



CITY OF TUCSON DEVELOPMENT SERVICES DEPARTMENT

Swimming Pool & Spa Guidelines

Each year, hundreds of young children die and thousands come close to death due to submersion in swimming pools. Current estimates show that each year about 300 children under 5 years old drown in swimming pools.

In California, Arizona and Florida drowning was the leading cause of accidental death in and around the home for children under the age of 5 years, while 75% of children involved in swimming pool submersion or drowning accidents were between 1 and 3 years old[†].

We all can do our part in creating a safer environment for our children, and knowing the building code for swimming pools is an imperative step towards that goal of zero child related pool accidents in our community. It is our hope that the following information will provide you with the necessary tools to make your pool a child safe pool.



The application of the building code as it pertains to pools, spas, and hot tubs shall be designed and constructed to provide protection against potential drowning, and near drowning by restricting access to swimming pools, spas, and hot tubs. If you have further questions or concerns please don't hesitate to call Development Services at (520) 791-5550 or the Tucson Fire Department at (520) 791-4512.

ENCLOSURE & BARRIER REQUIREMENTS

A swimming pool shall be protected by an enclosure and barrier surrounding the pool area and shall meet the following minimum requirements:

1. Be entirely enclosed by at least a 5' - 0" wall, fence or other enclosure as measured on the exterior side of the wall or fence.
2. The enclosure and barrier shall not contain openings, handholds, or footholds accessible from the exterior side of the enclosure and barrier that can be used to climb.
3. There shall be no openings in the wall or fence through which a spherical object 4" in diameter can pass. (Figure 1)

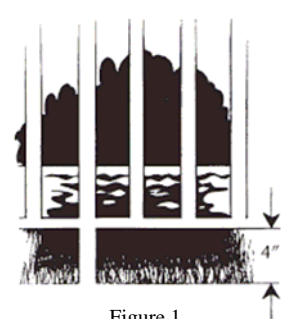
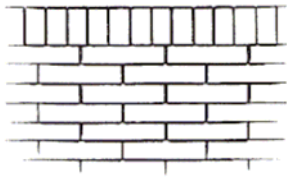


Figure 1

[†] United States Consumer Product Safety Commission Study

4. The wall or fence shall be at least 20" from the water's edge.

TYPES OF ENCLOSURE & BARRIER WALLS



Solid Walls

Solid walls 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.

Wrought Iron & Similar Fences

The horizontal components of any wall, fence or barrier shall be spaced not less than 45" apart measured vertically (Figure 2) or shall be placed on the pool side of a wall or fence with opening in the vertical components (vertical rails) greater than 1 3/4" measured horizontally. (Figure 3)

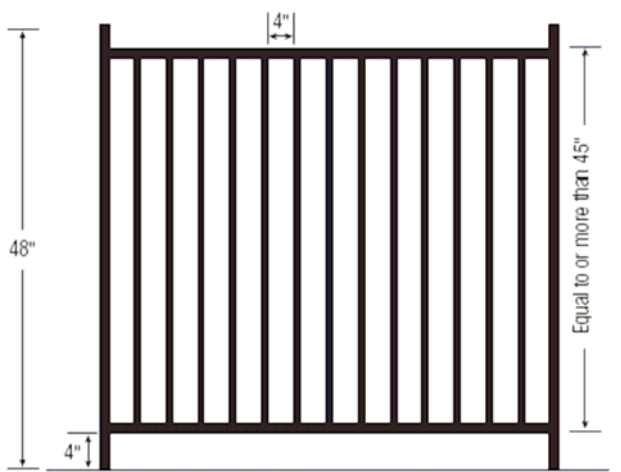


Figure 2

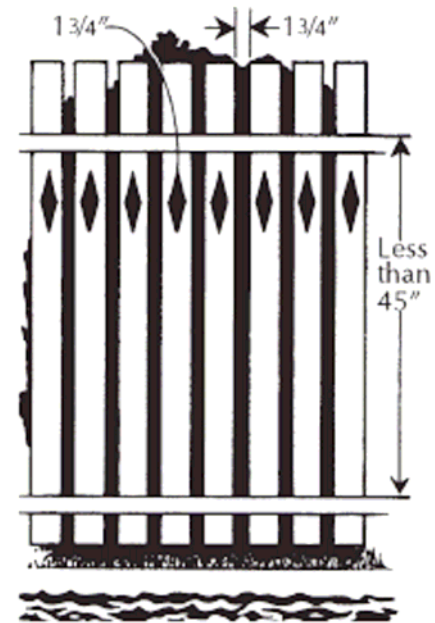


Figure 3

Chain Link Fences

On Chain Link Fences, the maximum mesh size shall be 2 1/4" square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1 3/4". (Figure 4)

WARNING: Barriers are **NOT** child-proof; they only provide layers of protection for a child who strays from supervision. Barriers give parents additional time to locate a child before the unexpected becomes a reality.

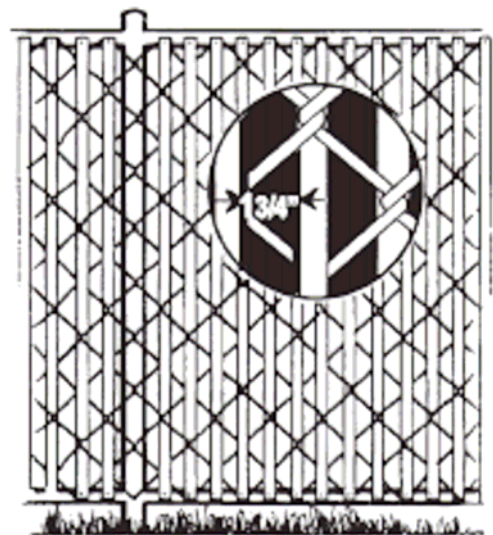


Figure 4

Lattice Fences

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 ¾". (Figure 5)

WARNING: Swimming pool drowning of young children are silent deaths. It is unlikely that splashing or screaming will occur to alert a parent or caregiver that a child is in trouble.

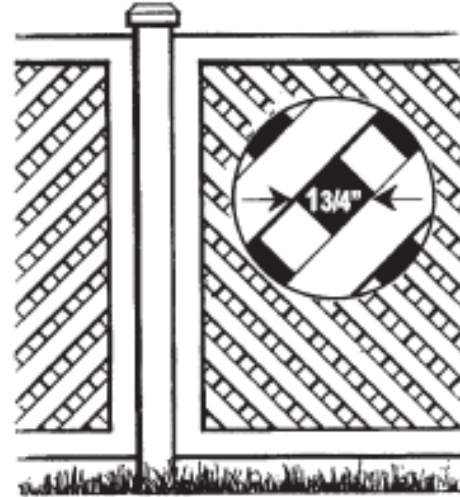


Figure 5

The Residence

The Residence or living area **CANNOT** be used as part of the enclosure required for a swimming pool or other contained body of water except for the following exceptions:

1. Opening Limitations

The residence may be used as part of the enclosure when a yard barrier is installed which has a minimum height of 4' - 0", or if the openings from the residence which would permit access to the swimming pool shall be permanently altered such that a spherical object 4" in diameter cannot pass. This is not an option for doors or emergency escape or rescue windows that adjoin the pool area.

2. Pool Barrier Options

A Pool Barrier is different from a property, perimeter, or enclosure wall or fence that keeps neighboring children from accessing your pool. The barrier is required if the pool enclosure does not fully enclose the pool and any residence opening leading to the pool is 4" or greater. They are specially designed so that children cannot easily climb, crawl, or squeeze through.

A. Wall or Fence

A minimum height 4' - 0" wall or fence separating the pool and/or spa from the house or living areas shall meet all enclosure requirements. It may not block passage from any emergency escape or rescue windows.

B. Pool Cover

The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346-91. An appeal to the building official will be required to use this exception.

ASTM F1346-91. Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs.

C. Above Ground Pools

An above ground swimming pool having non-climbable exterior sides, which is a minimum height of 4' – 0" may serve as the barrier. Any access ladder or steps shall be removable without tools and secured in an inaccessible position with a latching device not less than 54" above the ground when the pool is secure.

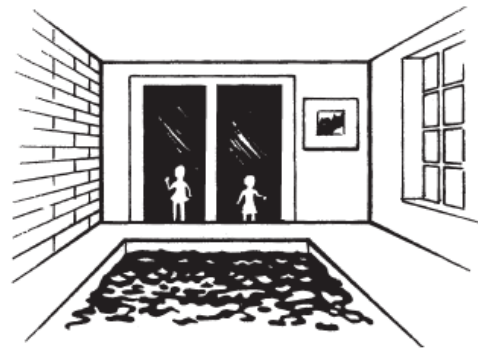
WARNING: Barriers should be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

SPA & HOT TUB COVERS

Spas or hot tubs with a lockable safety cover which complies with ASTM 1346-91 shall be exempt from all enclosure/barrier requirements.

INDOOR POOLS

All doors with direct access to the swimming pool or other contained body of water shall be equipped with a self-latching device which meets the requirements of subsection 1 paragraph C of the building code. All other open able dwelling unit or guest room windows with similar access shall be equipped with a screwed in place wire mesh screen or a keyed lock that prevents opening the window more than 4" or a latching device located not less than 54" above the floor. Emergency escape or rescue windows shall not adjoin the pool area.



GATES

Gates for the enclosure shall be self-closing and self-latching with a latch located at least 54" above the underlying ground or on the pool side of the gate with a release mechanism at least 5" below the top of the gate and no openings greater than 1/2" within 2' of the release. The gate shall open outward from the pool.

WARNING: The weak link in the strongest and highest fence is a gate that fails to close and latch completely. For a gate to close completely every time, it must be in proper working order.

ENTRAPMENT PROTECTION SUCTION OUTLETS

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

Pools and spa suction outlets shall have a cover that conforms to ANSI/ASME A112.19.8M, or an 18" x 23" drain grate or larger, or an approved channel drain system.

Pool and spa 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.

WARNING: Pool Submersions involving children happen quickly. A child can drown in the time it takes to answer a phone. 77% of the victims have been missing from sight for 5 minutes or less.

Dual drain separation

Single or multiple pump circulation systems shall have a minimum of two suction outlets of the approved type. A minimum horizontal or vertical distance of 3' shall separate the outlets. These suction outlets shall be piped so that the water is drawn through them simultaneously through a vacuum relief protected line to the pump or pumps.

POOL SAFETY

Please note these codes and guidelines are meant to provide additional time to locate a child. We need to remember that children are not waterproof in the same way as the most secure enclosure is not child proof. These are some other considerations that go hand in hand with having a safer pool for our children.

- Once a child is missing, check the pool first. Check the edge of the pool and scan the ENTIRE pool from surface to bottom. Seconds count in preventing death or disability.
- Do not allow a young child in the pool without a responsible adult supervising.
- Do not consider young children to be drown proof because they have had swimming lessons. Children must be watched closely while swimming.
- Do not use flotation devices as a substitute for supervision.
- Learn CPR (cardiopulmonary resuscitation)
- Keep rescue equipment by the pool. Be sure a telephone is easily accessible with you or by the poolside.
- Remove all toys from in and around the pool when not in use. Toys will attract young children to the pool.
- Never prop open the gate to a pool barrier.



If you would like to learn CPR, You can register for CPR classes with the “Save A Life” office at (520) 623-8484. Office hours are 8:30 am to 4:00 pm Monday thru Friday. Before calling to register, please have available the following information:

- Name
- Phone number

- Choice of C.P.R. or first aid class
- Level of C.P.R. required
- Need for class in Spanish
- Know what days you're available to attend

In addition, there are many other CPR classes around the Tucson Metropolitan Area that will train you how to perform CPR. You can call the American Heart Association and they can direct you to a training class that will meet your specific needs at 1-877-AHA-4CPR.

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