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Residential Swimming Pool Fences and Safety Devices

A swimming pool is any structure intended for swimming, recreational bathing or wading that is capable of containing water over 24 inches deep. This includes in-ground, above-ground and on-ground pools; hot tubs; spas and fixed-in-place wading pools but excludes manmade lakes or ponds created through the collection of storm water or drainage runoff. Urbandale Ordinance 150.03 (35)

The Urbandale Zoning Ordinance requires that swimming pools shall be set back a minimum of ten feet from all property lines, as measured to the closest edge of the water or any structures appurtenant to the pool. Urbandale Ordinance 160.36

Residential swimming pools must be completely enclosed by a barrier as described below.

Exception: A swimming pool with a power safety cover or spas with a safety cover complying with ASTM F 1346.

Indoor swimming pools

Walls surrounding indoor swimming pools are not required to have alarms, power safety covers or self-closing doors with self-latching devices.

Barrier height and clearances- Outdoor Pools

The top of the barrier shall be at least 48 inches above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier must be 2 inches measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level 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 must be 4 inches. IBC 3109.4.1

- **Openings** - Openings in the barrier must not allow passage of a 4-inch-diameter sphere. IBC 3109.4.1.1
- **Solid barrier surface** - Solid barriers, which do not have openings, must not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints. IBC 3109.4.1.2
- **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, the horizontal members must be located on the swimming pool side of the fence. Spacing between vertical members must not exceed 1.75 inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts must not exceed 1.75 inches in width. IBC 3109.4.1.3
- **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 must not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts must not exceed 1.75 inches in width. IBC 3109.4.1.4

Chain link dimensions

Maximum mesh size for chain link fences is 2.25 inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than 1.75 inches. IBC 3109.4.1.5

Diagonal members

Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members is 1.75 inches. IBC 3109.4.1.5

Gates

Access doors or gates shall comply with the requirements of a barrier and must be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and must be self-closing and have a self-latching device. Doors or Gates other than pedestrian access gates must have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, the release mechanism must be located on the pool side of the gate at least 3 inches below the top of the gate, and the door, gate and barrier must have no opening greater than 0.5 inch within 18 inches of the release mechanism. IBC 3109.4.1.7

Dwelling wall as a barrier

Where a wall of a dwelling serves as part of the barrier, one of the following must apply:

1. Doors with direct access to the pool through that wall must be equipped with an alarm which produces an audible warning when the door and its screen are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch shall be located at least 54 inches above the threshold of the door and be located with-in sight of the pool.
2. The pool must be equipped with a power safety cover which complies with ASTM F 1346.
3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the administrative authority, may be accepted so long as the degree of protection afforded is not less than the protection afforded by item 1 or 2. IBC 3109.4.1.8

Pool structure as barrier

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, then the ladder or steps either must be capable of being secured, locked or removed to prevent access, or the ladder or steps must be surrounded by a barrier. When the ladder or steps are secured, locked or removed, any opening created can not allow the passage of a 4-inch-diameter sphere. IBC 3109.4.1.9

Prohibited locations

Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers. IBC 3109.4.3

Entrapment avoidance

Suction outlets shall be designed in accordance with ANSI/APSP-7. IBC 3109.5

Call Before You Dig:

Call "One Call" for utility locations before you dig at 811. Utility locations are typically completed within 48 hours of your request. Underground utility location prior to digging is required by state law. This service is free of charge.

Required Inspections

1. **Pins and Setbacks**
The property corner pins must be exposed to view and the locations for the fence corner posts marked. If the property corner pins cannot be found, it is the owner's responsibility to have a registered land surveyor or civil engineer establish these points.
2. **Electrical Bonding**
The bonding connections and wire shall be visible to the inspector.
3. **Final Inspection**

Facts & Figures on Child Drowning's (U.S. Consumer Product Safety Commission)

LOCATION OF DEATHS

75% of deaths of children younger than 14 years old occurred at a residence— **53%** of those victims were younger than 5 years old.



58%
in-ground pools



17%
above-ground pools



9%
portable pools

INJURIES

4,900 Average number of emergency department pool and spa drowning-related injuries treated annually from 2011–2013



*The U.S. Consumer Product Safety Commission estimates injuries based on the National Electronic Injury Surveillance System. The full report is here: <http://www.poolsafely.gov/wp-content/uploads/2014/05/Pool-or-Spa-Submersion-Estimated-Injuries-and-Reported-Fatalities-2014-Report.pdf>

- Drowning is the #1 leading cause of unintentional death for children ages 1-4 according to the Centers for Disease Control and Prevention.
- 390 Annual average number of drowning deaths in pools and spas of children ages 0-14 (2012-2013) CPSC.
- African American children between ages 5 and 19 are 5.5 times more likely to drown in a pool than white children of the same age.
- 76% of deaths involved children younger than age 5
- 67% of deaths involved children between ages 1 and 3

PREVENTION: Simple Steps Save Lives

- Stay within **arm's reach** at **ALL** times in and around the pool
- Assign an adult **water watcher**
- **Fence** your pool: Use a 4-foot or taller fence with self-closing or self-latching gates.
- Install pool and gate **alarms**
- Learn how to **Swim**
- Learn **CPR**
- Take the *Pool Safely* **Pledge:**
<http://www.poolsafely.gov/pledge>