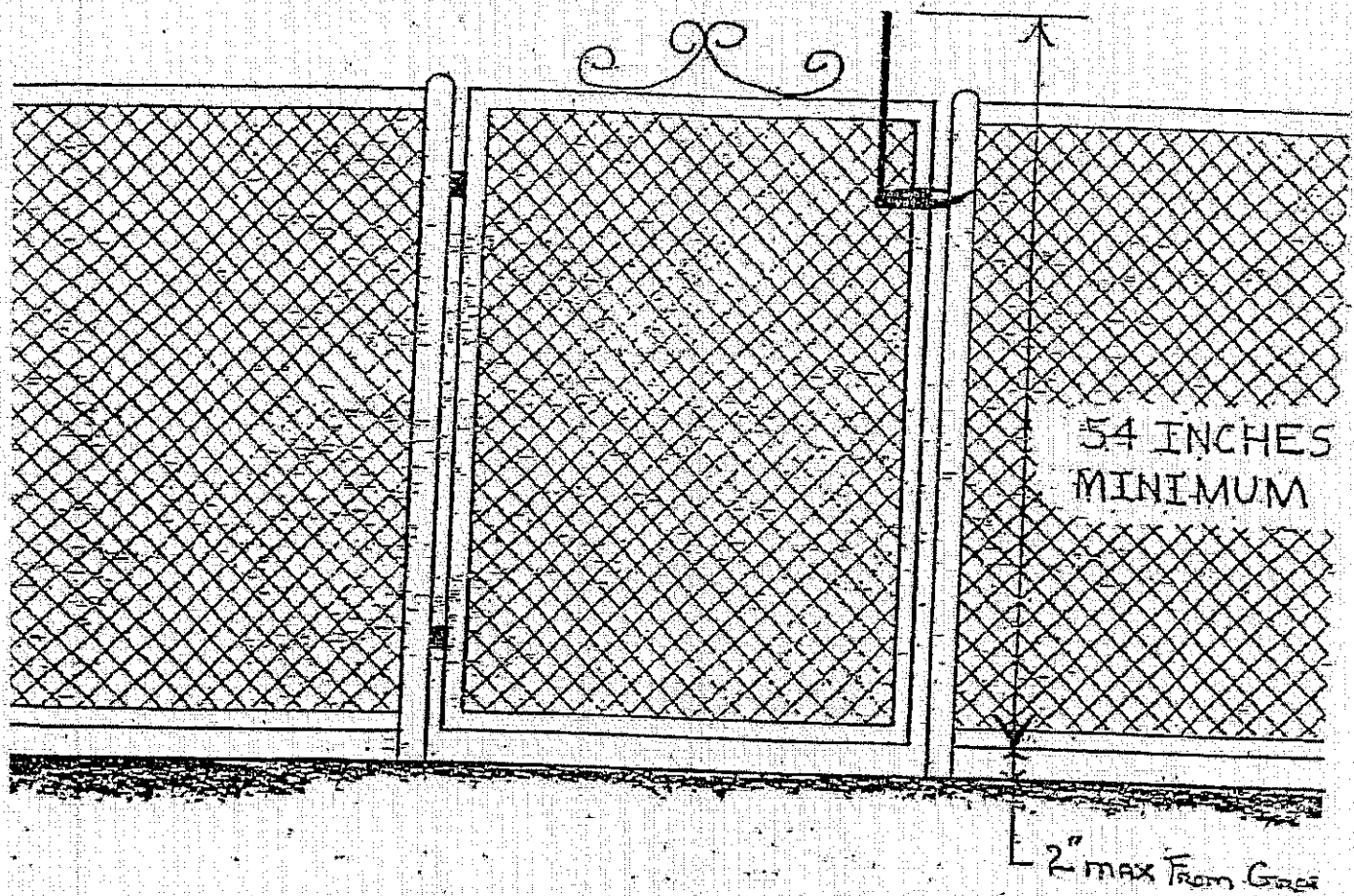
3" MINIMUM
BELOW TOP OF GATE



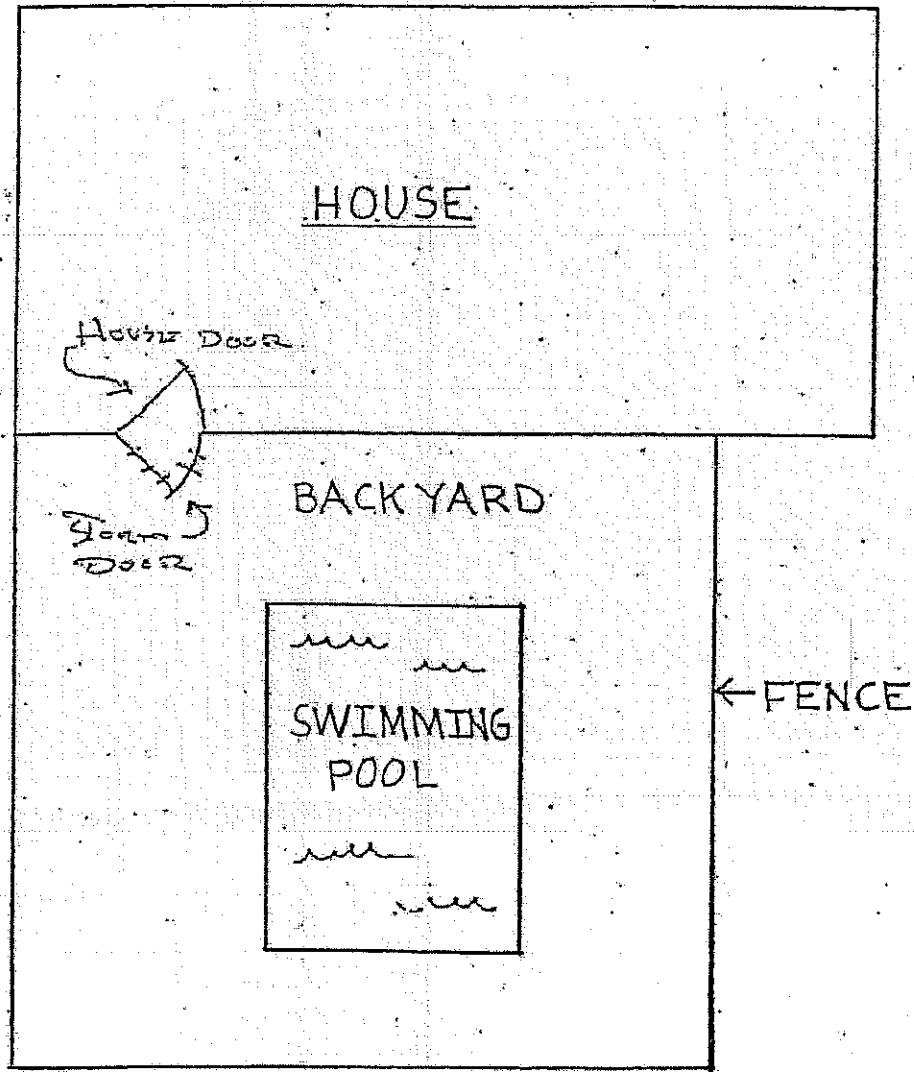
INSIDE POOL AREA ONLY

ELEVATION

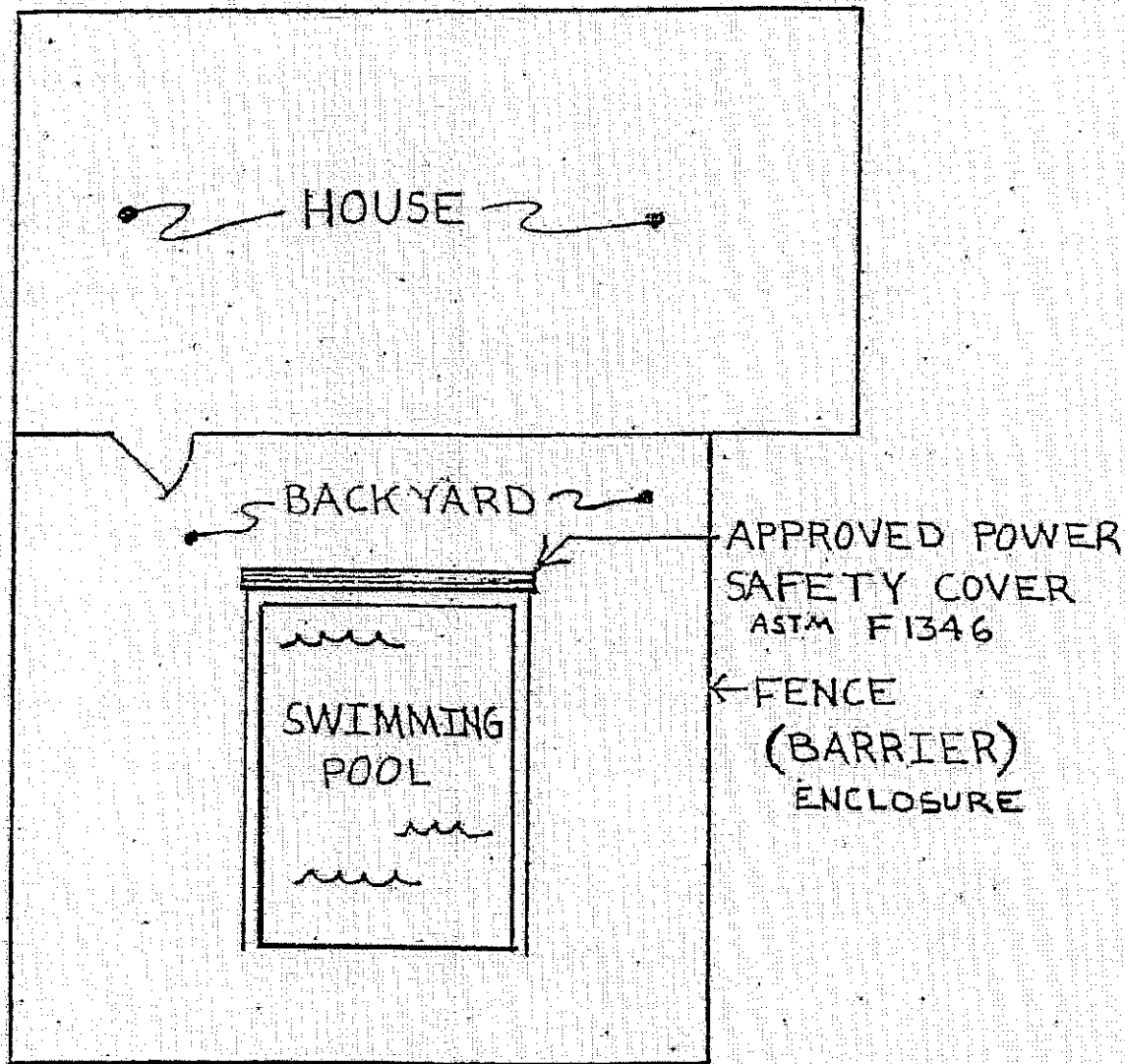
ACCESS GATE OR PEDESTRIAN ACCESS GATE



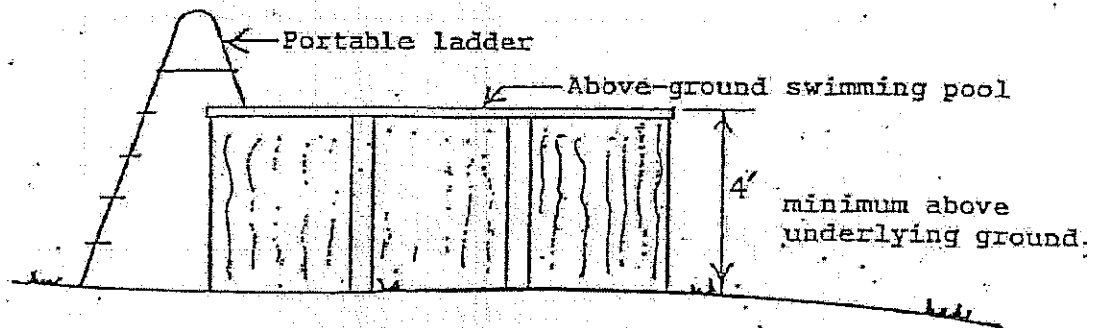
ELEVATION



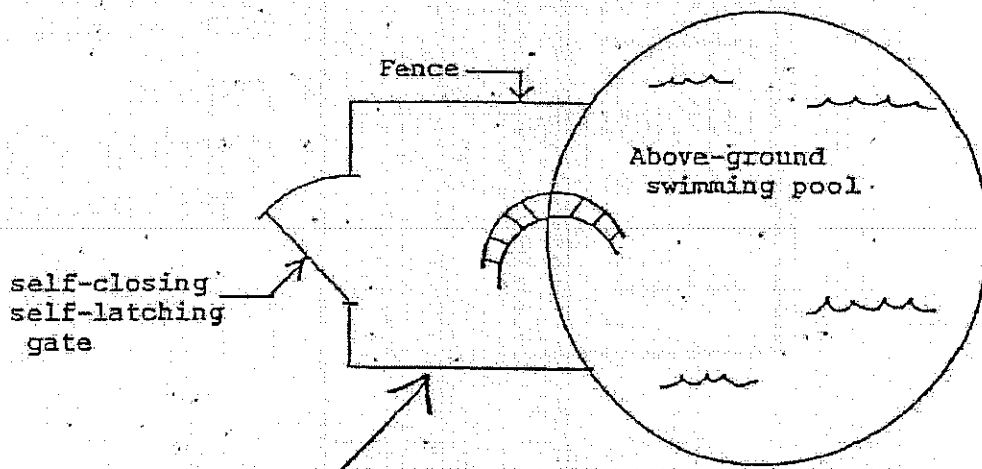
SITE PLAN



SITE PLAN



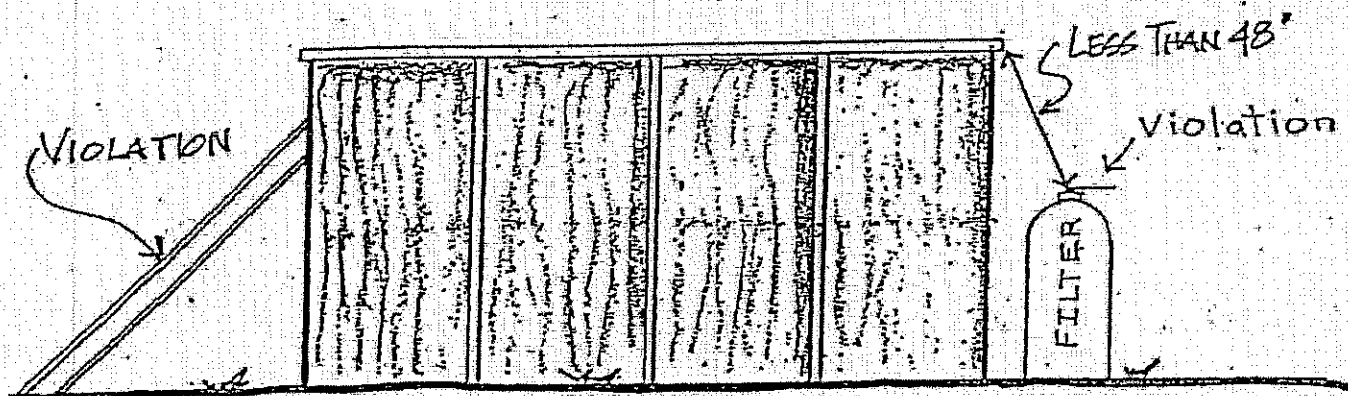
ELEVATION



SITE PLAN

"PROHIBITED LOCATIONS"

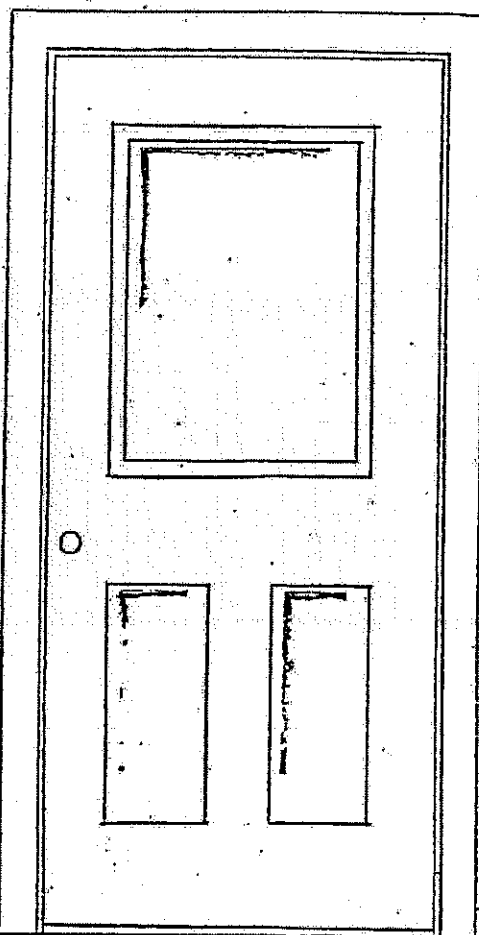
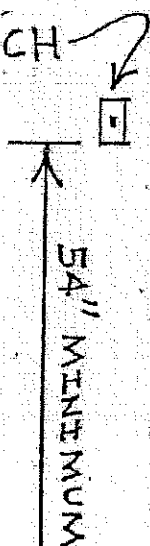
ABOVE GROUND SWIMMING POOL



ELEVATION

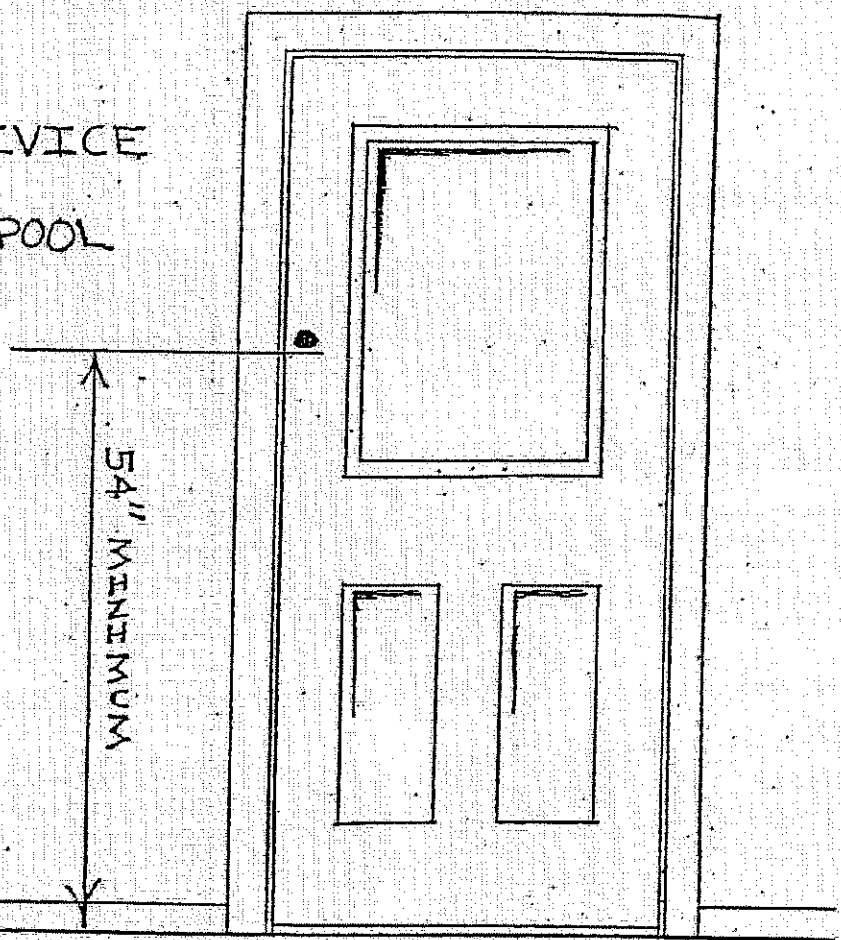
ADDED - 5/10/02

ALARM
DEACTIVATION SWITCH
OR TOUCHPAD



ELEVATION

SELF-CLOSING AND
SELF-LATCHING DEVICE
SWING AWAY FROM POOL



ELEVATION

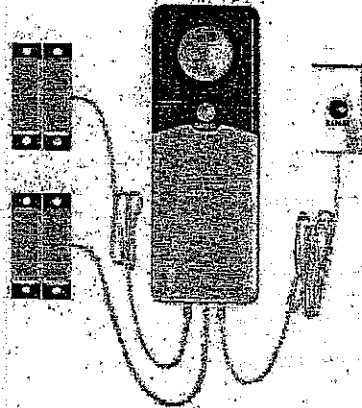
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TECHKO Wireless Ultra Slim Safe Pool Alarm

Model # S189D Internet # 204482850

★★★★★ Write the First Review

\$34.99 /each

PRODUCT SOLD: Online Only
Item cannot be shipped to the following state(s): GU,PR,VI

PRODUCT OVERVIEW

The Techko S189D Ultra Slim Pool Safety and Entry Alarm is an ETL listed and approved under UL 2017 standards. This child safety pool alarm is designed to sound a loud alert when a door or gate is opened. It is a simple solution for alerting you whenever your children and other pooler and leave the pool area. This unit includes two pairs of magnetic contact sensors and a remote bypass button, ideal for pool areas with two gate or door entrances.

DIYcontrols.com

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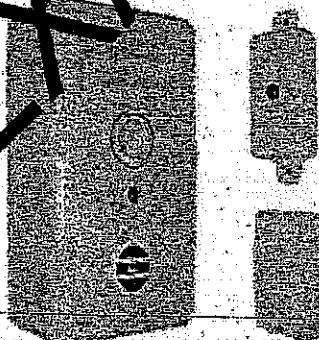
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Poolguard Door Alarm with Wireless Passthrough - NO Delay DAPT-WT

Availability: In Stock. Order by 2pm EST for same-business-day shipping.

SKU: DAPT-WT

Regular Price: \$79.95

Overview

POOLGUARD/PBM INDUSTRIES, INC. has been manufacturing pool alarms, door alarms, and gate alarms since 1982. All Poolguard products are proudly Made in the USA. Poolguard Door Alarms comply with all building codes and are UL Listed under UL 2017. The majority of children that drown in pools go out the back door first and Poolguard's Door Alarm can help protect those doors.

ENERGY CODE REQUIREMENTS FOR POOL

N1103.9 (R403.9) Pools and in-ground permanently installed spas (Mandatory). Pools and in-ground permanently installed spas shall comply with Sections N1103.9.1 through N1103.9.3.

N1103.9.1 (R403.9.1) Heaters. All heaters shall be equipped with a readily *accessible* on-off switch that is mounted outside of the heater to allow shutting off the heater without adjusting the thermostat setting. Gas-fired heaters shall not be equipped with constant burning pilot lights.

N1103.9.2 (R403.9.2) Time switches. Time switches or other control method that can automatically turn off and on heaters and pumps according to a preset schedule shall be installed on all heaters and pumps. Heaters, pumps and motors that have built in timers shall be deemed in compliance with this requirement.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Where pumps are required to operate solar-and-waste-heat-recovery pool heating systems.

N1103.9.3 (R403.9.3) Covers. Heated pools and in-ground permanently installed spas shall be provided with a vapor-retardant cover.

Exception: Pools deriving over 70 percent of the energy for heating from site-recovered energy, such as a heat pump or solar energy computed over an operating season.

