

Construction Requirements For Private Swimming Pools & Spas

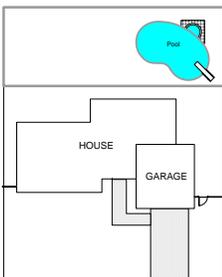
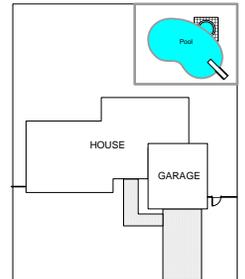
PERMITS REQUIRED: Any structure intended for swimming or recreational bathing that contains water greater than 24" (inches) deep are required to be permitted and inspected (including pre-fabricated pools that exceed 5,000 gallons). A single permit will be issued for your pool or spa and all associated equipment. (Encroachment permits may be required from the Public Works Department when intending to use public right-of-way.)

FENCE AND GATES

REQUIRED PROTECTION:

ALL pools, spas, and bodies of water as described above, greater than 24" (inches) in depth shall be protected from unwanted access by one of the following:

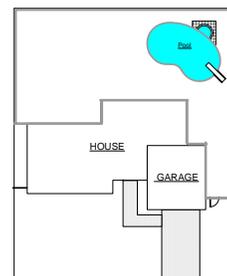
1. Completely surround the pool or spa on all sides with a 5' high, non-climbable fence. (See "Enclosure" page 2)



2. Provide a non-climbable fence between the house and the pool, and utilize the property line fences (walls) to act as the remaining barriers. (See "Enclosure" page 2)

3. Use the rear yard fencing as a portion of the barrier with the wall of the house as the remaining barrier. The house must have alarms on all doors that provide access to the pool area. The door alarms are to meet all the following requirements

- a) Has a continuous audible sound,
- b) sounds immediately upon the door or window opening, and
- c) keeps sounding while the door or window is open.



Construction Requirements For Swimming Pools & Spas (continued)

SWIMMING POOL AND SPA ENCLOSURE PROTECTION

1. General

All bodies of water greater than 18" in depth shall be equipped with at least one of the following seven drowning prevention safety features:

- a) The pool shall be isolated from access to a home by an enclosure that meets the requirements of CBC section 3109.4.4.3 (see section 2. Enclosure)
- b) The pool shall incorporate removable mesh pool fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.
- c) The pool shall be equipped with an approved safety pool cover that meets all requirements of ASTM specifications F 1346. (Hot tubs or spas shall be equipped with a locking safety cover that meets or exceeds ASTM-ES 13-89).
- d) The residence shall be equipped with exit alarms on those doors providing direct access to the pool.
- e) All doors providing direct access from the home to the swimming pool shall be equipped with a self-closing, self-latching device with the release mechanism placed no lower than 54" above the finished floor. (see page 1 figure # 3).
- f) Swimming pool alarms that, when placed in pools, will sound upon detection of accidental or unauthorized entrance into the water. These pool alarms shall meet and be independently certified to the ASTM Standard F 2208 "Standards Specification for Pool Alarms" which includes surface motion, pressure, sonar, laser and infrared type alarms. (This does not include individual use protection devices such as an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water).
- g) Other means of protection if the degree of protection is equal to or greater than that afforded by any of the devices listed above and have been independently verified by an approved testing laboratory as meeting standards for those devices established by ASTM or ASTM E.

2. Enclosure

All enclosures shall have all of the following characteristics:

- a) Any access gates through the enclosure shall open away from the swimming pool and are self-closing with a self-latching device placed no lower than 60" above the ground.
- b) A minimum height of 60".
- c) A maximum vertical clearance from the ground to the bottom of the enclosure of 2".
- d) Gaps or voids, if any, do not allow passage of a sphere equal to or greater than 4" in diameter (chain link fencing is acceptable).
- e) An outside surface free of protrusions, cavities and other physical characteristics that would serve as handholds or footholds that could enable a child below the age of five years to climb over.
- f) Double doors or pairs of gates are not generally allowed, however, removable sections of fence are permitted only if fixed in position in a manner that requires the use of a tool for removal or opening (Padlocks are not acceptable).
- g) The height differential for walls and fences adjacent and perpendicular to the required enclosure shall maintain a 2' minimum distance below the top of the enclosure.

NOTE: A complete site plan will be required for all permits. The type and location of the swimming pool/spa enclosure shall be clearly shown on the plans. This is to include all fences and gates as well as door and window alarms.

Notice of Provisions

Any person entering into an agreement to build a swimming pool shall give the consumer notice of these State regulations.

Construction Requirements For Swimming Pools & Spas (continued)

ELECTRICAL INSTALLATIONS

Electrical wiring and equipment in or adjacent to pools, spas or fountains shall comply with the applicable requirements of the most recently adopted edition of the California Electric Code.

1. Underground Wiring Locations

Except for wiring supplying pool or spa equipment, underground wiring may not be located under the pool or within an area extending 5 feet (1.52m) horizontally from the wall of the pool. (When space limitations exist, special approval may be attained if certain installation conditions are met.)

a) Rigid Nonmetallic Conduit (plastic)

Rigid nonmetallic conduit for circuits exceeding 20 amperes is required to be a minimum of 18" below grade. For GFCI protected circuits of 20 amperes or less the minimum burial depth is 12". These burial depths may be reduced to 4" when the conduit is located under a 4" thick concrete slab with no vehicular traffic (such as driveways), and the slab extends not less than 6" beyond the underground installation.

b) Rigid Metal Conduit

Rigid metal conduit is required to be a minimum of 6" below finish grade. This burial depth may be reduced to 4" when the conduit is located under a 4" concrete slab with no vehicular traffic.

Metal conduit passing through the pool decking shall be protected from corrosion by either a factory applied plastic coating or field wrapped with primer and a listed 10 mil. tape.

2. Overhead Conductor Clearances

Overhead conductors, less than 27' vertical distance above, or 20' horizontal distance from a swimming pool or spa, may be restricted by the Electrical Code or by the electrical utility company. If wiring exists, or is proposed in the area described above, contact the Building and Safety Division and Pacific

Gas and Electric Company.

3. Feeders

Feeder conductors to sub-panels serving swimming pools and/or spas shall have sufficient ampacity to supply the load served.

4. Junction Box Support

Electrical enclosures shall be rigidly supported from a structural member of a building or structure such as a block wall, gazebo, or spa enclosure. Junction boxes not over 100 cubic inches will be considered as adequately supported if two or more rigid metal conduits are threaded wrench tight into the box and those conduits are supported within 18" of the box. Non-metallic conduit shall not be used as a means of support for junction boxes.

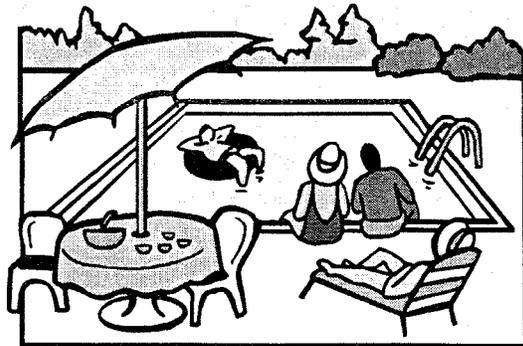
5. Wet Niche Fixtures

Approved metal forming shells shall be installed for the mounting of all wet-niche underwater fixtures and shall be equipped with provisions for threaded conduit entries.

Conduit shall be extended from the forming shell to a suitable junction box or other enclosure located not less than 4' from the inside wall of the pool.

Metal conduit shall be brass or other corrosion resistant material.

Where rigid nonmetallic conduit is used, a No. 8 insulated copper conductor shall be installed in this conduit with provisions for terminating in the forming shell, junction box or transformer enclosure, or ground fault circuit interrupter enclosure. The termination of the No. 8 conductor in the forming shell shall be covered with, or encapsulated in, a listed potting compound to protect such connection from the possible deteriorating effect of pool water.



ENJOY YOUR NEW POOL!

Construction Requirements

For Swimming Pools & Spas (continued)

Antientrapment Requirements for Single Family Home Pools *(California Health & Safety Code 115928)*

Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet all of the following requirements:

1. The swimming pool or spa shall have at least two circulation drains per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the drains.
2. Suction outlets that are less than 12 inches across shall be covered with antientrapment grates, as specified in the ASME/ANSI Standard A 112.19.8, that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area, and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.
3. Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth above shall meet the standards as published in the document, "Guidelines for Entrapment Hazards: Making Pools and Spas Safer," Publication Number 363, March 2005, United States Consumer Product Safety Commission.
4. Whenever a building permit is issued for the remodel or modification of an existing swimming pool, toddler pool, or spa at a single family home, the suction outlet of the existing swimming pool, toddler pool, or spa shall be upgraded or be equipped with an antientrapment cover meeting current standards of the American Society for Testing and Materials (ASTM) or the American Society of Mechanical Engineers (ASME).

Fuel Heated Pools *(2010 California Energy Code)*

The following items must be installed in conjunction with any FUEL HEATED SWIMMING POOL pursuant to the State of California Energy Code [2010 Energy Code Section 114(a)]:

1. An ON-OFF SWITCH mounted on the outside of the heater for easy access to allow shutting off the operation of the heater without adjusting the thermostat setting and to allow restarting without re-lighting the pilot light.
2. A permanent WEATHERPROOF PLATE, easily readable, giving instructions for the energy efficient operation of the swimming pool and for the proper care of swimming pool water when a pool cover is used.
3. A 36 inch minimum length of plumbing between the filter and the heater, to allow for FUTURE SOLAR HEATING equipment.
4. Outdoor fuel heated pools shall be provided with a POOL COVER.
5. The POOL HEATER shall have a thermal efficiency of at least 78%.
6. TIME CLOCKS shall be provided and so equipped so that the pump can be set to run in the off-peak electric demand period (unless required to operate an active solar pool heating system) and for the minimum time necessary to maintain the water in a clear and sanitary condition. Where public health standards require 24-hour operation, time clocks are not required.
7. Pools shall be provided with DIRECTIONAL INLETS to provide adequate mixing of pool water.