



Swimming Pools

Disclaimer: This is not a listing of all code sections involving building or utilities which involve this subject, but only the sections most often questioned. Refer to the 2007 Kentucky Residential Code book for information not listed in this handout and for other requirements of the building code.

Swimming Pools

Appendix G

The 2007 Kentucky Residential Code lists the following minimum standards for the installation of in-ground swimming pools installed in or on the lot of a one- or two-family dwelling. This document replaces any previous handouts on this subject issued by this office.

General (AG101.1) The provisions of this appendix shall control the design and construction of swimming pools installed in or on the lot of a one-family or two-family dwelling.

Definitions (AG102)

General. (AG102.1) For the purpose of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

Barrier. A fence, wall, building wall, or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

In-Ground Pool. See "Swimming Pool".

Residential. That which is situated on the premises of a detached one- or two-family dwelling or a one-family townhouse not more than three stories in height.

Swimming Pool. Any in-ground structure intended for swimming or recreational bathing that contains water over 24 inches (610 mm) deep.

Swimming Pool Indoor. A swimming pool which is totally contained within a structure and surrounded on all four sides by the walls of the enclosing structure.

Swimming Pool Outdoor. Any swimming pool which is not an indoor pool.



Swimming Pool Outdoor
In-Ground

Swimming Pools (Section AG103)

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

Barrier Requirements (Section AG105)

Application. (AG105.1) The provisions of this chapter shall control the design of barriers for residential in-ground swimming pools. These design controls are intended to provide protection against potential drownings and near drownings by restricting access to swimming pools.

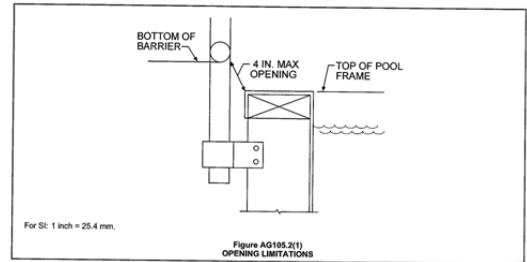


Swimming Pool Outdoor
Above Ground

Swimming Pools

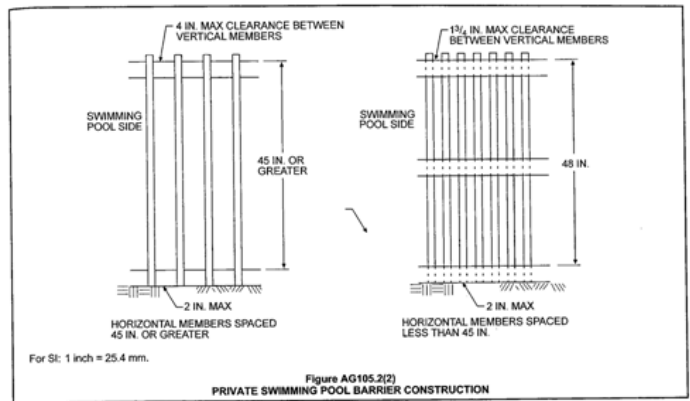
Outdoor Swimming Pool. (AG105.2) An outdoor in-ground swimming pool shall be surrounded by a barrier which shall comply with the following:

1. The top of the 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 4 inches (102 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. The maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm). (change effective 7-29-09)
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.

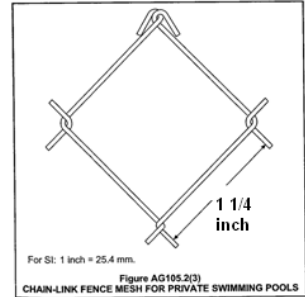


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4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 3/4 inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 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 3/4 inches (44 mm) in width.



6. Maximum mesh size for chain link fences shall be a 2 1/4 inch (75 mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not less than 1 3/4 inches (44mm). (change effective 7-29-09)
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 3/4 inches (4 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. Where the release mechanism of the self-latching device is located less than 54 inches (1732 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 1/2 inch within 18 inches (457 mm) of the release mechanism. (change effective 9-24-08)

9. **There is no indication in the building code and no approval by the building official which will accept an electrically operated pool cover as an approvable alternative to a properly installed barrier complying with Section AG105.2. Neither manually operated nor electrically operated pool covers are acceptable as an approvable alternative to a properly installed barrier complying with Section AG105.2.**

Indoor Swimming Pool. (AG105.3) Walls surrounding an indoor swimming pool shall comply with one of the following conditions:

1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or
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 in accordance with US 2017. The audible listed in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door and/or its screen, if present, are opened and be capable of being heard throughout the house during



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normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touch pad or switch, to temporarily deactivate the alarm for a single opening. Deactivation shall last for not more than 15 seconds. The deactivation switch(s) shall be located at least 54 inches (1372 mm) above the threshold of the door: or

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 1 or 2 described above.

Prohibited Locations. (AG105.4) **Barriers shall be located to prohibit permanent structures, equipment or similar objects from being used to climb them.**

Entrapment Protection for Swimming Pool and Spa Suction Outlets. (AG106)

General. (AG106.1) Suction outlets shall be designed to produce circulation throughout the pool or spa. Single-outlet systems, such as automatic vacuum cleaner systems, or multiple suction outlets, whether isolated by valves or otherwise, shall be protected against user entrapment.

Suction Fittings. (AG106.2) Pool and spay suction outlets shall have a cover that conforms to ANSI/ASMEA 112.19.8M, or an 18 inch by 23 inch (457 mm by 584 mm) drain gate or larger, or an approved channel drain system.

Exception: Surface skimmers

Atmospheric vacuum relief system required. (AG106.3). Pool and spa single or multiple-outlet circulation systems shall be equipped with atmospheric vacuum relief should grate covers located therein become missing or broken. This vacuum relief system shall include at least one approved or engineered method of the type specified herein, as follows:

1. Safety vacuum release system conforming to ASME A112.19.17; or
2. An approved gravity drainage system.

Dual Drain Separation. (AG 106.4). Single or multiple pump circulation systems have a minimum of two suction outlets of the approved type. A minimum horizontal or vertical distance of 3 feet (914 mm) shall separate the outlets. These suction outlets shall be piped so that water is drawn through them simultaneously through a vacuum-relief-protected line to the pump or pumps.

Pool Cleaner Fittings. (AG106.5). Where provided, vacuum or pressure cleaner fitting(s) shall be located in an accessible position(s) at least 6 inches (152 mm) and not more than 12 inches (305 mm) below the minimum operational water level or as an attachment to the skimmer(s).

Electrical Inspections Required.

Rough-In Electrical inspection required prior to pouring concrete and prior to pouring slab next to pool. Any indoor pool or outdoor in-ground pool must have a bonding grid installed within the concrete, within 18 inches of the perimeter edge of the pool. All metal parts must be grounded. **(2005 NEC 680 and 2008 NEC 680).**

Final electrical inspection required. The final inspection is to check for grounding on lights, plugs, and any other electrical equipment installed in or near the pool. **(2005 NEC 680 and 2008 NEC 680).**

Planning and Zoning Requirements governing swimming pools.

Question: **Where can a private swimming pool be located on a lot within the unincorporated areas of Hardin County?**

Answer: **Private swimming pools are permitted as an Accessory Use by the County's zoning ordinance in all Residential Districts: (R-1 – Urban Residential District, R-2 Rural Residential District, and R-3 Residential Estate District). Private swimming pools must also comply with private Subdivision Restrictions and all drainage and utility easements established on the subdivision plat recorded in the office of the Hardin County Clerk (www.hcky.org).**

The location on a lot of a private swimming pool is per the following:

R-1 Urban Residential District. When a pool is to be located on a R-1 residential lot it must meet the following setback requirements. No structure shall be constructed closer to the particular property line than indicated below:

- Front Setback – 40 feet from the front property line or 70 feet from the center of the street, whichever is greater;
- Side Setback – 10 feet;
- Rear Setback – 15 feet.

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R-2 Rural Residential District. When a pool is to be located on a R-2 residential lot it must meet the following setback requirements. No structure shall be constructed closer to the particular property line than indicated below:

Less than Three Acre Lots:

Front Setback – 40 feet from the front property line or 70 feet from the center of the street, whichever is greater;

Side Setback – 10 feet;

Rear Setback – 50 feet.

Note 5. Building setbacks – Lots less than the Minimum and Open Space Subdivision Designed Lots, See R-1 Setbacks. (Hardin County Development Standards 2009 - change effective 11-12-09)

Three Acre or Larger Lots:

Front Setback – 70 feet from the front property line;

Side Setback – 10 feet;

Rear Setback – 50 feet.

R-3 Residential Estate District. When a pool is to be located on a R-3 residential lot it must meet the following setback requirements. No structure shall be constructed closer to the particular property line than indicated below:

Front Setback – 70 feet from the front property line;

Side Setback – 20 feet;

Rear Setback – 100 feet.

Hardin County Health Department, Environmental Services (270-769-0312) restrictions on location of swimming pools. Per the **Kentucky On-Site Sewage Disposal System Regulation; 902 KAR10:085.**

When a pool is to be located on a residential lot it must meet the following setback requirements.

No Swimming Pool: Above-Ground Swimming Pool or In-Ground Swimming Pool shall be located in conflict with the following distance setbacks:

The pool structure cannot be located any closer than 10 feet from the septic tank.

The pool structure cannot be located any closer than 20 feet from the nearest lateral lines.

Question: **Do the installations of in-ground private swimming pools require the property owner and/or the pool installer to obtain a building permit, pay the permit fee, and meet the building code and other governing code requirements for pools, and obtain the rough-in inspection and the final inspection required before installing the pool and before using the pool?**

Answer: **Yes.**

(2007 KRC 105.1) Permit Required.

A swimming pool or appurtenances thereto shall not be constructed, installed, enlarged, or altered until construction documents have been submitted (R105.3) and a permit has been obtained from the local building official.

Work Exempt from Permits. (2007 KRC R105.2). Permits shall not be required for the following. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Building:

#(7). Prefabricated swimming pools that are less than 24 inches (610 mm) deep.

Abbreviations (AG107)

General AG107.1

ANSI – American National Standards Institute, 11 West 42nd Street, New York, NY 10036

ASME – American Society of Mechanical Engineering, Three Park Avenue, New York, NY 10016-5990

ASTM- ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428

NSPI – National Spa and Pool Institute, 211 Eisenhower Avenue, Alexandria, VA 22314

UL – Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, Illinois 60062-2096

Standards (AG108)

General AG108.1

ANSI/NSPI

ANSI/NSPI-5-99 Standard for Residential In-ground Swimming Pools.....AG 103.1

ANSI/NSPI-5-2003 Standard for Residential In-ground Swimming Pools.....AG 103.1

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ANSI/ASME A112.19.8M-1987 (R1996) Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs and Whirlpool Bathing Appliances.....AG106.2

ASTM

ASTM F 1346-91 (2003) Performance Specifications for Safety Covers and Labeling Requirements for All Covers For Swimming Pools, Spas and Hot Tubs.....AG105.2, AG105.5

ASME

ASME A112.19.17 Manufacturers Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub and Wading Pool.....AG106.3

Building Code Clarification Handouts Available Listing, 03-25-08

2008.001, Crawlspace & Basement Requirements	2008.008, Egress Windows and Window Wells
2008.002, Energy Efficiency Requirements	2008.009, 2007 Top Residential Code Requirements (Booklet)
2008.003, Accessory Structure on Residential Lots	2008.010, Inspection Checklist
2008.004, Dryer Vent Requirements	2008.011, Ramps, Landings, etc. for the Physically Challenged
2008.005, Footing Inspection Checklist	2008.012, Swimming Pools
2008.006, Deck and Stair Guide	2008.013, Floodplain Requirements
2008.007, Windows & Doors- Safety Glazing	