Swimming Pool Barrier Requirements
(2018 International Pool & Spa Code)

305.1 General.

The provisions of this section shall apply to the design of barriers for restricting entry into having pools and spas. Where spas and hot tubs are equipped with a lockable safety cover complying with ASTM F1346 and swimming pools are equipped with a powered safety cover that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 305.2 through 305.7.

305.2 Barrier heights and clearances.

Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall not be less than 48" above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface such as concrete, and the bottom of the required barrier shall not exceed 4 inches where measured on the side of the required barrier faces away from the pool or spas.
4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade of shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches.

305.2.2 Openings.

Openings in the barrier shall not allow passage of a 4-inch diameter sphere .

305.2.3 Solid barrier surfaces.

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

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 not be more than 1-inch 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 the 4-inches from grade or decking.

3. The fence shall be designed and constructed so that it does not allow the passage of a 4-inch sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not be greater than 4-inches from grade or decking.
4. An attachment device shall attach each barrier section at a height of not lower than 45-inches above grade. Common attachment devices include, but are not limited t, devices that provide security equal to or greater than that of a hook-and-eye type latch incorporating a spring-actuated 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 on-ground residential pools

305.2.5 Closely spaced horizonal 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, the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed 1 3/4 inches in width.

Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 ¾ inches in width.

305.2.6 Widely spaced horizontal members.

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, the interior width of the cutouts shall not exceed 1 ¾ inches in width.

305.2.7 Chain link dimensions.

The maximum opening formed by a chain link fence shall be not more than 1¾ inches . Where the fence is provided with slats fastened at the top and bottom which reduce the openings, such openings shall be maximum opening formed by a chain link fence shall be not more than 1¾ 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 1¾ inches (44 mm).

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 than13/4 inches. The angle of diagonal members shall be not greater than 45 degrees from vertical.

305.3 Gates.

Access gates shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

305.3.1 Utility or service gates

Gates not intended for pedestrian use, such as utility or service gates, shall remain locked when not in use.

305.3.2 Double or multiple gates

Double gates or multiple gates shall have at least one leaf secured in place and the adjacent leaf shall be secured with a self-latching device. The gate and barrier shall not have openings larger than 1/2 inch within 18 inches of the latch release mechanism. The self-latching device shall comply with the requirements of Section 305.3.3.

305.3.3 Latches

Where the release mechanism of the self-latching device is located less than 54 inches from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches below the top of the gate, and the gate and barrier shall not have openings greater than ½ inch within 18 inches of the release mechanism.

305.4 Structure wall as a barrier.

Where a wall of a dwelling or structure serves as part of the barrier and where doors or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Buildings may serve as a barrier if doors and operable windows having a sill height < 48" are equipped with a listed and labeled alarm in accordance with UL-2017.
In dwellings or structures not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located 54 inches or more above the finished floor. In dwellings or structures required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches and not less than 48 inches above the finished floor.
2. A safety cover that is listed and labeled in accordance with ASTM F 1346 is installed for the pools and spas.3.An approved means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

305.5 Onground residential pool structure as a barrier.

An onground residential pool wall structure or a barrier mounted on top of an onground residential pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.
2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch diameter sphere.

5. Barriers that are mounted on top of onground residential pool walls are installed in accordance with the pool manufacturer's instructions.

SECTION 310 SUCTION ENTRAPMENT AVOIDANCE

310.1 General. Suction entrapment avoidance for pools and spas shall be provided in accordance with APSP 7.

Exceptions:

1. Portable spas and portable exercise spas *listed* and *labeled* in accordance with UL 1563 or CSA C22.2 No. 218.1.
2. Suction entrapment avoidance for wading pools shall be in accordance with Section 405.

APSP-7, 5.1 General.
Methods to avoid entrapment in circulation systems, swim jet systems, alternative suction systems, and debris removal systems are shown in Sections 5.2 through 5.5.
4.3.1 Suction outlet certification
4.3.1.1 Manufactured suction outlet fitting assembly(ies).When used, fully submerged suction outlet fitting assembly(ies) including cover/grate and associated fittings, fasteners and components shall be tested and certified by a third-party test lab accredited by the International Laboratory Accreditation Cooperation (ILAC) to test and certify products as conforming to ANSI/APSP-16.