



TOWN OF MEDWAY
COMMONWEALTH OF MASSACHUSETTS

BUILDING DEPARTMENT

*Medway Town Hall
155 Village Street
Medway, MA 02053
Phone (508) 533-3264
Fax (508) 321-4988*

buildingdepartment@townofmedway.org

Building Commissioner

Jonathan Ackley

Swimming Pool Permit Application Addendum

The property owner must complete this form and submit to the Building Department before a Building Permit is issued. Please retain page 2 of this document for your reference.

Property Owner(s): _____

Property Address: _____ Medway, MA 02053

Contact Number: _____

Email Address: _____

Pool Installer: _____

Pool Installer Contact Number: _____

Pool Installer Email Address: _____

As the owner of the property address listed above, I recognize:

1. A swimming pool can pose major safety risks to unauthorized visitors both during the construction process and after the pool is completed.
2. I am ultimately responsible to ensure that temporary fencing is securely maintained around the pool area while the project is underway. In addition, I am also responsible for installing and maintaining permanent fencing and enclosures as outlined on page 2 "*Swimming Pool Barrier Requirements*."
3. I have read and understand the "*Swimming Pool Barrier Requirements*", also understanding I am responsible to make sure these requirements are met before the pool is used.
4. A final building inspection is required before the pool is used. The final inspection must be requested by the installing contractor or the property owner when all the work is complete.
5. Failure to meet these requirements may result in enforcement actions including a stop-work order and/or fines.

Property Owner Signature

Date

Swimming Pool Barrier Requirements

Temporary Construction Barriers

Construction fencing must be installed around the pool area once an excavation hole is dug and must be securely maintained until the permanent barrier is installed. Plastic mesh fences are not permitted once there is more than 24 inches of water in the pool.

Permanent Fencing and Enclosures

1. Top of the barrier shall be at least 48 inches above ground level.
2. 2-inch maximum space between the barrier and the ground.
3. 4-inch space between the top of the pool deck and barrier.
4. A 4-inch sphere cannot pass through openings in the barrier.
5. If 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 member shall be located on the swimming pool side of the fence and spacing between vertical members shall not exceed 1 $\frac{3}{4}$ inch in width.
6. If 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.
7. 1 $\frac{1}{4}$ mini-mesh size for chain link fences (max) unless slats are fastened at the top or bottom which reduce the openings to not more than 1 $\frac{3}{4}$ inches.
8. 1 $\frac{3}{4}$ inch for diagonal members, such as a lattice fence.

Gates

1. Must be self-closing and self-latching.
2. Shall open outwards-away from the pool.
3. Must accommodate a lock.
4. 54-inch minimum height above ground for self-latching release, or;
5. if the release mechanism of the self-latching device is less than 54 inches from the bottom of the gate, it shall be located on the pool side of the gate, at least 3-inches below the top of the gate.
6. The gate and barrier shall not have an opening greater than $\frac{1}{2}$ inch within 18-inches of the release mechanism.

House as Part of the Barrier

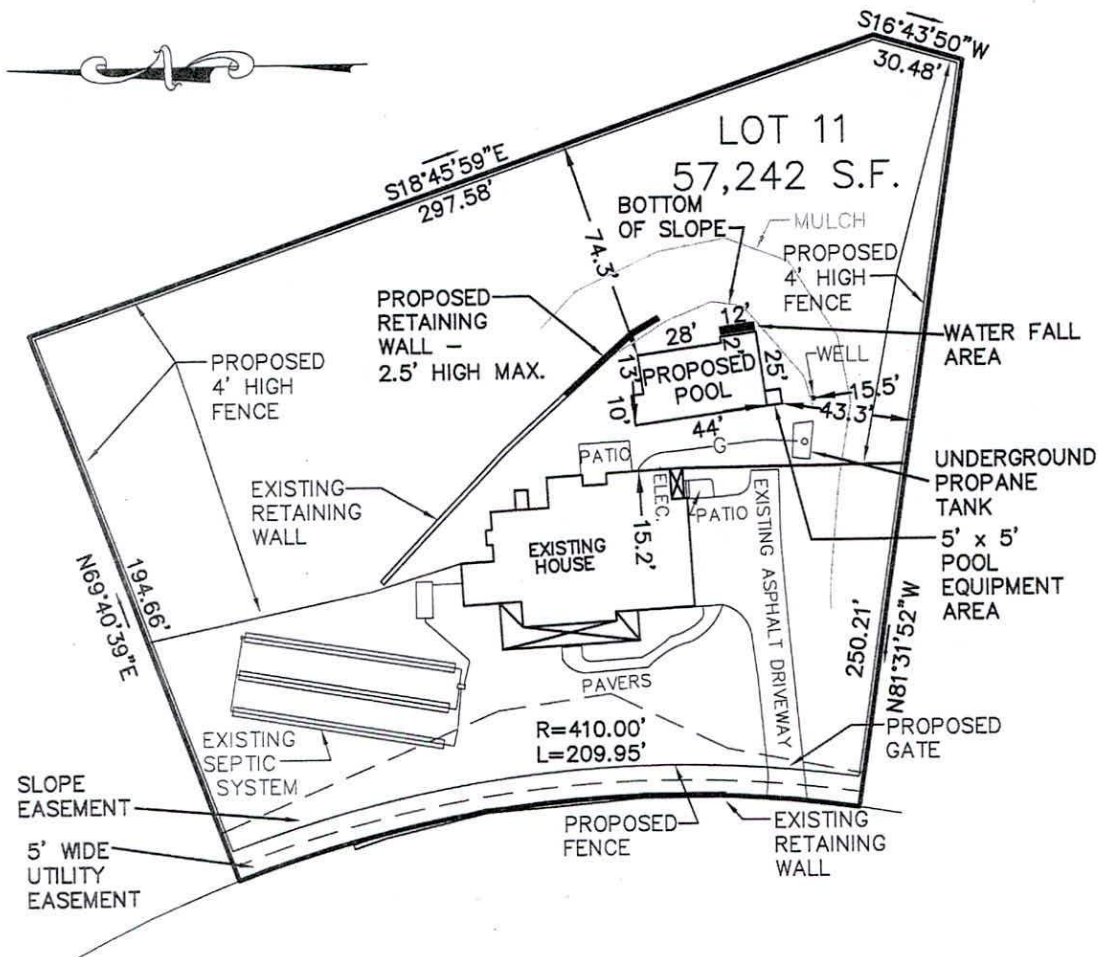
All doors, including bulkheads and windows with a sill height less than 48 inches with direct access to the pool area, must have an alarm that sounds when the door and its screen, if present, are opened, must have the following criteria:

1. Sound within 7 seconds
2. Sound continuously for at least 30 seconds
3. Have a distinctive sound from other household sounds – home security alarms are usually not acceptable
4. Automatically reset
5. Manual deactivation for 15 seconds and is located at least 54 inches above threshold

Ladders or Steps

When 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:

1. The ladder/steps shall be capable of being secured or locked to prevent unauthorized access, or
2. the ladder/steps shall be surrounded by a barrier with a self-closing, self-latching device.



LOT COVERAGE - 7.8%

I HEREBY CERTIFY THAT THE BUILDING HEREON SHOWN DOES CONFORM TO THE ZONING BY-LAWS OF THE TOWN OF NORFOLK.



ANDREW C. MURPHY P.L.S. #35042

ZONING: R-2
AREA: 43,560
FRONTAGE: 200'
SETBACKS:
F - 50'
S - 25'
R - 25'
LOT COVERAGE - 25%

SWIMMING POOL
S - 25'
R - 25'

NOTES:
1. CONTRACTOR TO CONTACT DIGSAFE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES ANY REPORT ANY DISCREPANCIES TO UNITED CONSULTANTS, INC.

REFERENCES:
MAP 14 BLOCK 41 LOT 99
DEED BOOK 38449 PAGE 466
PLAN 659 OF 2000

SCALE: 1" = 40'

DATE: OCTOBER 21, 2020

OWNER:

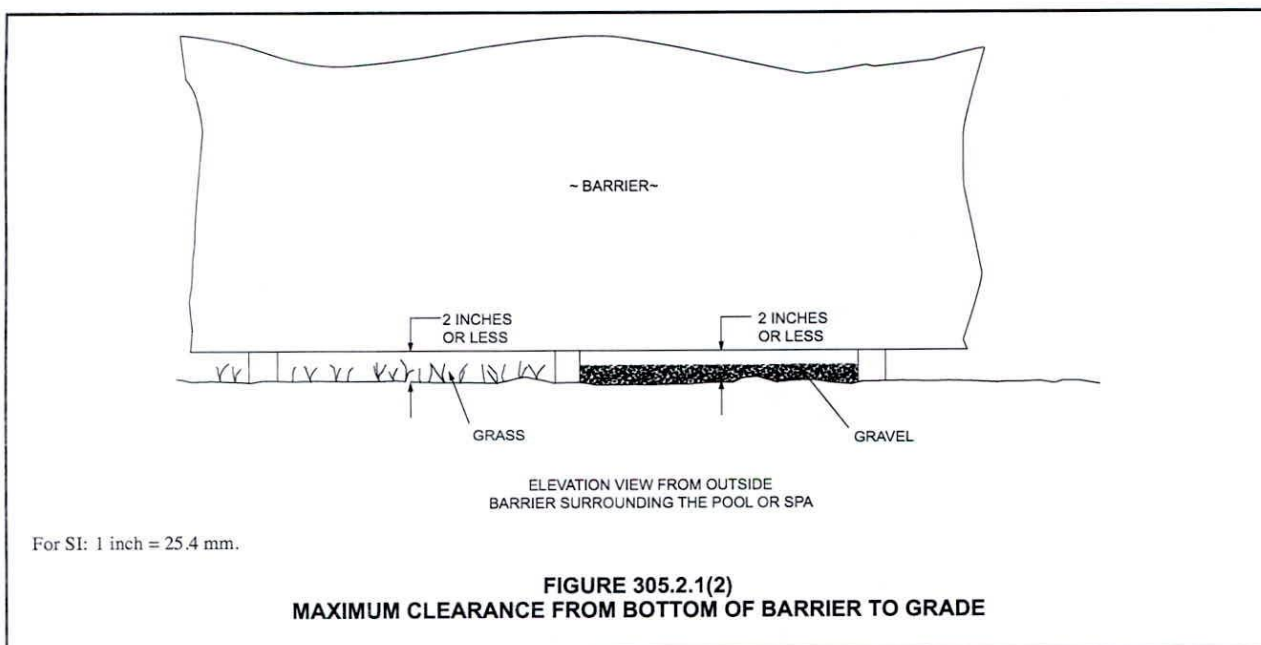
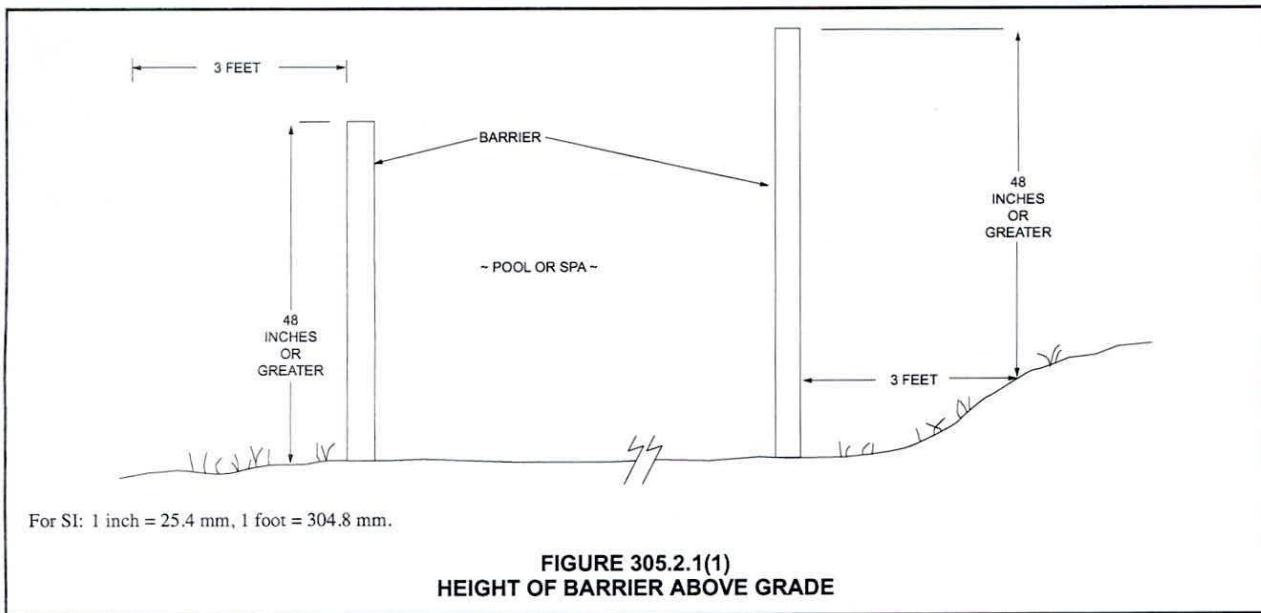
PROPOSED POOL PLAN

NORFOLK, MA

UNITED
CONSULTANTS
INC.

850 FRANKLIN STREET SUITE 11D
WRENTHAM, MASSACHUSETTS 02093
508-384-8560 FAX 508-384-8568

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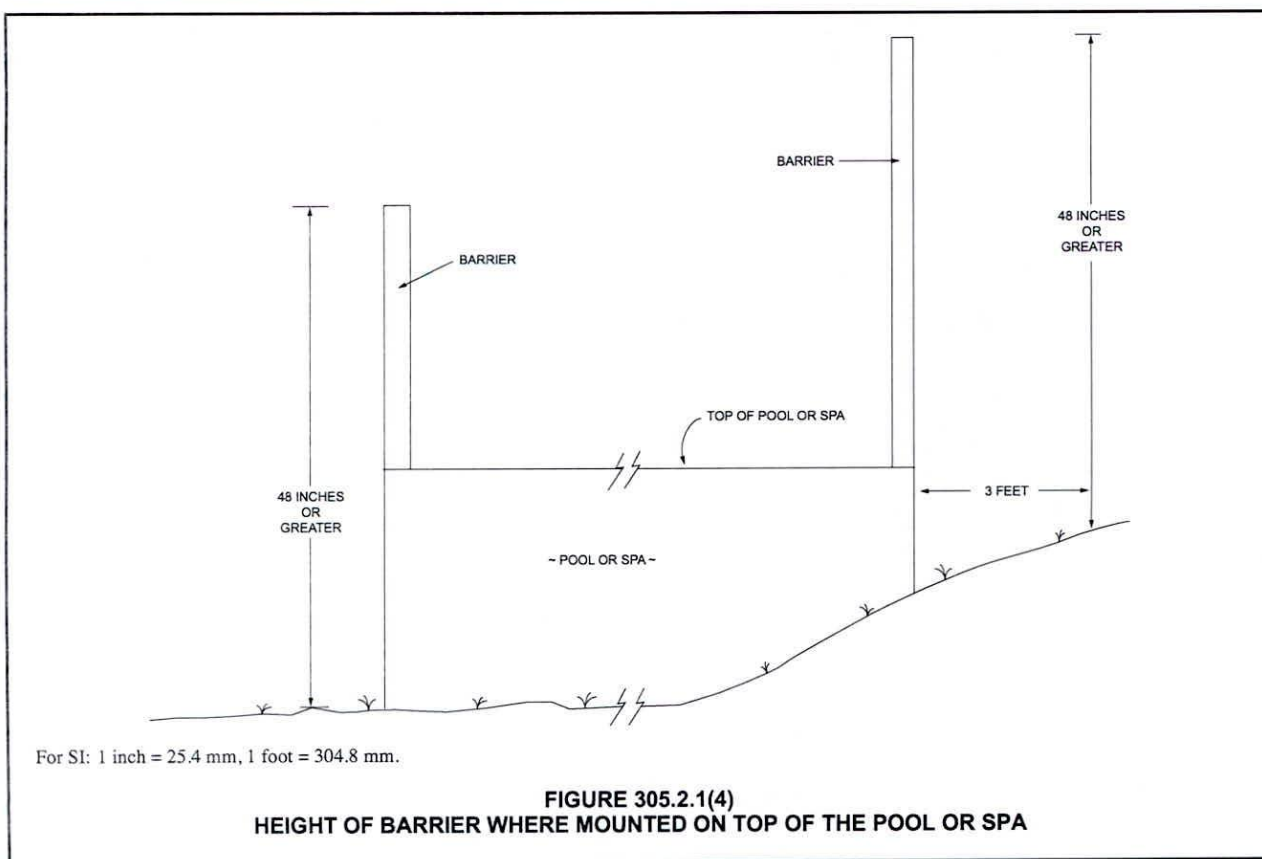
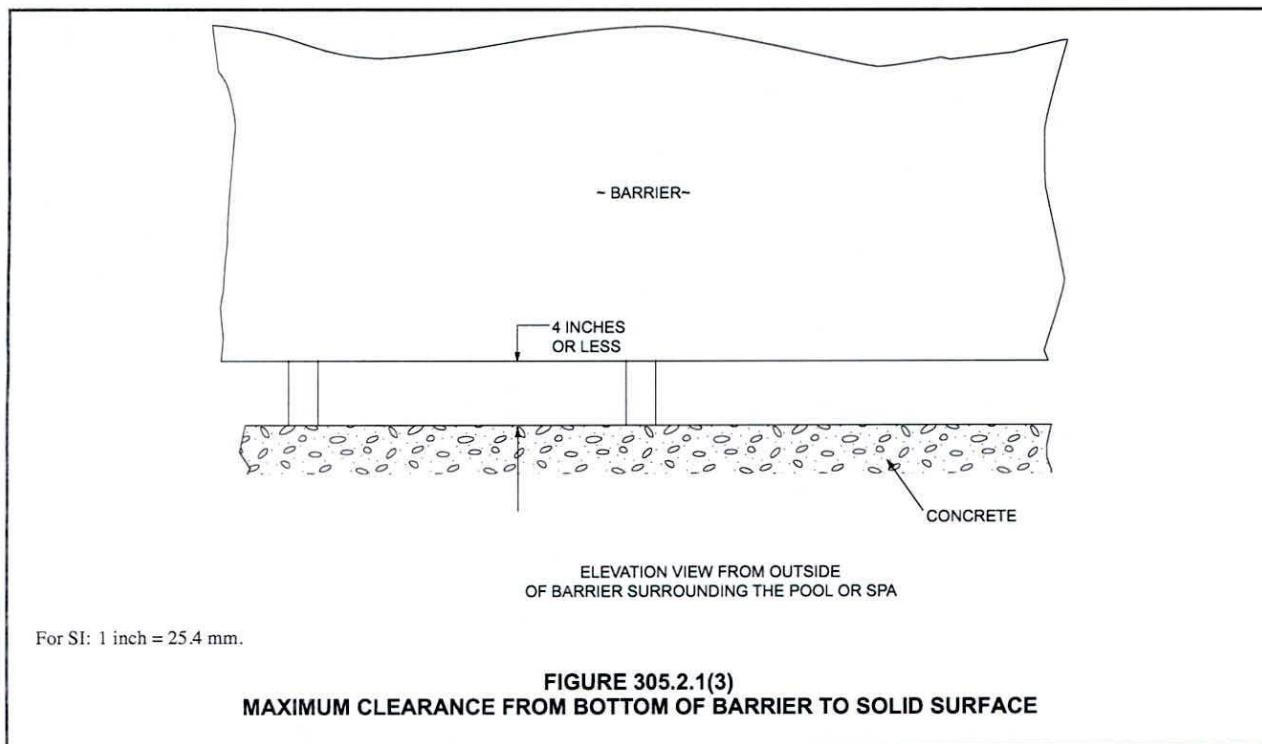
305.2.3 Solid barrier surfaces. Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

❖ An important characteristic of a barrier is that the exterior vertical face not offer any protrusions or indentations such that a toehold or handhold could assist in the climbing of the barrier.

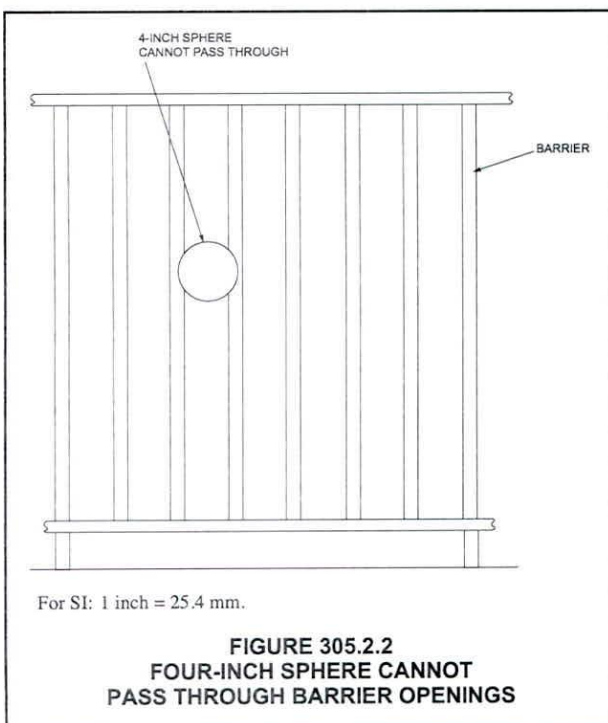
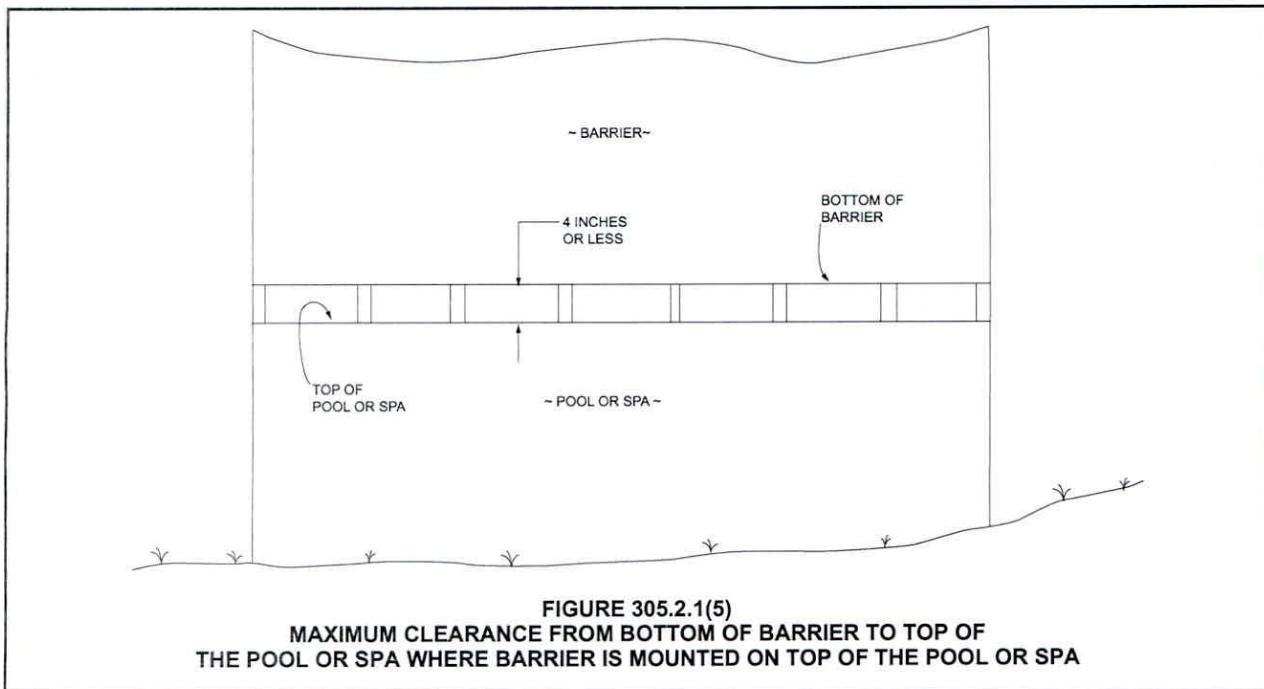
305.2.4 Mesh fence as a barrier. Mesh fences, other than chain link fences in accordance with Section 305.2.7, shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface

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shall not be more than 4 inches (102 mm) from grade or decking.

4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices include, but are not limited to, devices that provide the security equal to or

greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.

5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground residential pools.

❖ Mesh fences provide a temporary, removable barrier for a pool or spa. For example, consider a pool with a permanent barrier on three sides and the fourth side is bounded by a building. During times when the pool is not in use, a mesh barrier could be erected between the pool and the building so that the space between the building and the mesh fence could be used without concern that the pool could be easily accessed by children. The bottom of the mesh barrier (fence) must not be able to be lifted more than 4 inches (102 mm) above the pool deck so that a child cannot crawl under the barrier. The attachment devices between mesh barrier sections and the posts must be not less than 45 inches (1142 mm) above the deck so that they are out of reach of small children. The attachment devices must offer the same difficulty to disengage as a spring-loaded hook and eye latch. Gates with mesh fences must comply with gate requirements in Section 305.3.

Mesh fences must not be used on top of onground residential pools because mesh fencing cannot resist the forces of an adult falling against it. An adult could

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topple off the deck of an above-ground pool and onto the ground below (see Commentary Figure 305.2.4).

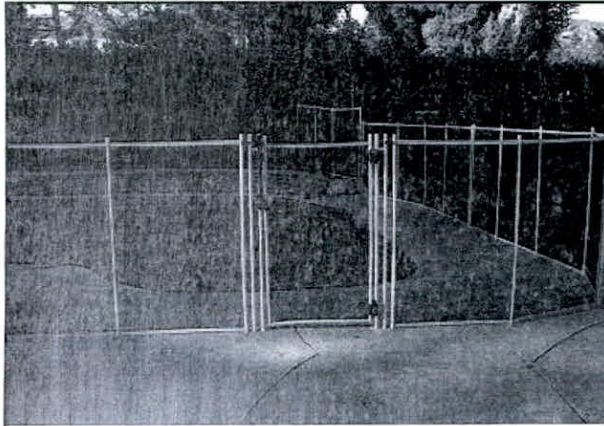


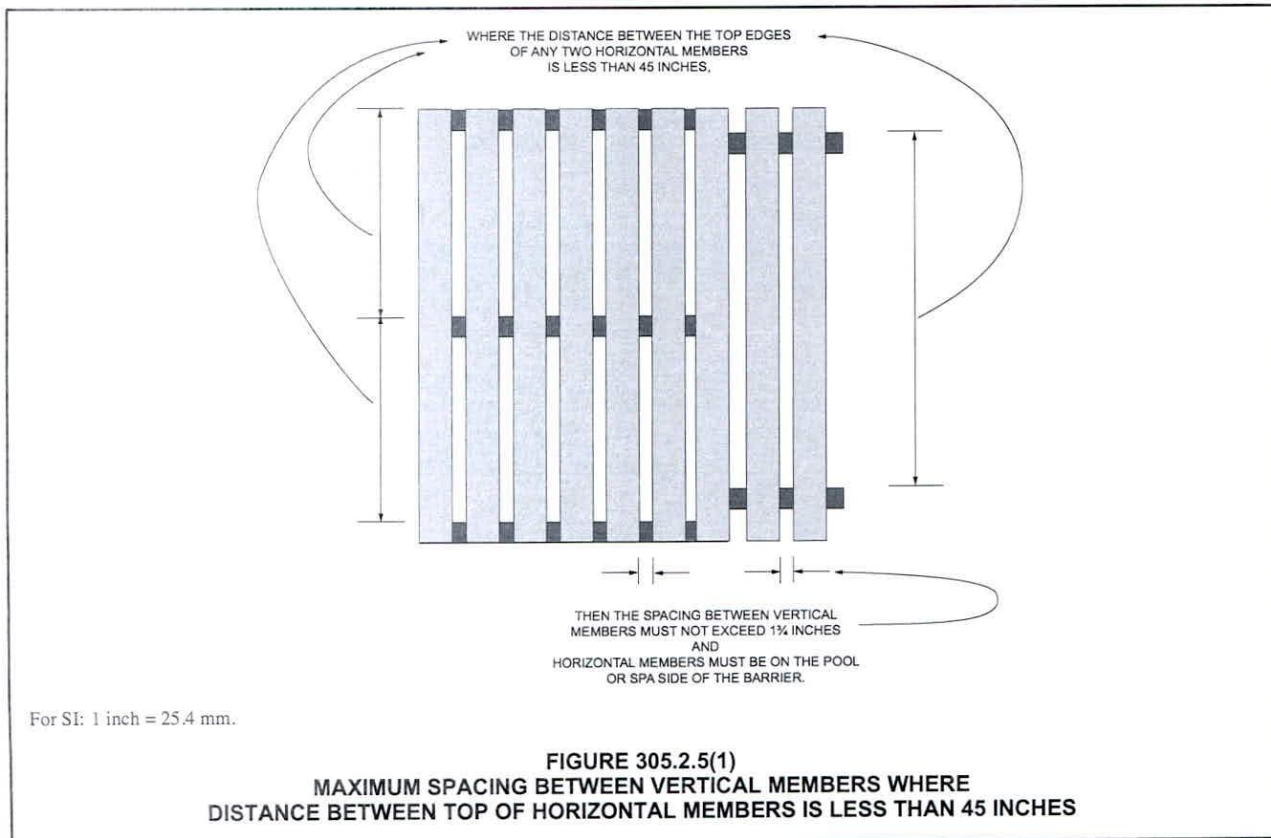
FIGURE 305.2.4
MESH FENCE AS A STRUCTURE-TO-POOL BARRIER

305.2.5 Closely spaced horizontal members. 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 pool or spa 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.

❖ Conventional fencing that is not chain link fence is typically constructed with horizontal rails attached to vertical posts. Vertical pickets are fastened to the horizontal rails to complete the barrier. If the distance between the top surface of the horizontal rails is less than 45 inches (1143 mm), such spacing could allow a child to climb up and over the barrier. Therefore, these closely spaced rails must be located on the pool or spa side of the barrier so that a child on the outside of the barrier cannot climb over it. Where closely spaced rails exist and are exposed between vertical members on the exterior of the fence, the gap between vertical pickets must not be more than $1\frac{3}{4}$ inches (44 mm) wide so that a child cannot wedge his or her foot in the gap and gain a handhold on the top closely spaced horizontal member in order to scale the fence [see Commentary Figure 305.2.5(1)]. Any decorative cutouts in the pickets must not have an opening greater than $1\frac{3}{4}$ inches (44 mm) for the same reason [see Commentary Figure 305.2.5(2)].

There are welded metal wire mesh products and flexible "on a roll" plastic fence products that "technically comply" with the dimensional requirements of this section. However, this section was written with the typical wood or rigid vinyl fence construction in mind. Consider a wood fence with 4-inch by 4-inch vertical posts with two 2-inch by 4-inch horizontal rails (one near the top, one near the bottom of the fence)



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than $1\frac{3}{4}$ inches (44 mm) to prevent a child from gaining a foothold to scale the fence [see Commentary Figure 305.2.5(2)].

Commentary Figure 305.2.6(2) shows a barrier. The fence is known to be 4 feet (1219 mm) high. It is obvious that the distance between the horizontal rails is less than 45 inches (1143 mm) and the vertical pickets spaced wider than 1.75 inches (44 mm). Thus, this fence is a violation because the horizontal members are not at least 45 inches (1143 mm) apart.

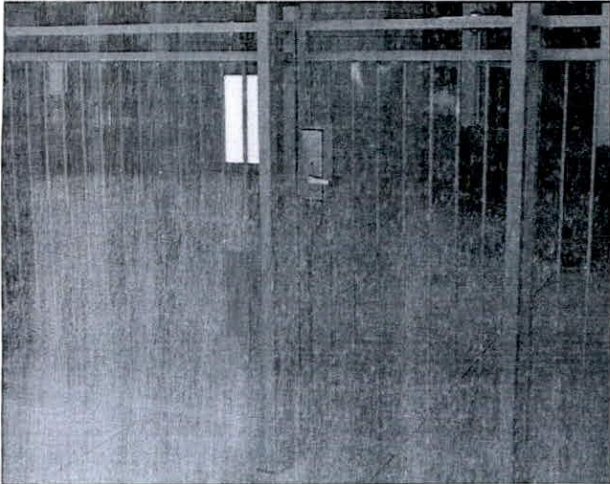
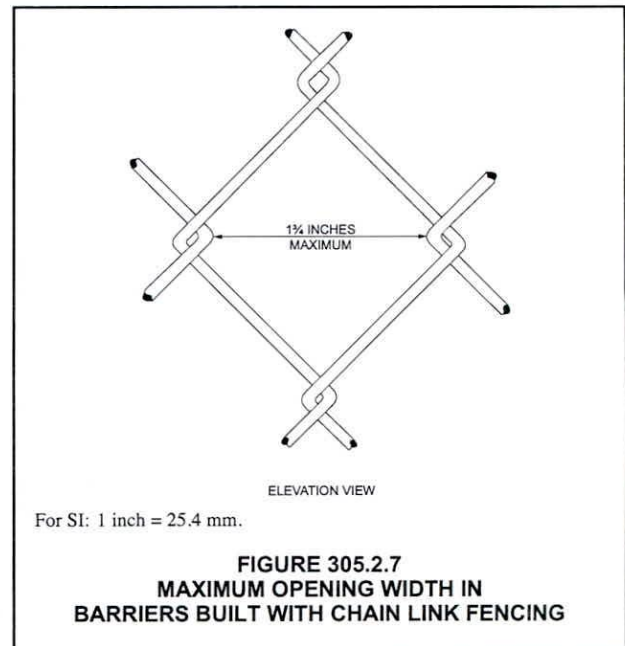


FIGURE 305.2.6(2)
VIOLATION—BARRIER (FENCE) HORIZONTAL
MEMBERS TOO CLOSE

305.2.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than $1\frac{3}{4}$ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom which reduce the openings, such openings shall be not more than $1\frac{3}{4}$ inches (44 mm).

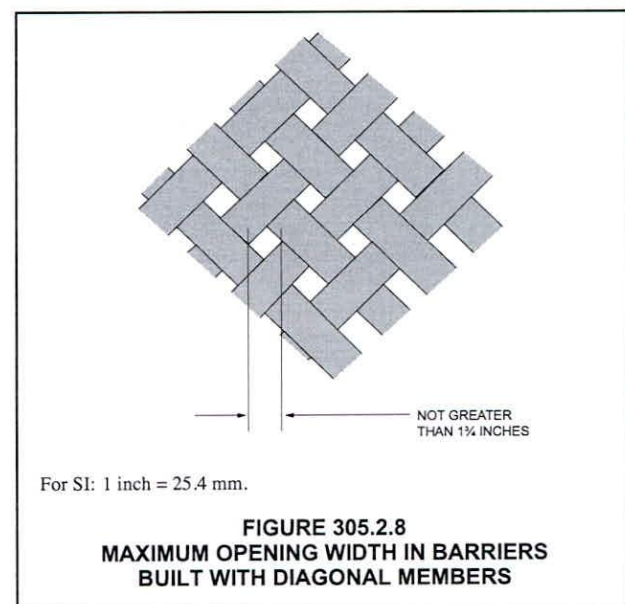
❖ Chain link fencing has diamond-shaped or square openings. The most common sizes of chain link openings (measured between parallel sides of the opening) are 2 inches (51 mm) and $2\frac{1}{4}$ inches (57 mm). This section requires that the openings be not greater than $1\frac{3}{4}$ inches (44 mm) so that a child cannot wedge his or her foot in the opening in order to climb the fence (see Commentary Figure 305.2.7). Two-inch (51 mm) and $2\frac{1}{4}$ -inch (57 mm) chain link fence must have the openings reduced in size by the installation of slats (sometimes called privacy slats) vertically or diagonally. Where slats are used, they must be attached to the top and bottom of the fence so that they cannot be removed for gaining a hand- or foothold on the fence. The slats must be of a width that reduces the openings to less than $1\frac{3}{4}$ inches (44 mm).

Chain link fencing is also available in $1\frac{1}{4}$ -inch (32 mm) size (mesh). The resulting diagonal opening is $1\frac{3}{4}$ inches (44 mm). Therefore, slats would not be required for this size of chain link fence.



305.2.8 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not more than $1\frac{3}{4}$ inches (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

❖ Some barrier designs use diagonal members (lattice-work) as part of the barrier. Where diagonal members are installed, the angle cannot be more than 45 degrees (0.79 rad) from vertical and the opening created by the diagonal members cannot be greater than $1\frac{3}{4}$ inches (44 mm) so a child cannot wedge a foot in the opening to climb the barrier (see Commentary Figure 305.2.8).



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release. The inside (backside of the gate) release mechanism must be protected against tampering from the outside of the gate by providing a solid panel or mesh with openings of not greater than $\frac{1}{2}$ inch (12.7 mm). The panel or small opening mesh must extend not less than 18 inches (457 mm) in all directions of the inside latch-release mechanism [see Commentary Figure 305.3.3(1)].

This section reflects the "traditional approach" for latch-release mechanisms on pedestrian access gates to pool and spa areas. Although suitable for most residential (as defined by this code) pool and spa access gates, this approach might not coordinate with designs for accessibility and controlled access needs in a public environment. For example, a latch-release on the inside (backside) of the gate or at a 54-inch height above the walking surface on either side of a gate is out of the reach range for persons seated in a wheelchair. Key card or key entry might also be necessary to control when the pool or spa can be used and who can use the pool or spa [see Commentary Figure 305.3.3(2)]. Therefore, the designer of the barrier system and pedestrian access gate for a public environment will need to assess each gate arrangement against all code requirements

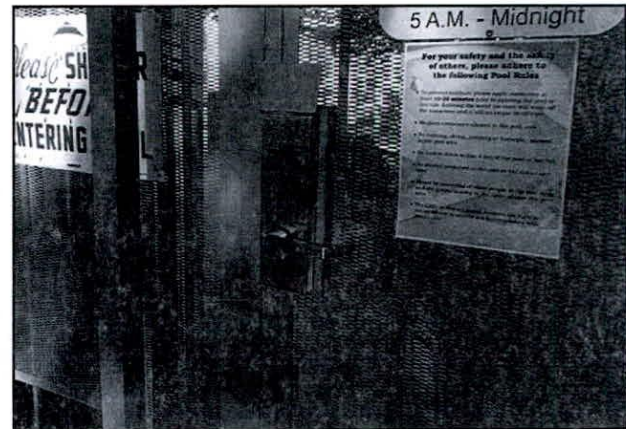
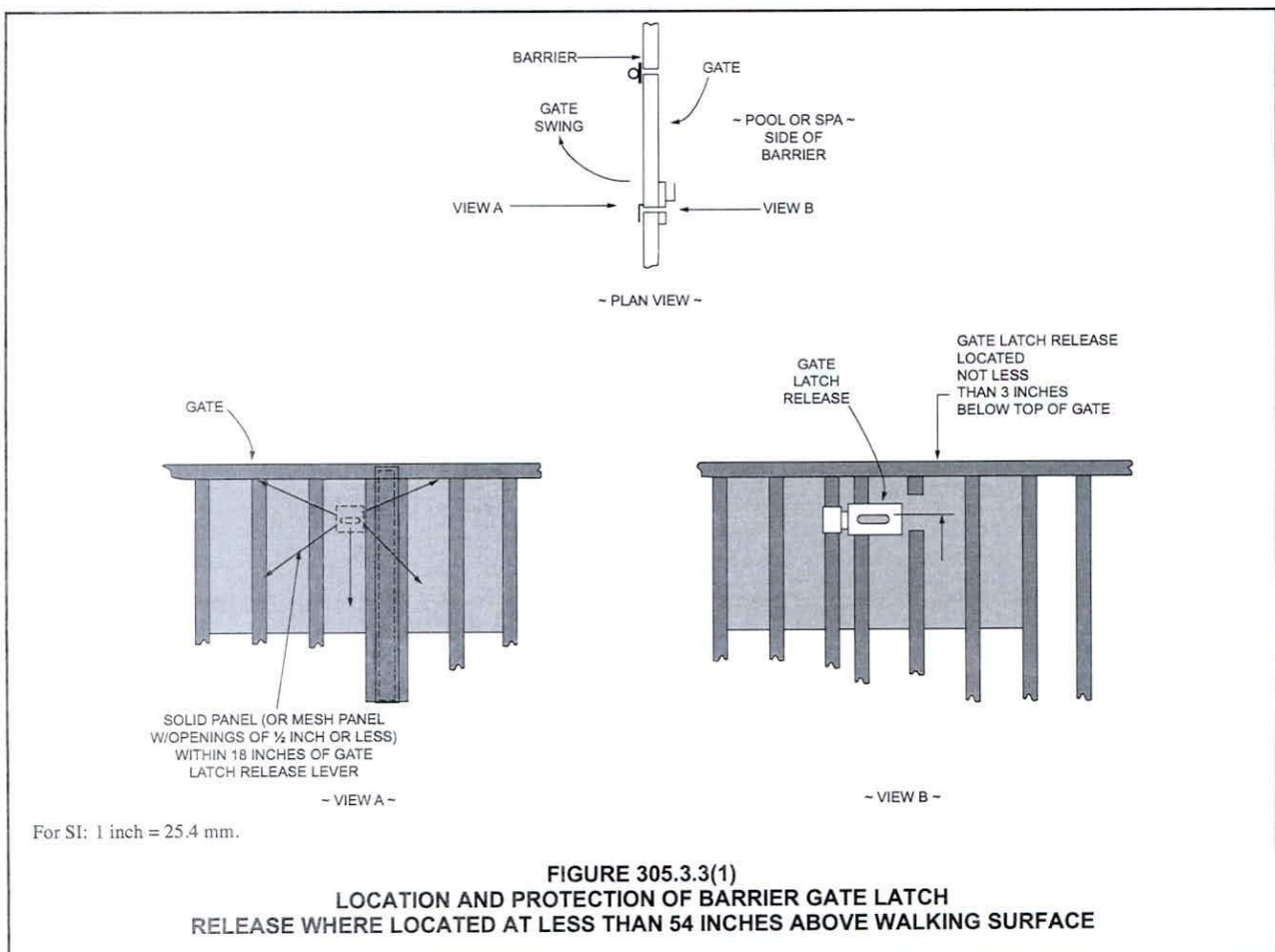
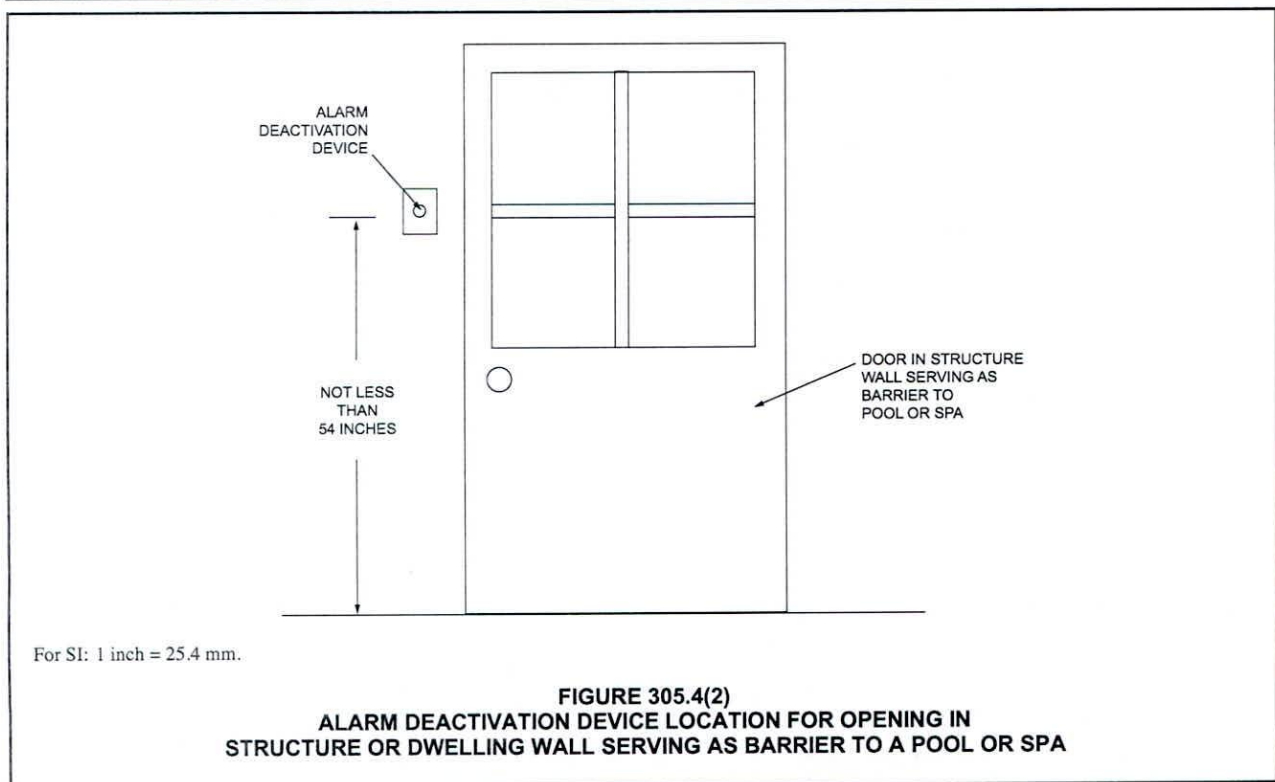
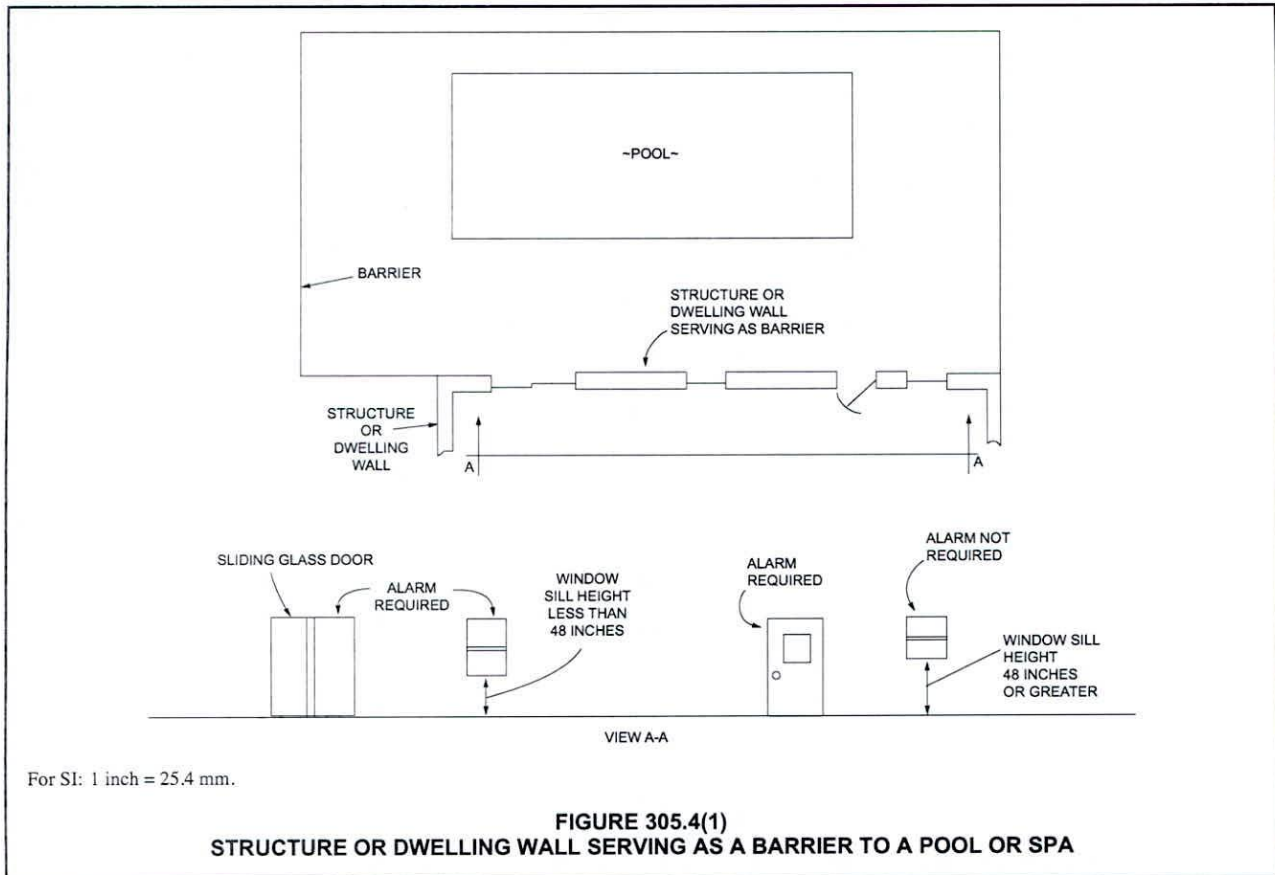


FIGURE 305.3.3(2)
KEY CARD ENTRY ON GATE TO POOL AND SPA
AREA MIGHT REQUIRE ALTERNATIVE METHOD
APPROVAL

and the needs of the client in order to propose an alternative method to the code official for compliance to this section (see Section 104.11).



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cise spas that are in compliance with UL 1563 or CSA C22.2 No. 218.1 are tested by a third-party agency to ensure compliance to APSP 7. The second exception allows for the requirements of Section 405 to provide for suction entrapment avoidance. Section 405 prohibits suction outlets from being installed in wading pools.

SECTION 311 CIRCULATION SYSTEMS

311.1 General. The provisions of this section shall apply to circulation systems for pools and spas.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storable pools* supplied by the pool manufacturer as a kit that includes circulation system equipment that is in accordance with Section 704.

❖ Section 311 covers requirements for circulation systems for all pools and spas other than portable residential spas, onground storable pools and portable residential exercise spas.

311.2 System design. A circulation system consisting of pumps, piping, return inlets and outlets, filters, and other necessary equipment shall be provided for the complete circulation of water. Wading pools and spas shall have separate dedicated filtering systems.

Exception: Separate filtering systems are not required for *residential* pools and spas.

❖ A water circulation system for a pool and spa is required in order to filter out dirt, hair and other particulates that accumulate in the water; provide sanitizing chemicals to the vessel water; and, in some cases, provide heated water to the pool or spa. The circulation system provides for complete movement of the water in all areas of the pool or spa so that disinfection

chemicals are well distributed for proper sanitary conditions. The requirement for wading pools and spas to have filter systems that are separate from each other and a main pool or spa is so that the disinfection levels in those smaller pools and spas can be better controlled. Also, if someone in the smaller pool or spa throws up or a child has an unexpected bowel movement, the pool or spa is isolated from the other pools and spas.

The exception allows residential spas to be an integral part of a residential swimming pool and share a common circulation system. Separate filtering systems are not needed because in a residential environment, use of the pool can be easily discontinued until the disinfection levels are returned to proper levels (see Commentary Figure 311.2).

311.2.1 Turnover rate. The equipment shall be sized to turn over the volume of water that the pool or spa is capable of containing as specified in this code for the specific installation.

❖ Turnover rate is the number of hours required to circulate the entire volume of water in the pool or spa through the filter one time. The flow capacity of the filtration pump determines the turnover rate. Thus, choosing the correct size of filtration pump is critical for providing a safe water quality in the pool or spa.

The flow rate of a filtration pump is dependent on the resistance to flow in the circulating system. Commentary Figure 311.2.1(1) shows the typical equipment in a circulation system.

This resistance to flow is called the total dynamic head of the system. Total dynamic heads for a circulation system can be calculated for various flow rates through the system. Plotting those points on a graph allows a circulation system curve to be drawn. Commentary Figure 311.2.1(2) illustrates the resulting circulating system curves for three different circulation systems. Circulation system A (Curve A) has the highest total dynamic head for any given flow rate. Circulation system C (Curve C) has the lowest total

