

# NEW PUBLIC POOL PLAN APPROVAL REQUIREMENTS



**LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH  
ENVIRONMENTAL HEALTH  
RECREATIONAL WATERS PROGRAM  
March 2020**



## Table of Contents

INTRODUCTION	3
FLOW CHART	4
GENERAL INFORMATION AND REQUIREMENTS	5
PLAN SUBMISSION REQUIREMENTS	5
GENERAL PUBLIC POOL REQUIREMENTS	7
REQUIREMENTS FOR SWIMMING POOLS	14
ADDITIONAL REQUIREMENTS FOR SPAS	15
ADDITIONAL REQUIREMENTS FOR GUTTER AND RIMFLOW POOLS	17
REQUIREMENTS FOR SOLAR HEATING	17
REQUIREMENTS FOR SPRAY GROUNDS	17
CONSTRUCTION INSPECTIONS	19
APPENDICES	20
<b>Figures and Tables</b>	<b>20</b>
1. Dimension Requirements For A Pool Without Diving Boards 31-B3	20
2. Spa Pools	21
3. Coping	22
4. Fencing Dimensions	23
5. Stair and Handrail Dimensions	24
<b>Checklist</b>	<b>25</b>

## INTRODUCTION

Public pools, including swimming pools, spas, spray grounds, wading pools, and special purpose pools located at apartments, condominiums, gated communities, hotels and motels, public and private schools, health clubs, city and county parks, mobile home parks, resorts and organizations, medical facilities, and water theme parks, are under the responsibility of the Los Angeles County Recreational Waters Program for plan review and approval. Public pools do not include individual therapeutic tubs or baths for cleaning the body, or pools at private single-family homes or dwellings with three units or fewer. This document contains requirements for submitting plans for a public pool in Los Angeles County. It also contains basic requirements of the California pool code.

### **Why are plans required?**

It is important for public health and safety that pools are constructed properly. Plan reviews and approvals are a cost-effective way to ensure that public pools meet the applicable code requirements and are safe. The California Health and Safety Code, the California Code of Regulations Title 22, and the California Building Code Title 24, provide the legal authority and requirements for the safe operation and construction of public pools.

### **When will the plans be reviewed?**

It is the goal of the Recreational Waters program to provide effective and efficient service in public health protection to all our clients. It is our goal to provide initial plan reviews within 20 days of plan submissions. Resubmissions with corrections take priority over new submissions and it is our goal to review them within 14 days.

### **Where can I get information?**

The Recreational Waters website has information, forms, and the fee schedule.

<http://www.publichealth.lacounty.gov/eh/inspection/pool-plan-check.htm>

You may also call our main office at (626) 430-5360.

### **Where can plans be submitted?**

Plans are submitted to the Recreational Waters Program at the Environmental Health Headquarter.

Los Angeles County Department of Public Health  
Environmental Health, Recreational Waters Program  
5050 Commerce Dr.  
Baldwin Park, CA 91706  
(626) 430-5360

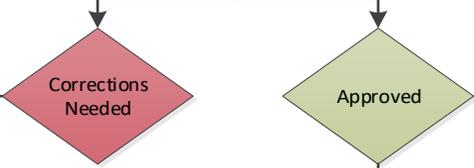
# Recreational Waters Plan Check Flow Chart

Pool Plans Submitted to:  
Los Angeles County Department of Public Health  
Environmental Health Recreational Waters Program  
5050 Commerce Dr.  
Baldwin Park, CA 91706  
(626) 430-5360

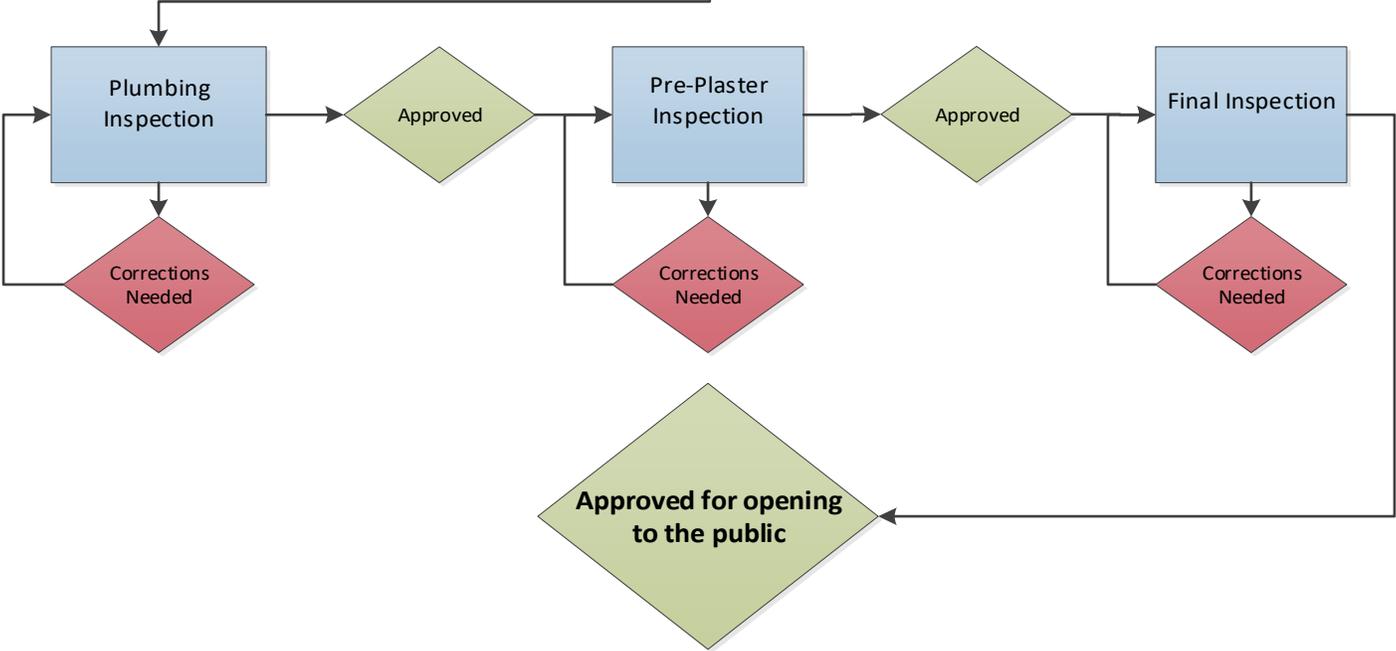
Application and fees will be verified.  
Plans may not be accepted if the application is incomplete, or critical issues can be assessed at the counter.

Corrections made and plans resubmitted.  
Additional fees may be incurred for changes made beyond the scope of corrections

Plans Reviewed and Report Issued



Obtain Building Permits and Commence Construction  
Call at least 5 days before each of the following field inspections to make an appointment. Plan approval is valid for 2 years.



## GENERAL INFORMATION AND REQUIREMENTS

Any person proposing to construct, reconstruct, renovate, alter, relocate, or replace a public pool or change its ancillary facilities, mechanical equipment or related piping, is required to submit legible plans and specifications to the County of Los Angeles, Department of Public Health, Recreational Waters Program for review and written approval prior to commencing the work and in advance of the issuance of any building, plumbing, or electrical permits.

A valid California State Contractors License (C-53 Pool Contractor, or A Engineering) is required to construct public pools. A licensed architect or engineer may submit plans; however, the pool contractor must be identified prior to commencement of construction.

A minimum of three complete sets of plans and specification sheets are required. One copy of the approved plans and specifications will be retained by the Recreational Waters Program. Plans and specification sheets should include all items listed in the plan submission requirements below.

The appropriate fee, paid to the County of Los Angeles, is required at the time of submission (Company check or cash).

All equipment, materials, methods of construction, and design must be approved. All equipment must be installed per the manufacturer's instructions.

Any changes in construction plans or equipment must be approved by the Recreational Waters Program. Changes may require additional plan check fees and resubmittal of plans.

Pool plan approval does not authorize the violation of any law, ordinance, or regulation and final approval is subject to field inspection and evaluation. Written approval is required to open the pool for use.

Plan approvals are valid for a period of two years from the date of the stamp.

## PLAN SUBMISSION REQUIREMENTS

The following items are required to be included with the plan submission. Missing items may delay plan approval. See the requirements below and in the checklist in the Appendices.

1. A completed Service Request Application with the following information. The application form is available on the website and at our office.
  - A. Job Address and APN# - street number, city, zip code, APN (Parcel number)
  - B. Name, mailing address, email address, and telephone numbers of pool contractor and owner.
2. Required fee payable to the County of Los Angeles. See separate fee schedule, also available on our website and at our office.
3. Three sets of drawings, to scale. Drawings must include the job address and APN and be drawn in scale appropriate for the project:
  - A. All pools other than spa pools, ¼ " = 1 foot. (top and profile view).
  - B. Spa pools, ½ inch or 1 inch = 1 foot. (top and profile view).
4. Drawings must be included for each of the following:
  - A. Pool Top View
    1. Dimensions (length, width).
    2. Suction and return line plumbing sizes and type of material.
    3. Location of skimmer(s), split suction drain(s), equalizers, and return lines.

4. 4 to 6-inch wide, slip-resistant tiles, of contrasting color, along the bottom of the pool where the water depth is 4½ feet. (Pools with a maximum water depth of 5 feet or less do not require a marking line).
  5. Stairs, ladders, grab rails, handrails.
  6. Location of depth markers.
  7. Contrasting tile on stair tread edges and spa bench edges, if used.
  8. Automatic fill line location.
  9. Pool light location(s), wattage, type, make, model.
  10. Emergency shut-off switch location for spa pools.
  11. Diving board (if any) location and distance from board center to side walls or other diving boards. (Top view and side view) (See the pool code for dimension requirements for pools with diving boards)
- B. Pool Profile View (longitudinal section)
1. Dimensions (length)
  2. Depths at the shallow end wall, depths at any beginning or ending in breaks in slope and depth at the main drain.
  3. Indicate depth markers on the pool wall matching the location on the pool deck.
  4. Stairs, with tread and riser dimensions.
  5. Dimensions of handrails, including height from deck and each step tread.
  6. Sectional view of coping.
  7. Water line tile (6", contrasting color, glazed/glossy smooth)
  8. Diving board (if any) with distance diving board extends over the pool and depths below the diving board.
- C. Plot Plan; Equipment Room, Deck, Pool Enclosure, Restrooms, Safety Signs
1. Scaled plot plan showing pool location on property in relation to adjacent buildings.
  2. Equipment room
    - a. Dimensions including ceiling elevation (at least 7'), placement of equipment and location in relation to the pool.
    - b. Lockable entrance.
    - c. Sloped floors to drainage (2%). Drain to sewer if indoors and to storm drain if outdoors.
    - d. Hose bibb with approved backflow for cleaning the floors and equipment.
    - e. Backwash and sewer connection. Protected from rain intrusion, if outdoors.
    - f. Floor sink or utility sink. Protected from rain intrusion, if outdoors.
  3. Deck details
    - a. Pool location on deck.
    - b. A minimum of 4 feet of unobstructed decking around the pool (6 feet between any two pools). Include Americans with Disabilities Act (ADA) lift location.
    - c. Clearances from pool edge to pool enclosure and clearances outside of pool enclosure.
    - d. Deck drainage type (located at least 4 feet from coping).
    - e. Deck material.
    - f. Depth markers and no dive markers. Where the pool has a maximum depth of 6 feet or less, no diving markers on the deck adjacent to all deck depth markers.
    - g. Hose bibb locations supplied with potable water with approved backflow.
  4. Pool enclosure details
    - a. Show the pool with the proposed fence or building wall surrounding it.
    - b. Show a scaled profile view of all fences, gates, and doors. Include latch hardware details. Must be self closing and self latching.
    - c. Outline the entire enclosure with a yellow marker.
    - d. Identify areas outside of the enclosure to ensure they are public areas and not property lines.
  5. Restroom details: See requirements for when restrooms, showers, and drinking fountains are required.
    - a. Separate restrooms for men and women. Urinal(s) required in men's restroom.
    - b. Smooth, moisture resistant wall finishes throughout.
    - c. Floors must be concrete or similarly resilient surface extending upwards onto the

walls at least 5" with an integrally coved junction and must slope,  $\frac{1}{4}$ " per foot (2%), to floor drain(s).

- d. Shower(s) with adequate drainage and hot (not > 110°F) and cold water.
- e. Hand lavatory with hot and cold water, a permanently mounted soap dispenser, and a single-service towel dispenser.
- f. Toilets(s) and urinal(s).
- g. Drinking fountain(s).
- h. Separate locker/dressing facilities are required for all non-residential pool facilities.

6. Safety Signs and Equipment

- a. Indicate location of signs
- b. Indicate location of body hook attached to a pole at least 12 feet in length.
- c. Indicate location of life ring with rope attached.
- d. Indicate location of pool test kit, DPD type and pH.

7. Solar heater system detail, if being installed

5. General Data and Equipment List

- A. Surface area of the pool in square feet.
- B. Volume or total pool capacity in gallons.
- C. Color of plaster or pool surface (White).
- D. Filter: make, model, square footage, and maximum GPM (Gallons Per Minute).
- E. Filtration pump: make, model, horsepower rating, and maximum GPM.
- F. Additional pumps: make model number and horsepower rating (spas, attraction pumps etc.).
- G. Skimmer(s): make, model number, and maximum GPM.
- H. Influent pressure gauge placed after the pump but before the filter (usually found on top of the filter).
- I. A vacuum gauge before the pump.
- J. Chlorinator and pH Regulating System: make and model.
- K. Chemical controller: make and model (for pH and disinfection control)
- L. Flowmeter: make and model.
- M. Lighting; make and model, watts or wattage equivalent.
- N. Backwash plumbing to sewer with air gap. Separation tank for filters using DE or similar media.
- O. Fresh water automatic fill line from a potable water source with approved backflow prevention device.
- P. Suction drain covers / grates: make and model.
- Q. Emergency shut off switch for all spa pumps and blowers.

## GENERAL PUBLIC POOL REQUIREMENTS

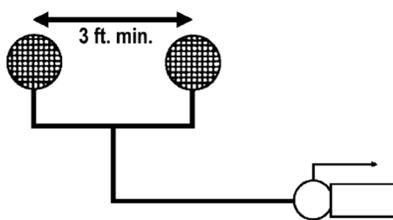
1. All pool equipment must be listed on the Los Angeles County Approved Pool Equipment List. Equipment includes filters, pumps, skimmers, flow meters, chemical feeders, chlorine generators, drain covers, prefabricated spas, and certain supplemental equipment and finishes.
2. All pools must be lined with white plaster or a smooth, waterproof, white interior finish, impervious to moisture. Samples are required for shell finishes not previously approved.
3. No letters, marking, or images are permitted on the pool shell other than required safety markings.
4. The pool must be constructed of reinforced concrete or a material equivalent in strength and durability (**See Figures and Tables #1 and #2 for dimension requirements**).
5. The pool must be lined with (6" wide) waterline tiles around the entire perimeter of the pool. Rim flow pools are permitted to have depth markers installed below the waterline, but as close as is

reasonable to the waterline. Waterline tiles must be contrasting in color to the white pool shell and be glossy smooth and easily cleanable.

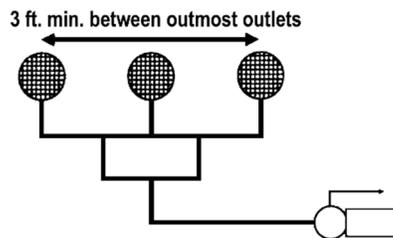
6. Depth markers of contrasting color are required on the pool wall at the water line on both sides, at the minimum and maximum depths, at the break in slope, and at both ends of the pool. Waterline depth markers are required to be glazed and easily cleanable waterline tiles. Depth markers are required on the pool deck corresponding to every depth marker at the water line and are required to be permanent, slip resistant, tile, concrete, or concrete-like. All depth markers must be marked with the letters, "feet" or "ft." and "inches" or "in". Painted letters or vinyl decals are not permitted. Depth marker numbers must be at least 4 inches in height and must be positioned to indicate the water depth accurate to the nearest 6 inches as measured from the pool floor to the middle of the skimmer opening. Exception; Spa and wading pools require at least 2 depth markers.
7. A ladder as a second means of exit is required at the deep end or area of a pool having a water depth greater than 4½ feet, and on both sides if the pool width exceeds 30 feet, every 100 feet.
8. Steps and step holds of ladders must have a minimum tread of 5 inches and a minimum width of 14 inches. Step risers must be uniform and not exceed 12 inches. Grab railings must be provided at the top of both sides and extend over the coping or edge of the deck.
9. Stairs are required at the shallowest end of all pools greater than 1 foot in depth to the deck. All pools with two shallow ends or any instance where the pool user will encounter a shallow, deep, and shallow configuration as the pool user proceeds through the pool, will be required to have stairs at one shallow end and a means of exit such as a ladder(s) at the other shallow end.
10. All stairs must be at least 24 inches wide. All risers must be no greater than 12 inches high. The top riser is considered that distance from the deck or coping, down to the first tread of the stair and the deck thickness/coping should be taken into consideration. The first tread below the deck must be at least 14 inches but not greater than 18 inches long. The remaining treads must be 12 inches but not greater than 16 inches long. If the top tread is convexly or triangularly shaped, it must have a radius of a minimum of 21 inches but not greater than 24 inches. All treads except for the top tread must be uniform. **(See Figures and Tables #5 Stair and Handrail Dimensions)**
11. At least one handrail is required for all stairs. Spas require two handrails. The handrail must be between 28 inches and 36 inches above the deck and above each step tread as measured from the deck and the edge of each step tread to the top of the handrail. The handrail must extend into the pool, from the deck to the bottom step tread, but may not extend beyond the bottom step. A minimum clearance of 3 inches between any handrail and step riser is required. The handrail may not extend onto the deck more than 2 ½ feet or obstruct the deck unnecessarily. **(See Figures and Tables #5 Stair and Handrail Dimensions).**
12. Coping on pools must extend out into the pool at least 1 inch but not more than 2 inches. The coping must be at least 1 inch thick but no greater than 2½ inches thick. The handhold of the coping may not be greater than 9 inches above the waterline. All coping or cantilevered decking must be sloped at 1/4 inch per foot away from the pool. Handholds are required around the entire perimeter of the pool. A C-701 type of handhold for rim flow and fiberglass spa pools is required around the entire pool. **(See Figures and Tables #3 Coping for illustrations of the requirements)**
13. A minimum 4 feet wide, continuous, slip-resistant, non-abrasive deck area of concrete or concrete like material must be provided flush with the top of the pool and extend completely around the pool. Deck material must be approved by this Department. Wood decking or indoor-outdoor carpeting is not permitted. Deck measurements are made from the coping edge. The required decking around a pool must be free of all posts, columns, or other obstructions and extend at least 4 feet behind any diving board, slide, or permanent handicapped equipment. There cannot be any changes in the deck elevation around the pool. All parts of the deck must drain naturally or to floor drains at least 4 feet from the pool and slope between 1% and 2% with no accumulation of

water. The space between the coping and the deck must be sealed with an appropriate caulking. A minimum distance of 6 feet between any two pools or spas is required.

14. Separate men's and women's public toilet facilities are required at the pool, except when living quarters of the farthest pool user is less than 300 feet travel distance from the pool. The distance is the walking distance from the pool wall to the furthest unit and includes 10 feet for each floor of multi-story buildings. Urinal(s) are required in the men's restroom and in unisex restrooms. When restrooms and shower facilities are required, they must be at the pool or adjacent to the pool area and located not more than 100 feet walking distance ( same level) away and be easily accessible by pool users. If two pools are located on the same property and all living units are within 300 feet walking distance to either pool, no toilet facilities are required. If restroom and shower facilities are not required, the facilities need not comply with the swimming pool code regarding separate men's and women's facilities, urinals, and floor drains, but must be constructed so as to be readily cleanable and comply with Building and Safety Department requirements.
15. For calculating the number of showers, toilets, urinals, lavatories, and drinking fountains, one pool user is considered for every 15 square feet of pool surface area. Add multiple pools in the same area together.
  - a. One shower with hot and cold water must be provided for every 50 pool users.
  - b. One lavatory with hot and cold water must be provided for every 80 pool users.
  - c. One toilet must be provided for every 60 women and one toilet and one urinal for every 75 men.
  - d. One guarded jet drinking fountain must be provided for the first 250 pool users and an additional fountain must be provided for each additional 200 pool users or fraction thereof.
16. Each pool must be provided with a separate recirculation, treatment system, and equipment.
17. Each pump located on any type of pool must be plumbed with at least two suction outlets. Suction outlets must be separated by a distance of at least 3 feet, measured from the center of one suction pipe to the other. The suction drains must be plumbed with a "T" in the center that is hydraulically balanced. Each branch of the "T" must be the same size or larger than the main suction plumbing.



**Two Outlets**



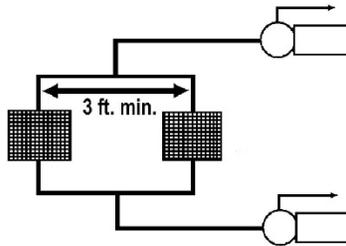
**Three Outlets**

18. In spa pools where space on the floor precludes both suction outlets from being on the floor, one suction outlet can be located on a wall or different design plane as long as the suction outlets are offset and separated by 3 feet and the one on the wall's drain cover is within 3 inches of the floor. At least one filtration suction must be located on the floor.
19. Each suction cover of a split drain must be the same. The flow rating of each cover/grate must be equal to or greater than the flow rating of the pump to which it is connected. For example, if a pump is rated at 80 GPM at 60 feet of head, each cover/grate of the split suction must be rated at 80 GPM or greater. If 3 or more suction outlets are used, refer to the table below.

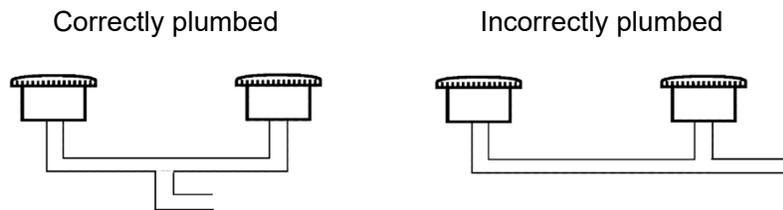
Number of covers/grates per system	Minimum flow rating of each cover/grate % maximum system flow rate
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2	100%
3	66.7%
4	50%
5	40%
6	33.3%

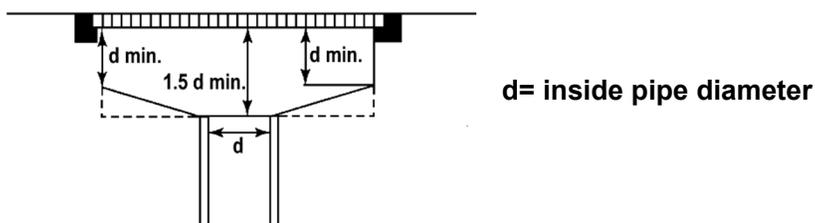
20. Each branch of a split suction must terminate under its own suction outlet. Except suction plumbing from two different pumps may terminate at one suction outlet, provided the combined flow rate of the two pumps is less than the flow rating of the cover/grate. See table above and diagram below.



21. Split suctions must be plumbed so they are hydraulically balanced. See diagram below.



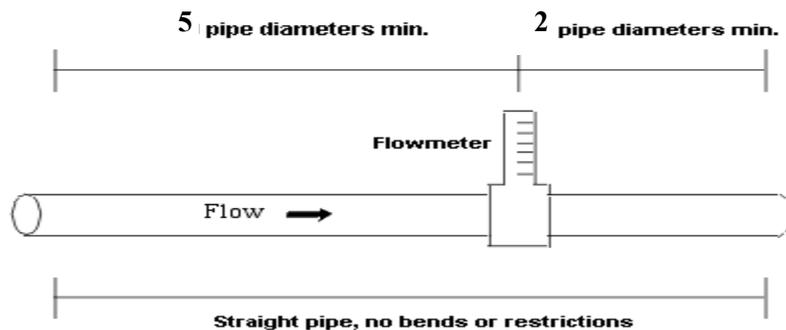
22. A main drain connected directly to a skimmer requires a split main drain.
23. Fasteners for suction fittings are required to be designed so that tools are required for disassembly. Standard slotted screws are not permitted for affixing covers to the suction fitting body. Fasteners must be corrosion resistant and equivalent to grade 316 stainless steel.
24. If the drain cover/grate is not part of a pre-manufactured sump, and is placed on a field-built sump, the sump must comply with the following dimensions.



25. The recirculation system is required to have the capacity to provide a complete turnover of the pool water in:
- One-half hour or less for a spa pool;
  - One-half hour or less for a spray ground;
  - One hour or less for a wading pool;
  - Two hours or less for a medical pool;
  - Six hours or less for other types of public pools.
26. One skimmer is required for every 500 square feet or less of pool water surface or an adequate number to meet 100% of pump flow at the manufacturer's maximum flow rating, whichever is

greater. A typical skimmer is rated at a maximum of 55-75 GPM.

27. Skimmers must meet the following requirements:
- Skimmers must be built into the wall.
  - Skimmers must be individually adjustable.
  - Skimmers must have an air-lock protective device which will prevent leakage of air into the recirculation system.
  - Each skimmer is required to have a cleanable screen or basket, removable from an opening on the deck.
28. If an equalizer is required or used, it must be split at least 3 feet apart, have approved covers, and be located at least 18" below the waterline.
29. Two return lines are required for the first 10,000 gallons and one return line for each additional 10,000 gallons. Return line inlets must be located at least 10 feet apart, and at least 18" below the water line except for spas and wading pools. For pools exceeding 40 feet in width, or greater than 3,000 square feet in surface area, bottom floor return lines are required.
30. Pipes are required to be sized so flow velocity of piping systems, including all pipes and fittings, other than inlet devices or venturi throats, do not exceed 6 feet per second (1.829 m/s) in any suction piping and 8 feet per second (2.438 m/s) in any portion of the return system.
31. Filters must be sized not to exceed the following:
- |                    |         |   |
|--------------------|---------|---|
| Diatomaceous Earth | 2       | GPM/sq.ft.                                |
| Rapid Sand         | 3       | GPM/sq.ft.                                |
| High Rate Sand     | 15 - 20 | GPM/sq.ft. (See rating in equipment list) |
| Cartridge          | .375    | GPM/sq.ft.                                |
32. An influent pressure gauge is required to be placed before the filter but after the pump (usually found on top of the filter). An effluent pressure gauge is no longer required.
33. A vacuum gauge is required to be placed before the pump.
34. A flowmeter must be installed on a horizontal straight run of pipe with a minimum of 5 pipe diameters before and 2 pipe diameters after the flowmeter. It should be positioned after the filter and before the heater. It may be installed after the heater, if a great enough distance can be maintained so that heated water will not damage the flowmeter.



35. An automatic disinfectant and pH regulating system is required. Chlorinators are required to supply not less than the equivalent of 3 pounds of chlorine per day per 10,000 gallons of pool water capacity.
36. A chemical controller is required to monitor and control the pH and disinfectant levels.

37. Chemical feeder pumps and recirculation system pumps are required to be electrically interconnected so that when the recirculation pump is off, chemical pumps are off.
38. Diatomaceous earth or similar media filters must be permanently plumbed to a p-trap with a fixed air gap and have a separation tank. Sand filters must be permanently plumbed to a p-trap with a fixed air gap. A sight glass is required for observation of backwash water. Cartridge filters must have a designated area with a hose bibb and floor drain to clean the filter. An extra cartridge filter (element set) is required to be available at the pool site.
39. No direct connection of a pool or its recirculating system is permitted with a sanitary sewer, storm drain, or deck drain system.
40. The water velocity in all suction line plumbing is not permitted to exceed 6 feet per second and in all return lines water velocity is not permitted to exceed 8 feet per second.
41. Each pool must be provided with a split bottom drain by which the pool can be emptied.
42. An adequate number of hose bibbs are required in the pool area in sufficient numbers to allow a 75-foot hose to reach all areas of the pool deck. A hose bibb is required in the equipment area. Each hose bibb must be protected by an approved backflow device.
43. An underwater light is required in a swimming pool or spa. The light must be white (no color, or color changing) and at least 0.5 watts per square foot of pool or spa surface area. If a lighting type other than incandescent lighting is used, such as fiber optic, fluorescent, halogen, or LED, their equivalency to incandescent lighting must be demonstrated.
44. The pool is required to be enclosed by one or a combination of the following: a fence; portion of a building; wall; or other approved durable enclosure. Doors, openable windows, gates of living units or associated private premises are not permitted as part of the pool enclosure. The enclosure is required to meet all of the following specifications (**See Figures and Tables #3**):
  1. The enclosure is required to have a minimum effective perpendicular height of 5 feet as measured from the outside.
  2. Openings, holes or gaps in the enclosure, doors and/or gates may not allow the passage of a 4-inch diameter sphere. The enclosure is required to be constructed over a hard and permanent material equivalent to concrete.
  3. The enclosure is required to be designed and constructed so that it cannot be readily climbed by small children. Horizontal and diagonal member designs which might serve as a ladder for small children are prohibited. Horizontal members are required to be spaced at least 48 inches apart. No planters or other structures that can be climbed upon will be permitted within 5 feet of the outside of the pool enclosure or within a 5-foot arc of required clear space. The area 5 feet outside of the pool enclosure is required to be a common area open to the public.
  4. Chain link may be used provided that the openings are not greater than 1¾ inches measured horizontally.
  5. The 5-foot areas outside the enclosure must be public areas, open to all patrons of the pool.
  6. A 5-foot clear radius is required outside of the fence enclosure with no trees, lamp posts, or any object that can be climbed.
  7. The enclosure cannot adjoin a private property. A 5-foot clearance is required from adjacent properties.
  8. The deck and ancillary facilities are required to be designed and intended to be used by pool users as defined as those engaged in water activity such as diving, swimming, or wading, or watching those engaged in water activity. All amenities for pool users within the pool enclosure, such as, fire pits, barbeques, and lounge areas, must be in view of the pool and also similar amenities are required to be provided outside of the pool enclosure for non-pool users. See the *Pool Enclosure Informational Bulletin* for allowances with explanations and diagrams.

- 45.** Gates and doors of the pool enclosure are required to meet the following specifications:
1. Gates and doors are required to be equipped with self closing and self latching devices. The self latching devices are required to keep the gate or door securely closed. Gates and doors are required to open outwardly away from the pool except where otherwise prohibited by law. Hand activated door or gate opening hardware are required to be located at a height no lower than 42 inches but no higher than 44 inches above the deck or walkway;
  2. Gates and doors are required to be capable of being locked during times when the pool is closed. Exit doors which comply with Chapter 10, Title 24, California Code of Regulations shall be considered as meeting these requirements.
  3. The pool enclosure is required to have at least one means of egress without a key for emergency purposes. Unless all gates or doors are so equipped, those gates and/or doors which will allow egress without a key are required to have a sign in letters at least 4 inches high stating EMERGENCY EXIT.
  4. The enclosure is required to be constructed so that all persons will be required to pass through common pool enclosure gates or doors in order to gain access to the pool area. All gates and doors exiting the pool area are required to open into a walkway or public area accessible by all patrons of the pool. No access to and from the pool area is permitted directly from private units or patios. No access to non-pool user amenities or rooms shall require passage through the pool area.
- 46.** Supplemental heat transfer systems for pools or spas must not interfere with the proper functioning of the recirculation system or reduce the filtration rate below the required minimum. Heat exchangers must be installed according to requirements in the California plumbing code.
- 47.** A body hook with a pole at least 12 feet in length is required (not required for wading pools and spas). For public pools that exceed 75 feet in length or 50 feet in width, the pool operator is required to provide a rescue pole on at least two opposing sides of the public pool at centralized locations.
- 48.** A life ring with a rope attached is required. The rope must be as long as the maximum width of the pool (wading pools and spas exempt). For public pools that exceed 75 feet in length or 50 feet in width, the pool operator is required to provide a life ring on at least two opposing sides of the public pool at centralized locations.
- 49.** Plans are required to indicate the location of the required safety signs. The appropriate signs will be verified upon inspection as follows per code:
- REQUIRED SIGNS.** All signs shall have clearly legible letters or numbers not less than 4 inches high, unless otherwise noted, fixed to a wall, pole, gate or similar permanent structure in a location visible to all pool users.
- POOL CAPACITY SIGN** - A sign shall indicate the maximum number of pool users permitted for each pool. [In letters and numbers not less than 4 inches high]. The pool user capacity of a spa pool shall be based one pool user for every 10 square feet of pool water surface area. The pool user capacity for all other pools shall be based on one pool user for every 20 square feet of pool water surface area. Pool user capacity requirements do not apply to wading pools or spray grounds
- NO DIVING SIGN.** Signs shall be posted in conspicuous places and shall state, "NO DIVING" at pools with a maximum water depth of 6 feet or less. [In letters not less than 4 inches high].
- NO LIFEGUARD SIGN** - Where no lifeguard service is provided, a sign shall be posted stating, "NO LIFEGUARD ON DUTY." [In letters not less than 4 inches high]. The sign also shall state [in letters not less than 1 inch high], "Children Under the Age of 14 Shall Not Use Pool Without A Parent or Adult Guardian In Attendance."
- ARTIFICIAL RESPIRATION AND CARDIOPULMONARY RESUSCITATION SIGN** - An illustrated diagram with text [not less than 1/4 inch high] of artificial respiration and CPR procedures shall be posted.

**EMERGENCY SIGN** - The emergency telephone number 911, the number of the nearest emergency services, and the name and street address of the pool facility shall be posted. [In letters and numbers not less than 1 inch high].

**SPA WARNING SIGN** - A warning sign for spa pools shall be posted stating, "CAUTION" and shall include the following language [in letters not less than 1 inch high]:

- a. Elderly persons, pregnant women, infants and those with health conditions requiring medical care should consult with a physician before entering the spa.
- b. Unsupervised use by children under the age of 14 is prohibited.
- c. Hot water immersion while under the influence of alcohol, narcotics, drugs or medicines may lead to serious consequences and is not recommended.
- d. Do not use alone.
- e. Long exposure may result in hyperthermia, nausea, dizziness or fainting.

**EMERGENCY SHUT-OFF SWITCH SIGN** – [In letters not less than 1 inch high], a sign shall be posted at the spa emergency shut off switch stating, "EMERGENCY SHUT-OFF SWITCH."

**KEEP CLOSED SIGN** - A sign shall be posted on the exterior side of gates and doors leading into the pool enclosure area stating, "KEEP CLOSED" [In letters not less than 4 inches high].

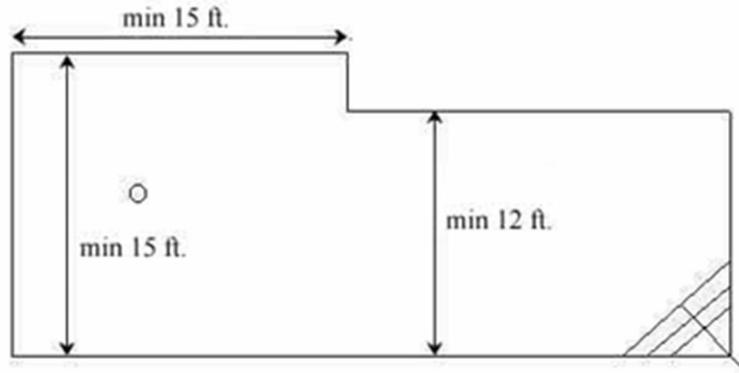
**DIARRHEA NOTICE SIGN** - A sign [in letters not less than 1 inch high] and in a language or diagram that is clearly stated shall be posted at the entrance area of a public pool which states that persons having currently active diarrhea or who have had active diarrhea within the previous 14 days shall not be allowed to enter the pool water. This sign may be posted with all the other safety signs.

- 50.** Floating type pool covers are limited to pools where there is constant supervision with a responsible person opening the pool and removing the cover and closing the pool each day. Floating type pool covers, permanently installed, and safety type pool covers must be submitted to this Department for approval, be ANSI approved, must not obstruct the deck in any way, and must not interfere with the coping requirements. Pool covers must be approved by this Department prior to use.
- 51.** Tile used along the edge of the pool steps must be no greater than 4 inches wide, contrasting in color, and slip resistant.
- 52.** The direction of flow for the recirculation equipment is required to be labeled clearly with directional symbols such as arrows on all piping in the equipment area. Where the recirculation equipment for more than one pool is located on site, the equipment is required to be marked as to which pool the system serves. Valves and plumbing lines are required to be labeled clearly with the source or destination descriptions.
- 53.** All equipment rooms/areas must be easily accessible for inspection and have an enclosure that can be locked. If an enclosed room, the ceiling elevation must be at least 7 feet. A concrete slab is required with a floor drain. Floors are required to slope to drainage (2%), draining to the sewer if indoors and to the storm drain if outdoors. A hose bibb for cleaning the floors and equipment is required. A floor sink or utility sink protected from rain intrusion is required.

## REQUIREMENTS FOR SWIMMING POOLS

1. The maximum allowed water depth at the shallow end of a swimming pool is 3½ feet. The water depth at the base of any portion of a stair must not exceed 3½ feet.
2. The minimum width of a swimming pool must be at least 15 feet wide, except for swimming pools with a maximum depth of 6 feet or less, the entire pool may be a minimum of 12 feet wide.
3. For areas of swimming pools with a depth greater than 6 feet, the width and length are required to

be at least 15 feet. Pools with curved shapes must have a minimum radius of at least 6 feet at the shallow end and a minimum radius of at least 7½ feet at the deep end.



- No recesses or projections are permitted in the swimming pool except as approved for stairs, handhold, ladders, steps, handrails, skimmers, inlet fittings, and perimeter overflow systems. An area is not considered a recess or projection, and will be permitted, if it is 12 feet or more in length and width in a pool with a maximum depth of 6 feet or less or 15 feet or more in length and width in a swimming pool with a maximum depth greater than 6 feet. Swim outs, loveseats, baja steps, and foot holds are prohibited.



- For "L" or irregularly shaped pools, the minimum width (12 feet or 15 feet), must be maintained for both sections of the "L."
- For pools without diving boards, from the shallow end, to a depth of at least 4½ feet, the slope must not be greater than 1 foot vertically in 10 feet horizontally. For a minimum distance of 3 feet, from the break in slope at 4½ feet the slope must not exceed 1 in 3. For a minimum distance of 3 feet from the end of the 1-in-3 slope to the main drain, the slope must not exceed 1 in 6. The main drain must be a minimum of 3½ feet from the deep end wall. **(See Figures and Tables #1)**
- In pools greater than 5 feet in depth, a straight line of slip-resistant tile of contrasting in color from the pool shell and lane markings must be installed on the bottom of the pool (not the walls) where the water depth is 4½ feet. The tile must be at least 4 inches but not greater than 6 inches wide.

## ADDITIONAL REQUIREMENTS FOR SPAS

- The water surface area of a spa must not exceed 250 square feet and the water depth must not exceed 4 feet. The water depth over the benches must not exceed 24 inches.
- All spas must have benches extending around the entire perimeter of the spa and have an aeration system, sufficient to distribute aeration over the entire surface of the spa. Swim spas for general use are prohibited. In spas, because of size, where there is the possibility of someone swimming, the following sign may be required to be posted: "NO SWIMMING" - "It has been

determined that swimming in elevated water temperatures may be hazardous to your health." There must be no abrupt changes in the height of spa benches. Any changes in spa bench elevation must not exceed a slope of 1:10. Medical spas may be exempt from some or all of the above requirements.

3. Spa benches must be a minimum of 12 inches but not more than 24 inches in length. The clearance between parallel benches in a spa must be at least 24 inches. The floors of spas are required to have a minimum length and width, or diameter of 24 inches. **(See Figures and Tables #2).**
4. A continuous unobstructed 4 feet wide, slip-resistant, non-abrasive deck area of concrete or concrete like material must be provided flush with the top of the spa pool and extend around at least 50% of its perimeter. Spa steps must be located where the deck is at least 4 feet wide. If the deck is raised more than 18 inches above ground level, it must have a protective railing extending around the entire perimeter, including areas not requiring a 4-foot deck.
5. Landscape planters, flower beds, or similar unpaved areas are not permitted within 4 feet of a spa pool unless such areas are behind a solid wall at least 5 feet in height as measured from the outside.
6. A spa pool aeration and/or hydro-jet system must be completely separate from its filtration system.
7. A return line will be required in a spa for each 50 GPM of designed filtration rate or fraction thereof (design filtration rate means the required turnover rate and the pump output at 60 feet of head). Example: If a spa has a required turnover rate of 78 GPM, it is required to have 2 return lines.
8. A spa pool must have a minimum of two depth markers. Slip-resistant depth markers are also required on the deck along with no diving tiles.
9. The maximum allowable water temperature of a spa is 104 degrees F.
10. Fiberglass or acrylic spas must be on this Department's approved equipment list. Only white or light pastel colors are permitted for spas. A light color is defined as a color having a light reflectance value (LRV) of 55% or greater. Tile samples for tile spas must be submitted.
11. Fiberglass spas with coping as part of the pool shell extending out onto the deck are required to have the following dimensions:
  - The height; at least 1/2 inch but not more than 2 inches above the deck.
  - The width; at least 2 inches and not exceed 6 inches. The surface of the coping must be slip resistant and level (no slope) **(See Figures and Tables #3).**
12. A single clearly labeled emergency (on/off type) shut off switch which is readily accessible and visible from the spa, that will shut off all filtration, booster, chemical, and blower pumps, is required.
13. For fiberglass spas, waterline tile around the entire perimeter of the pool is required.
14. Cold plunges are permitted under the following conditions:
  - The maximum size is 49 square feet and the maximum depth is 4 feet
  - The cold plunge must be built in conjunction with a hot spa.
  - The cold plunge must have a refrigeration system or other means to cool the water.
  - Recirculation system requirements must comply with hot spa standards.
  - A ladder and grab rail may be used in lieu of stairs.
  - Benches may be omitted.

## ADDITIONAL REQUIREMENTS FOR GUTTER AND RIMFLOW POOLS

1. A separate surge chamber is required.
2. Pool plans must be designed, approved, and stamped by an engineer or architect with experience working on public pools.
3. A C-701 type handhold is required around the entire perimeter of a rim flow pool and the handhold is not permitted to protrude into the pool. **(See Figures and Tables #3)**
4. The entire gutter must be accessible for cleaning. Rim flow pool gutter covers must be removable.

## REQUIREMENTS FOR SOLAR HEATING

1. Solar panels and all components must meet National Sanitation Foundation (NSF) Standard 50.
2. Split suction outlets are required to be located at the deepest section of the pool so that covers are within 3 inches of the pool floor and no closer than 5 feet from any inlet.
3. Pipe velocity and sizing requirements must be met.

## REQUIREMENTS FOR SPRAY GROUNDS

1. A minimum 4-foot wide walking surface is required to extend around the perimeter of the splash zone of a spray ground.
2. The recirculation system is required to be in operation at all times that the spray ground is open for use and is required to have a minimum of four turnover cycles prior to opening for proper disinfection and filtration.
3. No standing water is permitted within the splash zone.
4. Nozzles that spray from the ground level must be flush with the ground with openings no greater than ½ inch. Spray ground water features that extend above the ground must be clearly visible.
5. The splash zone is required to be sloped so that only water from the spray ground water feature flows back to the surge basin. Areas adjacent to the splash zone are required to be sloped away from the spray ground to deck drains or other surface water disposal systems.
6. All foggers and misters that produce finely atomized mists are required to be supplied directly from a potable water source and not from the surge basin.
7. When multiple pumps are used the control systems for the spray ground water feature pump and recirculation system pump are required to be electrically interconnected so that when the recirculation pump is off the spray ground water feature pump is also off.
8. The spray ground is required to have a surge basin or treatment tank constructed of materials which are inert, corrosion resistant, nontoxic and watertight including materials such as concrete, fiberglass, high density polyethylene, stainless steel or other materials as approved by the enforcing agent which can withstand all anticipated loadings under full and empty conditions as determined by an engineer or architect who has experience working on public pools.

9. The total volume of the surge basin is required to be at least 4,000 gallons or a minimum of three times the gallons per minute flow rate of all the spray ground pumps and the recirculation pump combined, whichever is higher.
10. The turnover time is required to be one-half hour or less.
11. The suction intake for the spray ground or water feature pump in the surge basin is required to be located adjacent to the recirculation return line.
12. When separate pumps are used, the suction intake for the recirculation pump is required to be located in the lowest portion of the surge basin and on the opposite side from the suction intake for the spray ground pump.
13. The surge basin is required to be designed to have easy access for cleaning and inspection. The basin is required to have at least one ladder access and is required to have at least one 3-foot by 3-foot access opening. Lids are required to be locked or require a tool to open.
14. The surge basin is required to be equipped with an automatic make up water fill device through an air gap or be protected by an approved backflow prevention device in accordance with Chapter 6 of the California Plumbing Code.
15. Ultraviolet light disinfection is required to be used to supplement disinfection methods required in this chapter unless another treatment process is provided that has been determined by a nationally recognized testing laboratory to be capable of providing at least the equivalent level of reduction of cryptosporidium as the ultraviolet light disinfection system. The ultraviolet light disinfection unit is required to comply with the applicable requirements established by the NSF/ANSI 50-2010 performance standard effective August 2010.
16. An accurately calibrated ultraviolet light intensity meter that has been properly filtered to restrict its sensitivity to the disinfection spectrum is required to be installed in the wall of the disinfection chamber at the point of greatest water depth from the light source.
17. The ultraviolet light unit is required to be located on the recirculation system and is required to be installed to provide treated water directly to the spray features.
18. The ultraviolet light disinfection system must be equipped with an automatic shutdown system that inactivates the water feature pump if the ultraviolet dosage rate drops below 40 mJ/cm<sup>2</sup>.
19. Artificial lighting is required to be provided at all spray ground pads which are used at night or which do not have adequate natural lighting so that all portions of the spray pad and deck may be seen easily. Lighting that may be exposed to the feature pool water is required to be installed in accordance with the manufacturer's specifications and the California Electrical Code.
20. A means of diverting runoff from the splash zone is required to be installed on the spray ground drainage piping before the surge basin to divert water to the storm drainage system when the spray ground is not in operation.
21. A removable and cleanable catch screen or basket is required to be installed on the spray ground drainage system before it enters the reservoir to prevent larger debris.
22. A sign shall be posted at each spray ground and be visible from any part of the spray ground that states, "CAUTION: WATER IS RECIRCULATED. DO NOT DRINK."

## CONSTRUCTION INSPECTIONS

The contractor is required to contact the Recreational Waters Program to make an appointment and obtain approval for the following inspections (5 days prior):

1. **Plumbing** (Pre-Gunite): Exposed plumbing and prior to applying gunite or applying pneumatically placed concrete;
2. **Pre-Plaster**: Prior to plastering or applying the final surface to the pool shell;
3. **Final**: At the completion of construction. Written approval from the Recreational Waters Program is required to open the pool to the public.

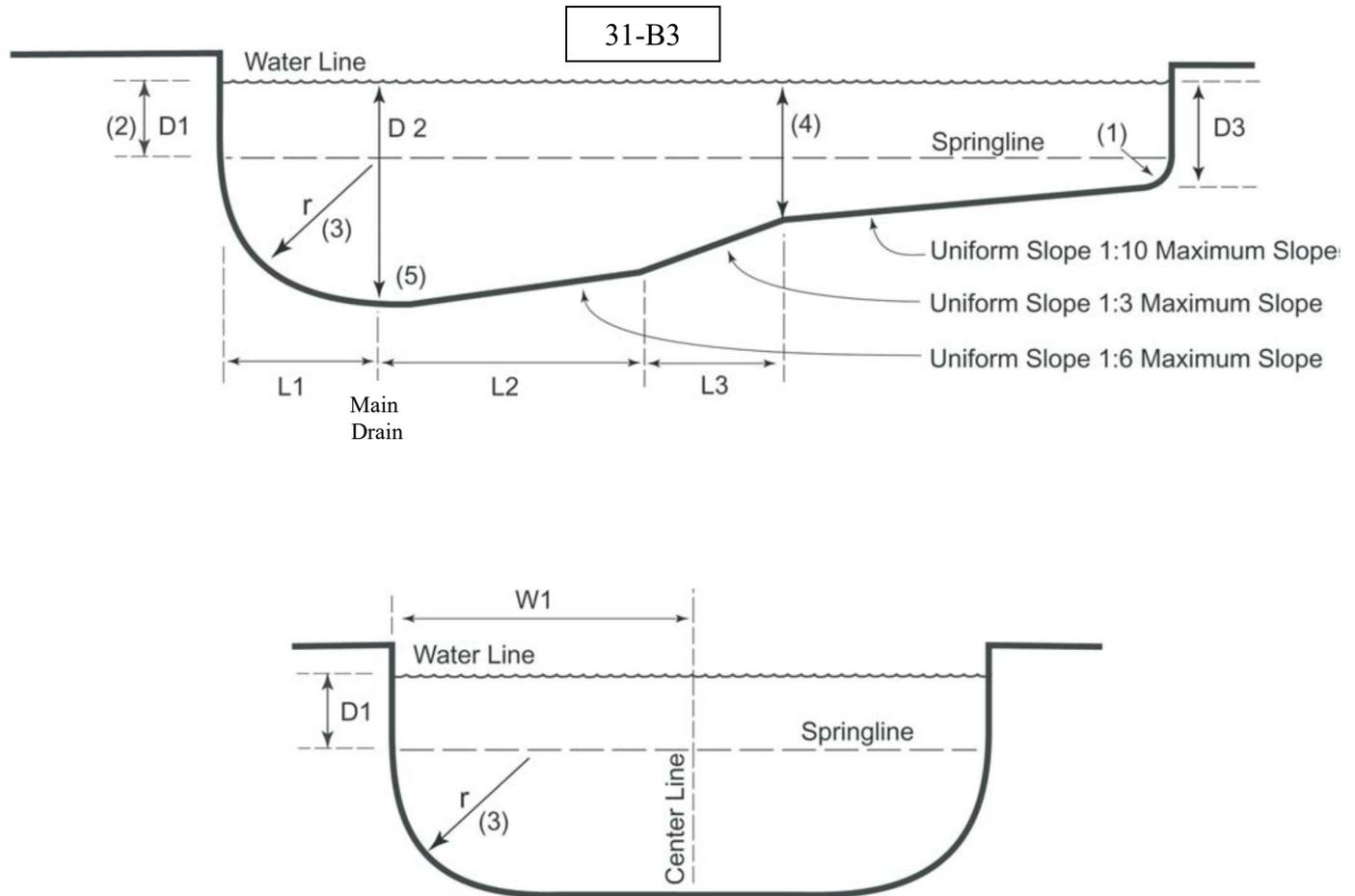
For further information, visit our web site at:

<http://www.publichealth.lacounty.gov/eh/inspection/pool-plan-check.htm>

## APPENDICES

## Figures and Tables

## 1. Dimension Requirements for A Pool Without Diving Boards 31-B3



31B3-a POOLS WITH MAXIMUM WATER DEPTH = 6' 0"

Dimension	D1	D2	D3	L1	L2	L3	W1
Minimum	2' 6"	-	0' 0"	3' 6"	3' 0"	3' 0"	6' 0"
Maximum	—	6' 0"	3' 6"	—	—	—	—

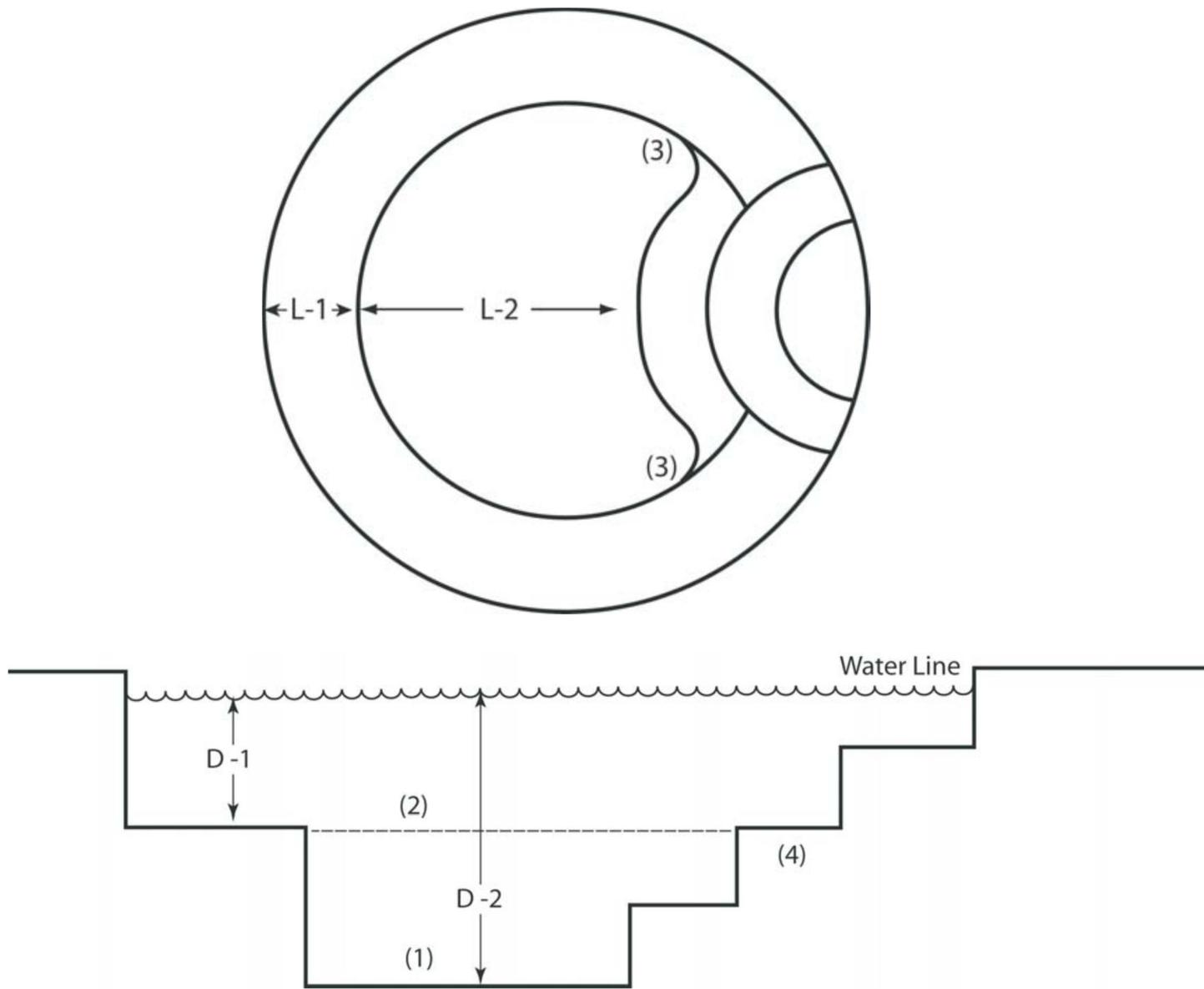
31B3-b POOLS WITH MAXIMUM WATER DEPTH &gt; 6' 0"

Dimension	D1	D2	D3	L1	L2	W1
Minimum	2' 6"	(5)	0' 0"	3' 6"	3' 0"	7' 6"
Maximum	—	—	3' 6"	—	—	—

Notes for Figure 31B-3 and Tables 31B-3a and 31B-3b.:

1. Radius at the shallow end shall be a maximum of 1' 0".
2. Springline D1 shall extend to the break in slope between the shallow area and the deep area.
3. Maximum radius shall equal D2 minus D1 dimensions.
4. Where there is a break in slope, the break in slope shall be located at a water depth equal to 4' 6".
5. The main drain shall be located to provide complete drainage of the pool.

## 2. Spa Pools



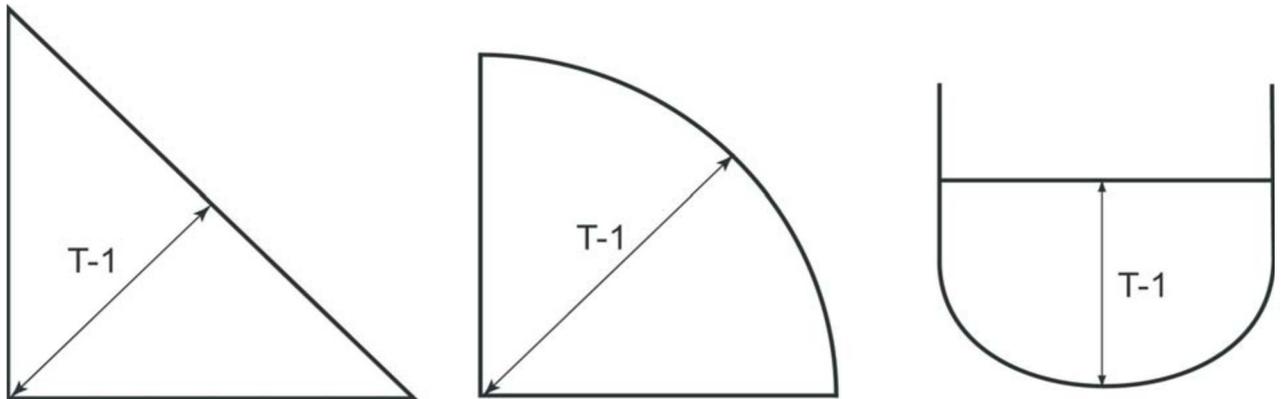
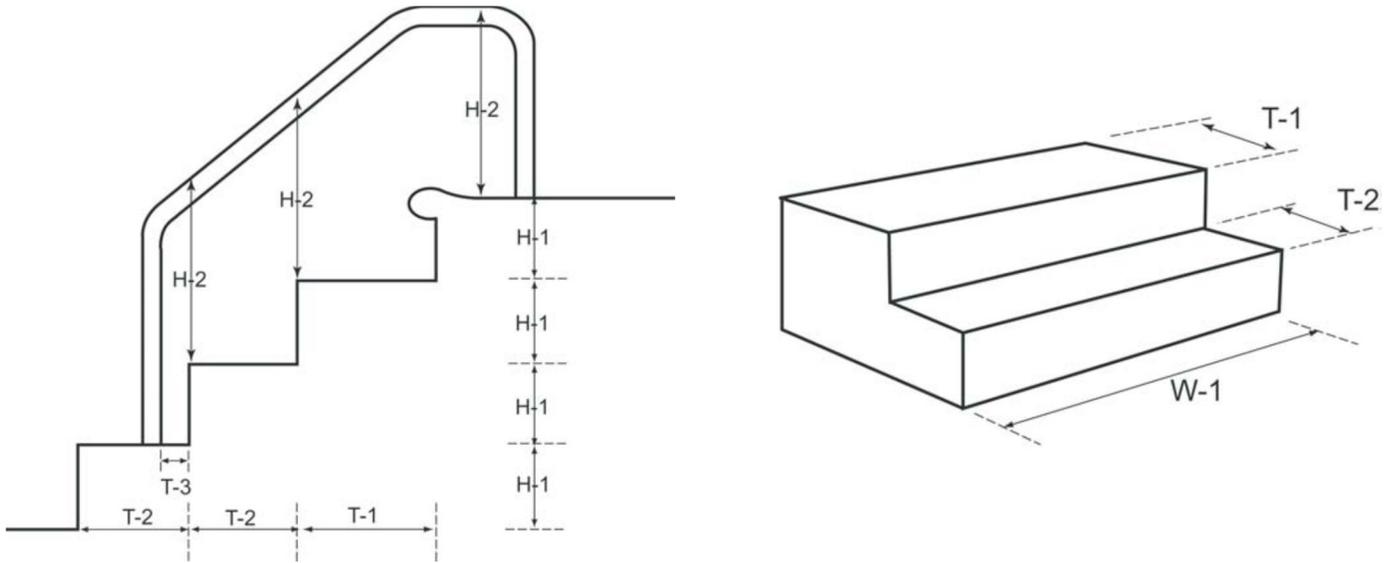
Dimension	Depth of Water		Length of Sections	
	D1	D2	L1	L2
<i>Minimum</i>	-	24"	12"	24"
<i>Maximum</i>	24"	48"	24"	-

1. Bottom slope shall not exceed 1:10 and must be uniform. D-2 not to exceed 42" at base of stairs.
2. Bench ramping shall not exceed 1:10 uniform slope, measured at the inner circumference of the bench.
3. Six-inch minimum radius at "pinch points."
4. See #5 Stair and Handrail Dimensions.





### 5. Stair and Handrail Dimensions



Dimensions	T-1 Standard	T-1 Triangular, Concave, Convex	T-2	T-3	W-1	H-1	H-2
Minimum	14"	21"	12"	3"	24"	6"	28"
Maximum	18"	24"	16"	---	---	12"	36"

## Checklist

## Required Items for New Public Pool Plan Check Submission

For your use and to be verified when submitting plans

Included (Check)	Required Item	Comment
	Complete Application (for each pool) Plan submitter is a C-53 Contractor, A Contractor, Architect, or Engineer.	
	Fee	
	3 Sets of Drawings	
	Top View of Pool; -Minimum width 12' -Maximum surface area for a spa 250 ft <sup>2</sup> -Spa bench completely around	
	Profile View of Pool; Measurable slope to floor drains	
	Plot Plan	
	Pool Enclosure Details: -Highlighted Pool Enclosure Boundary -5' clear radius outside -5' set back from property line -No openable windows -Outside of enclosure is a public area	
	Equipment Room; Indicated location and indicated indoor or outdoor.	
	Deck Details Amenities (i.e. Fire pit, BBQ) have similar amenities outside of the enclosure for non-pool users.	
	Restroom Details: Check facility type; a) Residential; If 300 feet or greater from pool wall to furthest unit, restrooms, showers, and drinking fountain(s) included. b) Non-Residential; Included.	
	Solar Heating System Details if applicable	
	General Data and Equipment List	
	Other	

EHS Name: \_\_\_\_\_ Date: \_\_\_\_\_

**LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH  
ENVIRONMENTAL HEALTH  
RECREATIONAL WATERS PROGRAM**

5050 Commerce Dr  
Baldwin Park, CA 91706  
(626) 430-5360

