

Swimming Pool Barrier and Electrical Code Requirement Fact Sheet

SECTION AG 105 BARRIER REQUIREMENTS

AG105.2 Outdoor Swimming Pool: An outdoor swimming pool, including an in-ground, aboveground or on-ground pool, hot tub or spa shall be provided with a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219mm) 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 (51mm) 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 aboveground 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 (102mm).
2. Openings in the barrier shall not allow passage of a 4-inch diameter (102mm) 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 (1143mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 $\frac{3}{4}$ inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within cutouts shall not exceed 1 $\frac{3}{4}$ inches (44mm) 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) or more, spacing between vertical members shall not exceed 4 inches (102mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 $\frac{3}{4}$ inches (44mm) in width.
6. Maximum mesh size for chain link fences shall be a 2 $\frac{1}{4}$ -inch (57mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1 $\frac{3}{4}$ inches (44mm).
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 $\frac{3}{4}$ inches (44mm).
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 (1372mm) 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 (76mm) below the top of the gate; and
 - 8.2. The gate and barrier shall have no opening greater than $\frac{1}{2}$ inch (13mm) within 18 inches (457mm) 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 F1346; 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 so 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 aboveground 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:

10.1. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or

10.2. The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG 105.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch diameter (102mm) sphere.

ELECTRICAL CODE REQUIREMENTS

Receptacle outlets.

Location. Receptacles that provide power for water-pump motors or other loads directly related to the circulation and sanitation system shall be permitted to be located between 6 feet and 10 feet (1829 mm and 3048 mm) from the inside walls of pools and outdoor spas and hot tubs, and where so located, shall be single and of the locking and grounding type and shall be protected by ground-fault circuit interrupters.

Other receptacles on the property shall be located not less than 6 feet (1829 mm) from the inside walls of pools and outdoor spas and hot tubs.

Where required. At least one 125-volt, 15- or 20-ampere receptacle supplied by a general-purpose branch circuit shall be located a minimum of 6 feet (1829 mm) from and not more than 20 feet (6096 mm) from the inside wall of pools and outdoor spas and hot tubs. This receptacle shall be located not more than 6 feet, 6 inches (1981 mm) above the floor, platform or grade level serving the pool, spa or hot tub.

GFCI protection. All 15- and 20-amp, single phase 125-volt receptacles located within 20 feet (6096 mm) of the inside of pools and outdoor spas and hot tubs shall be protected by a ground-fault circuit-interrupter. Outlets supplying pool pump motors from branch circuits with short-circuit and ground-fault protection rated 15 or 20 amperes, 125 volt or 240 volt, single phase, whether by receptacle or direct connection, shall be provided with ground-fault circuit-interrupter protection for personnel.

Indoor locations. Receptacles shall be located not less than 6 feet (1829 mm) from the inside walls of indoor spas and hot tubs. A minimum of one 125-volt receptacle shall be located between 6 feet (1829 mm) and 10 feet (3048 mm) of the inside walls of indoor spas and hot tubs.

Indoor GFCI protection. All 125-volt receptacle rated 30 amperes or less and located within 10 feet (3048 mm) of the inside wall so spas and hot tubs installed indoors, shall be protected by ground-fault circuit interrupters.

Switching devices. Switching devices shall be located not less than 5 feet (1524 mm) horizontally from the inside walls of pools, spas and hot tubs except where separated from the pool, spa or hot tub by a solid fence, wall or other permanent barrier or the switches are listed for use within 5 feet (1524 mm).

Disconnecting means. One or more means to simultaneously disconnect all underground conductors for all utilization equipment, other than lighting, shall be provided. Each of such means shall be readily accessible and within sight from the equipment it serves and shall be located at least 5 feet (1524 mm) horizontally from the inside wall of a pool, spa, or hot tub unless separated from the open water by a permanently installed barrier that provides a 5 foot (1524 mm) or greater reach path. This horizontal distance shall be measured from the water's edge along the shortest path required to reach the disconnect.

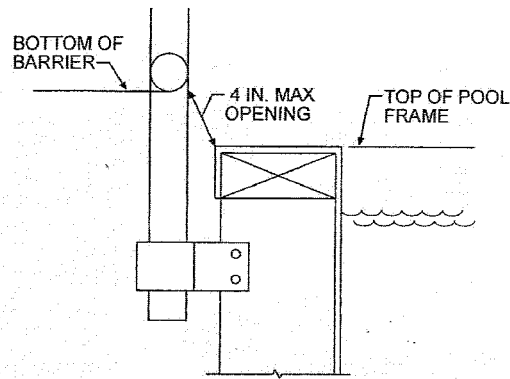
Refer to Chapter 42 Swimming Pools of the Virginia Residential Code for additional electrical information.

REQUIRED INSPECTIONS

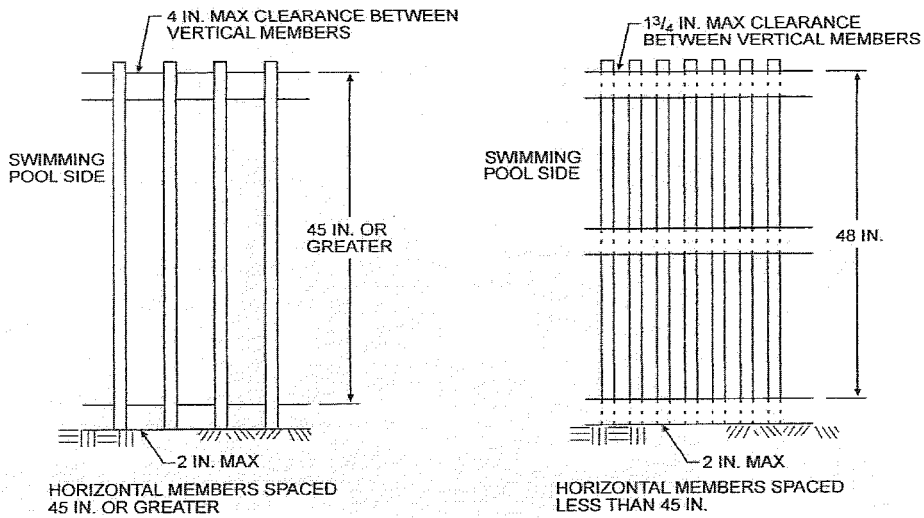
For the electrical permit – trench, swimming pool bonding, rough, and final electrical

For the pool permit – footing (if applicable), and final pool

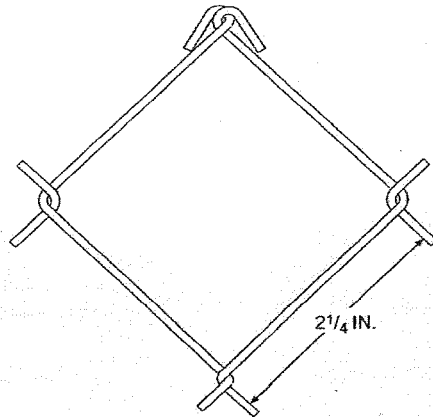
For the barrier permit – final barrier



OPENING LIMITATIONS



PRIVATE SWIMMING POOL BARRIER CONSTRUCTION



CHAIN-LINK FENCE MESH FOR PRIVATE SWIMMING POOLS