

SECTION 305 BARRIER REQUIREMENTS

305.1 General. The provisions of this section shall apply to the design of barriers for all aquatic vessels. These design controls are intended to provide protection against the potential drowning and near drowning by restricting access to such vessels. These requirements provide an integrated level of protection against potential drowning through the use of physical barriers and warning devices.

Exception: Portable residential spas and portable residential exercise spas.

305.2 Outdoor Swimming Pools. All outdoor aquatic vessels shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.8.

Exception: Spas or hot tubs with a lockable safety cover that complies with ASTM F1346.

305.2.1 Barrier height and clearances. The top of the barrier shall be at least 48 inches (1524 mm) above grade measured on the side of the barrier that faces away from the aquatic vessel around the entire perimeter of the vessel and for a distance of three (3) feet measured horizontally from the required barrier. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) from surfaces that are not solid, such as grass or gravel, and measured on the side of the barrier that faces away from the vessel. Where the top of the vessel structure is above grade, the barrier shall be at ground level or mounted on top of the vessel structure, and the maximum vertical clearance between the top of the vessel structure and the bottom of the barrier shall be 4 inches (102 mm). The maximum vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall be four (4) inches (102 mm) measured on the side of the required barrier which faces away from the vessel.

305.2.2 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

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.

305.2.4 Mesh restraining barrier/fence. 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 restraining fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.

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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 four (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 sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not be more than four (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 barrier, the gate shall comply with Section 305.3.

6. Patio deck sleeves such as vertical post receptacles which are placed inside the patio surface shall be of a nonconductive material.

7. Mesh fences shall not be used on top of on ground residential pools.

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 aquatic vessel 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.

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 (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.

305.2.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than 1.75 inches. Where the fence is provided with slats fastened at the top and bottom which reduces the openings, such openings shall be not more than 1.75 inches.

305.2.8 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than 1.75 inches (44 mm).

305.2.9 Clear Zone. There shall be a clear zone of not less than 36 inches (914 mm) around the exterior of the barrier and around any permanent structures or equipment such as pumps, filters and heaters that can be used to climb the barrier.

305.2.10 Poolside Barrier Setbacks. The aquatic vessel side of the required barrier shall be not less than twenty (20) inches from the water's edge.

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 vessel and shall be self-closing and 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 (12.7 mm) within 18 inches (457 mm) of the release mechanism.

305.3.3 Latches. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from grade, the release mechanism shall be located on the vessel side of the gate at least 3 inches (76 mm) below the top of the gate, and the gate and barrier shall not have openings greater than 1/2 inch (12.7 mm) within 18 inches (457 mm) 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, doors and operable windows with a sill height of less than 48 inches, that provide direct access to the aquatic vessel through the wall shall be equipped with an alarm that produces an audible warning when the door or its screen or window, is opened. The alarm shall be listed and labeled in accordance with UL 2017. In dwellings or structures not required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings or structures required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the threshold of the door. In addition, one or more of the following additional levels of protection shall be provided:

1. The aquatic vessel shall be equipped with a power safety cover that is listed and labeled in accordance with ASTM F1346.
2. The aquatic vessel shall be provided with an underwater alarm that is listed and labeled in accordance with ASTM F2208.
3. The aquatic vessel shall be provided with a laser or infrared alarm that is listed and labeled in accordance with ASTM F2208.
4. Other means of protection, such as self-closing doors with self-latching devices, which are approved, shall be accepted provided that the degree of protection afforded is not less than the protection afforded by Items 1, 2 or 3.

305.5 Pool structure as a barrier. Where an on ground residential pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, the following shall apply:

1. An onground pool wall, itself, shall be permitted to be the barrier where the pool structure is on grade and the wall is at least 48 inches (1219 mm) above grade for the entire perimeter of the pool and complies with the requirements of Section 305.3.

2. Where the means of access is a ladder or steps, the ladder or steps shall be capable of being secured, locked or removed to prevent access or the ladder or steps shall be surrounded by a barrier that meets the requirements of this section.

3. 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.

4. The barrier shall be installed in accordance with the manufacturer's instructions.

305.6 Natural barriers. In the case where the vessel area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge a minimum of eighteen (18) inches, a barrier is not required between the natural body of water shoreline and the vessel.

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305.7 Natural topography. Natural topography that prevents direct access to the aquatic vessel area shall include but not be limited to mountains and natural rock formations. A natural barrier approved by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by manufactured or constructed means.

305.8 Indoor swimming pools. Walls surrounding indoor aquatic vessels shall comply with Section 305