Swimming Pool and Spa Packet

BI-23

CBC 2007

Swimming Pool and Spa Plan Submittal Requirement and Plan Check Correction List. (6 pages)

Minimum 18" x 24" Plan Sheets Required for Pools and Spas
(Do not show trees, plants, shrubbery on site plan or area drainage plan)
The following handouts / information sheets (available at public counter) must be printed onto the plans:

Attachments Included:

1. Special Inspection List and Table 1704.4 (2 pages) ***Imprint on plans.***
2. BI-4 Weep Screed Detail (1 page) ***Imprint on plans.***
3. BI-21 Pool and Spa Construction and Inspection Guide and State Energy Regulations for Swimming Pools (2 pages) ***Imprint on plans.***
4. Minimum Requirements (2 pages) ***Imprint on plans.***
5. BI-17 Pool Barrier Compliance (completed and signed) (2 pages) ***Imprint on plans***
6. Residential Circuit Card and Load Summary (completed and signed) (2 pages) ***Imprint on plans.***
7. BI-27 Pollution Prevention For Construction (completed and signed) (4 pages) ***Imprint on plans.***
8. Swimming Pool/Spa Packet Note Sheet (1 page) **Imprint on plans.**
9. BI-26 Drainage Information (1 page) **Imprint on plans, when applicable.**

CITY OF SAN CLEMENTE
BUILDING DIVISION
910 Calle Negocio, Suite #100
San Clemente, CA 92673
(949) 361-6100

☐ **City**
☐ **Applicant**

SWIMMING POOL & SPA PLAN SUBMITTAL REQUIREMENTS & PLAN CORRECTION LIST BASED ON 2007 CALIFORNIA CODES

PLAN REVIEW #_____

Job Address _____

Owner _____

Designer _____

Scope of Work: ☐ Pool ☐ Spa ☐ Pool & Spa

1. Provide name, address and phone number on the plans for:
   a. Owner
   b. Plan preparer (with signature)
   c. Engineer

2. On adjacent properties, show all climbable structures within 5 feet of property lines, **or** imprint on the site plan the following note: ***"There are no climbable permanent structures on adjacent properties within 5 feet of proposed or existing pool barriers".***

3. Imprint the following note on the plans: ***"The Equipotential Bonding required by current adopted CA. Elec. Code Article 680, shall be installed to eliminate voltage gradients in the pool area as prescribed."***

4. Imprint on the plans the following (completed and signed):
   Prior to requesting the Pre-plaster inspection, all revision/changes to the proposed and existing pool barriers shown on approved plans shall be HOA approved, submitted for City plan review and approved, permit issued and field inspection signed off by City of San Clemente Building Inspector.
   Owner Print Name_____
   Owner Signature_____ Date_____
   Contractor Print Name_____
   Contractor Signature_____ Date_____

5. Provide a complete site plan showing the following:
   a. Property lines clearly identified.
   b. Proposed pool, spa shape, dimensions and location to show setbacks and clearance from existing and proposed structures. Show setback to Property line from waters edge.
   c. Pool barrier fencing and gate location, show height & description/type of fencing.
   d. Show existing structures on site and any proposed structures (house, garage, retaining walls, patio cover, deck, etc...).
   e. Location of pool/spa equipment.
   f. Topography of the site with indicating top and bottom of slopes (if any) on and adjacent (neighbors) properties.
   g. Indicate overhead utilities and electric service drops **or** specify underground utilities.

6. Pools shall be setback from top and bottom of slopes as required by City of San Clemente grading ordinance (see FIGURE 1). The building official may approve alternate setbacks and clearances when a soils investigation by a qualified engineer demonstrates the intent of the code has been satisfied. The report shall be prepared by a licensed Geotechnical or Civil Engineer that addresses the location of pool/spa, soil conditions and slope stability.

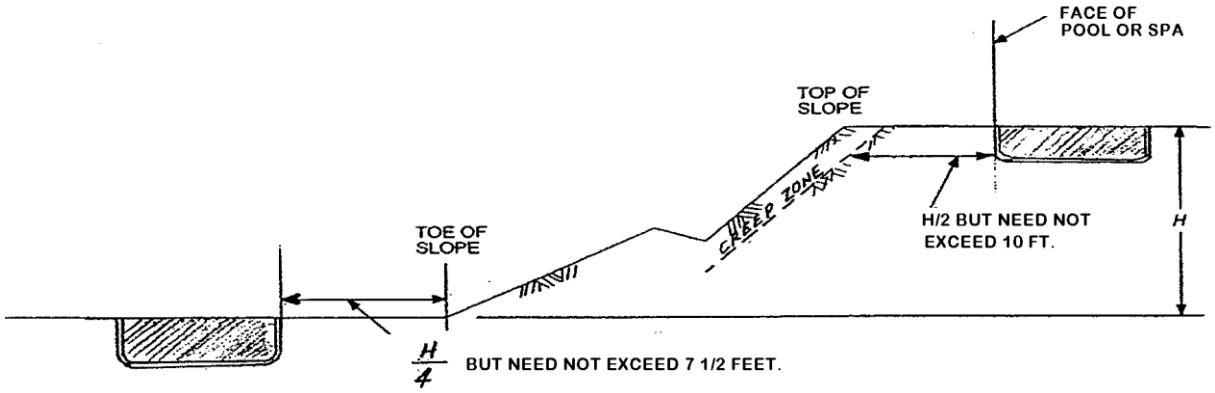


FIGURE 1 - SETBACK DIMENSIONS

7. That portion of pool or spa wall within a horizontal distance of 7 feet from top of slope shall be capable of supporting the water in the pool or spa without soil support. (CBC 1805.3.3)

8. A licensed Civil, Structural, Geotechnical Engineer or Architect must approve the location of the pool by reviewing and stamping the site plan. The site plan shall be wet signed and stamped by the Engineer or Architect.

9. Each sheet of the pool plans shall be wet signed and stamped by a licensed Civil, Structural Engineer or Architect.

10. The Engineer or Architect shall circle all sections and details on the pool plans which are applicable to the project and cross reference details on the pool plan to indicate applicable locations.

11. A minimum of two cross-sections of the pool **(other than standard structural details)** shall be shown. These two cross-sections shall show the following:
    a. Distance from the pool to top or bottom of slopes
    b. Distances from pool to the adjacent buildings or structures.
    c. Show all dimensions on cross sections.

12. Structural calculations for pool and/or spa (and retaining walls) prepared by a licensed Civil or Structural Engineer are required. Calculations shall include all surcharges from slopes and/or adjacent structures.

13. Retaining walls proposed that modify existing slopes require separate permit and review and must be submitted prior to or along with the pool / spa plans. Structural calculations prepared by a licensed Civil or Structural engineer shall be provided at the time of submittal.

14. Due to expansive soils typical in much of San Clemente, pool and spa shells (and retaining walls) shall be designed and constructed to conform with expansive details using lateral earth pressure of 100 psf/ft equivalent fluid pressure (or greater if required by soils report). Exception: Design engineer may utilize lower lateral pressures for design when soils letter/report is provided that recommends lower pressures.

15. Protection of adjoining property - The person making or causing an excavation to be made shall provide written notice to the owners of adjoining buildings advising them that the excavation is to be made and that the adjoining buildings should be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation. **2007 California Building Code 3307.1 Protection required.**

    Permittee Signature_____

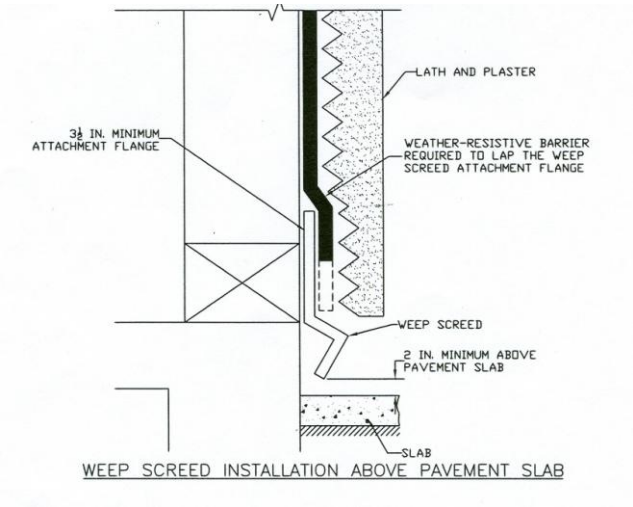
16. On a separate sheet (see BI-26 attached for information to be shown on plan) Provide yard drainage plan.

17. Clearly identify and distinguish between existing hardscape and landscape and new/proposed hardscape and landscape improvements.

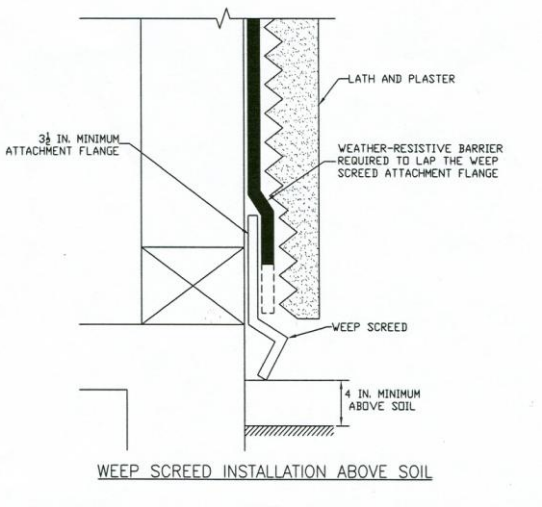
18. Show direction of swing of all exterior doors. Show section detail of landing for out swinging doors.

19. When constructing hardscape and landscape adjacent to buildings the required minimum distance between finish grade and bottom of stucco weep screeds shall be maintained: (**Imprint on plans and cross reference location**).

WS-2



WS-4



20. Show location of all fencing on the plans. Provide section and/or elevation for all required pool fencing. Comply with the following requirements:
    a. Height: 5 feet minimum above exterior grade.
    b. Climbability: 45 inches minimum between outside horizontal members.
    c. Openings: shall not allow passage of 4 inch diameter sphere between vertical members.
    d. Bottom of fence to be within 2 inches of firm soil or pavement.

21. Gates in pool/spa enclosure to comply with the following requirements:
    a. Gate to swing outward from pool/spa enclosure.
    b. Gate to be self-closing, self-latching, with latch located at a minimum height of 54 inches if it can be reached from the outside.
    c. Comply with the same requirements contained in item #19 above for fence.

22. Pool and/or spa are required to be FENCED ON ALL SIDES. Where a wall of a dwelling serves as part of the barrier, doors with direct access to pool through the wall shall be equipped with an alarm, which produces an audible warning when the door and its screen, if present, are opened. The alarm shall sound continuously for a minimum of thirty (30) seconds immediately after the door is opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means, such as touchpad or switch to temporarily deactivate the alarm for a single opening. Such deactivation shall last not more than fifteen (15) seconds. The deactivation switch shall be located at least fifty-four (54) inches above the threshold of the door. **Provide product specifications for any proposed door alarm system and show all locations on the plans.**

23. Provide safety glazing in fences, doors and windows, where the glass is located within 5 feet from edge of pool/spa and less than 60 inches above grade.

24. All exterior receptacles must be GFCI protected. Locate all exterior receptacles on plans. Per NEC 680.22 (A) (3). At least one receptacle on a general purpose branch circuit shall be located a minimum 10 feet from and not more than 20 feet from the inside wall of the pool.

25. The mechanical code requires that pool and spa heater vents are located a minimum of 4 feet from openings into a building. Show openings on plans **or** Note "No openings within 4 feet."

26. Indicate size and location of gas lines to pool/spa/BBQ/fireplace, etc. show size of each section. Gas piping shall not be installed under patio cover, deck or other structures, unless installed in vented sleeve. (Provide detail and location if using sleeve)

27. Specify gas piping materials to be used above and below ground. (metallic gas piping is prohibited underground by San Clemente ordinance)

28. A. Provide and show location of P-trap connected to the house sewer. All pool/spas shall dispose of swimming pool waste water into a three (3) inch P-trap. Cleanouts are required and a strainer must be provided on the inlet. (Exception: Spas less than 750 gallons need not discharge into a sewer system).
    B. Show location of any pool/spa overflow drains and connections to house sewer or specify on plans **No Overflow Drains**.

29. Filters, heating systems, and pumps installed with pools, spas, hot tubs, waterfall or any other man-made body of water, shall be enclosed and soundproofed to meet the City Noise Ordinance. Provide details of sound enclosure wall and cross reference details on plans.

30. BBQ Centers: provide a detailed list of all equipment (BBQ, sink, refer etc..) to be installed.

31. Show locations and width of all easements on the site plan. No improvements shall be located within the easement area. If there are no easements, provide a **note** on the plan signed by the designer, owner or contractor as follows: **"I have verified the subject property's grant deed and title report and have found no easements in the area of the proposed construction. I acknowledge that I am responsible and accountable for not constructing in the easements".** Signature: _____

32. Pools & spas are to be located per Planning Division not less than 5 feet from property lines, (unless an exception is granted through a Minor Exception Permit) and must be set back from any structure a distance equal or greater than the depth of the pool or spa.

33. A PRE-POOL AND/OR SPA SITE INSPECTION will be required during the plan review process to determine and verify:
    a. Proximity of pool/spa to slopes, adjacent structures, retaining walls, required side yards, location of proposed pool equipment.
    b. Existing site conditions of yard grading and drainage.
    c. Overhead utilities and electrical service drop.
    d. Existing conditions of pool/spa barrier

34. See additional sheets for additional corrections.

PLEASE PROVIDE A WRITTEN RESPONSE TO INDICATE WHERE ON THE PLANS EACH ITEM HAS BEEN CORRECTED.

RESUBMIT REVISED / CORRECTED PLANS FOR RECHECK

Contact the plans examiner _____
at (949) 361-_____with any questions.

Project #:_____

1st Review Date: _____ By: _____ Remarks: _____
2nd Review Date: _____ By: _____ Remarks: _____
3rd Review Date: _____ By: _____ Remarks: _____

Project #: _____

CITY OF SAN CLEMENTE
Building Division
Additional Swimming Pool Corrections

City of
San Clemente
Building Division

SPECIAL INSPECTION LIST
POOL/SPA

Project No: _____ **Permit No: _____**

Project Address: _____

Description of Type of Inspection Required
Location, Remarks, etc.

	Strength	City Inspector	Date
POOL EXCAVATION: Geotechnical Engineer shall observe the site and excavation/soil conditions and provide written field memo that states the pool/spa location and soil conditions are satisfactory from a geological standpoint.			
Geotech Engineer shall certify pool bottom conforms to Structural Note 1 on STD POOL STRUCTURAL PLAN, otherwise contractor shall advise pool engineer of non-conformity to said note.	S.P. = 1,500 psf min. and no dissimilar soils conditions under pool area		
SHOTCRETE/GUNITE: Provide concrete test results for concrete foundation in contact with soluble sulfate soils. (CBC 1913.10)	Type V f'c = 4500 psi Water = 0.45 Cement		
SHOTCRETE/GUNITE PLACEMENT per CBC. Section 1704.4 and 1913.			
ACCOUSTICAL REPORT	Max 55 DBA 7:00 am-10:00 pm Max 50 DBA 10:00 pm – 7:00 am		

1. The special inspections listed are in addition to the called inspections required by Appendix Chapter 1, Section 109 of the California Building Code.
2. Continuous inspection by a Deputy Inspector is required during the performance of this work unless otherwise specified. This Special Inspection is not a substitute for inspection by a City Inspector. Specially inspected work installed or covered without the approval of the City Inspector is subject to removal or exposure.
3. The Deputy Inspector must be approved by the City of San Clemente in advance in order to perform the types of Inspection specified.
4. It is the responsibility of the Contractor to schedule the time with the Deputy Inspector of Inspection Agency prior to performing any work that requires special inspection. All work shown above performed without required special inspection is subject to removal.
5. Special Inspection reports shall be submitted to the Building Division for approval prior to City Inspector approval of that work.

TABLE *1704.4*
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD[a]	*IBC* REFERENCE
1. Inspection of reinforcing steel, including prestressing tendons, and placement.	–	X	ACI 318: 3.5, 7.1-7.7	1913.4
2. Inspection of reinforcing steel welding in accordance with Table *1704.3*, Item 5b.	–	–	AWS D1.4 ACI 318: 3.5.2	–
3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased	X	–	ACI 318: *Appendix* D	1911.5, 1912
4. Verifying use of required design mix.	–	X	ACI 318: Ch. 4, 5.2-5.4	1904.2.2, 1913.2, 1913.3
5. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	–	ASTM C 172 ASTM C 31 ACI 318: 5.6,5.8	1913.10
6. Inspection of concrete and shotcrete placement for proper application techniques.	X	–	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
7. Inspection for maintenance of specified curing temperature and techniques.	–	X	ACI 318: 5.11-5.13	1913.9
8. Inspection of prestressed concrete: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons in the seismic-force-resisting system.	 X X	–	 ACI 318: 18.20 ACI 318: 18.18.4	–
9. Erection of precast concrete members.	–	X	ACI 318: Ch. 16	–
10. Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.	–	X	ACI 318: 6.2	–
11. Inspect formwork for shape, location and dimensions of the concrete member being formed.	–	X	ACI 318: 6.1.1	–

For SI: 1 inch = 25.4mm

a. Where applicable, see also Section 1707.l, Special inspection for seismic resistance.

Weep Screed Detail

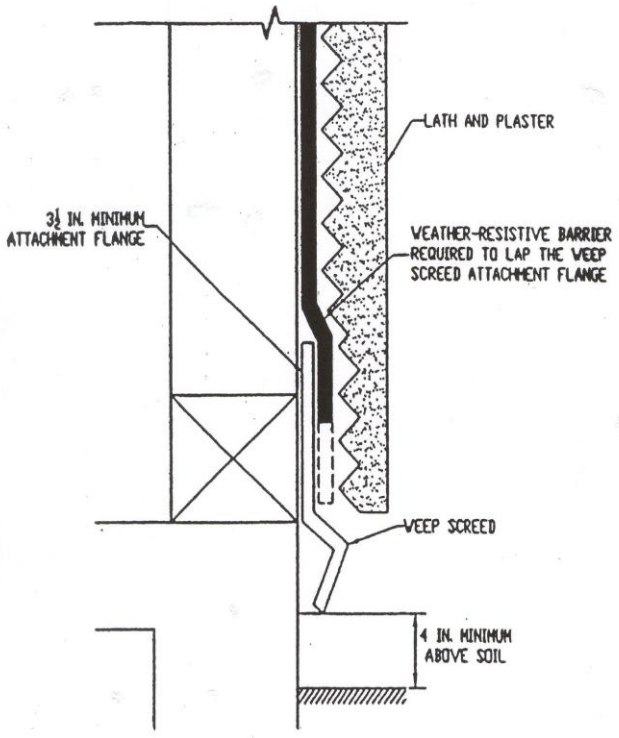
BI-4

CBC 2007

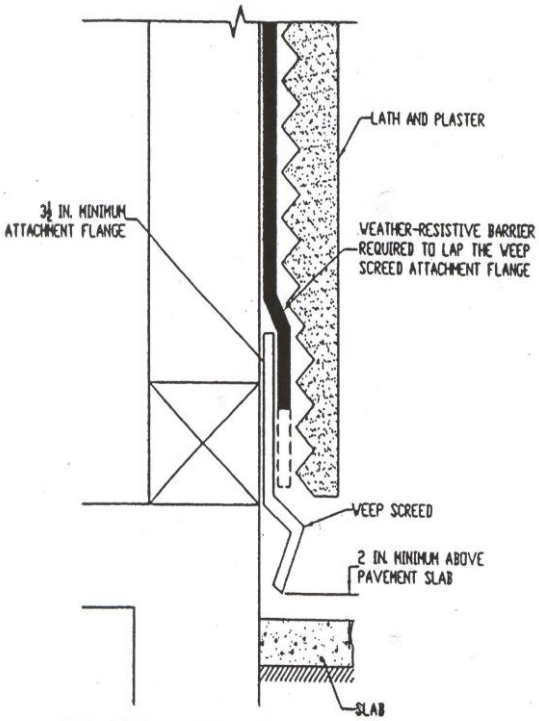
Section 2512.1.2 of the 2007 California *Building Code* requires that:

A minimum 0.019-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant weep screed with a minimum vertical attachment flange of 3 ½ inches (89 mm) shall be provided at or below the foundation plate line on all exterior stud walls. The screed shall be placed a minimum of 4 inches (102mm) above the earth or 2 inches (51 mm) above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the building. The weather-resistive barrier shall lap the attachment flange, and the exterior lath shall cover and terminate on the attachment flange of the screed.

When constructing hardscape and landscape adjacent to buildings the required minimum distance between finish grade and bottom of stucco weep screeds shall be maintained as follows: **(Imprint on plans and cross reference location)**



WEEP SCREED INSTALLATION ABOVE SOIL



WEEP SCREED INSTALLATION ABOVE PAVEMENT SLAB

Pool and Spa Construction and Inspection Guide

BI-21

CBC 2007

LOCATION:

1. Pool and equipment shall be not less than 5 ft. from property line. Requires 5 ft. fence.
   a. *(The five (5) feet distance from the property line may be reduced when the equipment is soundproofed to the satisfaction of the City Building Official and the degree of soundproofing is demonstrated in an acoustical report approved by the City Building Official)*
2. Pool and Spa equipment shall be placed in sound barrier enclosure such as a solid grouted block wall.
3. Overhead wires shall not be within 20 ft. of pool.
4. Provide 120V receptacle between 10 ft. and 20 ft. from water with G.F.C.I.

SHOTCRETE (PRE-GUNITE):

1. Use expansive soil schedule for steel reinforcement of the pool/spa.
2. Uniform clearance of steel (minimum 2½ inches from earth). Steel held firmly in place. See 2007 CBC, Section 1913.4.2.
3. If ramp is at deep end, extra steel required.
4. If pool is in angle of repose of building or wall, extra steel required per engineering plans.
5. Is main drain line recessed for uniform steel clearance and uniform concrete dimension?
6. Pressure test pool/spa piping system (35 p.s.i. for 15 minutes).

PRE-DECK INSPECTION

1. Use K copper and plastic pipe. Copper-depth of lines to be 12 inches under concrete.
2. Water pipe shall be copper within 5 ft. of pool heater.
3. Electric wiring shall be in plastic conduit. Steel risers wrapped.
4. Use tracer wire (Minimum #18 copper plastic covered) with polyethylene (PE) gas line for natural gas only. Transition risers shall be metallic and shall be wrapped at 6" above grade.
5. Pressure test gas line (10 p.s.i. for 15 minutes). Underground PE gas line, 15 p.s.i. for 15 minutes.
6. P-trap and back wash required and must drain into sewer.

FINAL INSPECTION:

1. Pool enclosure/barrier shall be 5 ft. high with maximum 4 in. clear between vertical spacing; self-closing and latching gates with inside latch at least 4½ ft. high from surface.
2. Provide electrical receptacle no closer than 10 ft. or no farther than 20 ft. from pool for use as a service receptacle. Provide G.F.C.I. protection. Motors, heaters to be bonded to copper pipe.

3. Health Department requirements shall be met on semi-public and public pools.
4. Provide waterproof switches and plugs, if exposed.
5. Decks shall drain to pool property only, **or** to street via non-erodible drains or ducts.
6. Metal equipment within 5 ft. of pool shall be bonded.

NEW STATE ENERGY REGULATIONS FOR SWIMMING POOLS

SOURCE: California Administrative Code, Title 24, Part 6, Article 1,
Energy Conservation Standards for New Residential Buildings

SWIMMING POOL HEATING

All new or replacement gas or electric swimming pool heating systems must meet the following requirements:

The pool heating system must be equipped with:

1. An easily accessible on/off switch mounted on the outside of the heater that turns the heater on and off without the need to re-light the pilot light or change the thermostat setting;

2. A permanent weatherproof plate or card that provides instructions for the energy efficient operation of the swimming pool and for the proper care of swimming pool water when a swimming pool cover is used; and,

3. A length of plumbing (36 inch minimum) between the filter and the gas or electric heater to allow for the possible future addition of solar heating equipment.

4. Any new or replacement gas or electric heater must have a thermal efficiency of at least 75% and must be so identified on the plans and the heater.

5. Outdoor pools equipped with a gas or electric heater must also be equipped with a pool cover. The pool cover must be one that was manufactured for use as a pool cover.

6. Time clocks must be installed on any new or replacement pool circulation pump 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 in keeping with applicable public health standards.

7. Time clocks are not required where public health standards require 24-hour operation.

8. All new pools must be equipped with directional inlets which adequately mix the pool water to prevent stratification of the heated supply water and the colder existing water.

THESE REQUIREMENTS DO NOT APPLY TO HOT TUBS OR SPAS

CBC 2007

MINIMUM REQUIREMENTS FOR
POOL ENCLOSURES AND SAFETY DEVICES
(Per City Ordinance 1451 Section 2, QQ & 2007 CBC, Section 3109)

Any swimming pool, hot tub, spa or similar outdoor body of water intended for swimming or recreational bathing, ***eighteen inches (18")*** or more depth and located on the premises of Group R Occupancies, shall contain an enclosure or barrier to conform to the following requirements:

1. The top of the barrier shall be at least ***sixty inches (60")*** above grade measured on side of the barrier which faces away from the swimming pool.

2. Openings in the barrier shall not allow passage of a ***four inch (4")*** diameter sphere. Shrubs, trees or landscape materials cannot be considered as part of the barrier.

3. Solid barriers, such as masonry, concrete or stone walls shall not contain indentations, protrusions or plants closer than ***forty-five inches (45")*** apart vertically, horizontally, or from top of wall, except for tooled masonry joints.

4. Any configuration providing ladder-like access allowing illegal entry to the pool area shall be prohibited. Ladder-like access shall mean any method or action such as climbing, crawling, pushing, jumping or other means to gain access to a pool or spa area.

5. Where the barrier is composed of horizontal and vertical members, the distance between the tops of the horizontal members shall be ***forty-five inches (45")*** or more. Openings between vertical members shall not exceed ***four inches (4").***

6. Maximum mesh size for chain link fences shall be ***two and one-quarter inches (2 1/4")*** unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than ***one and three-quarter inches (1 3/4").*** The wire shall not be less than 9 gauge.

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall be no more than ***one and three-quarter inches (1 3/4").***

8. All required pool fence and gate enclosures shall extend to within ***two inches (2"***) of firm soil or pavement. All access gates shall be constructed in compliance with all requirements stipulated for pool fences in items 2 through 7 above, and shall be equipped to accommodate a locking device. Access gates shall open outward away from the pool, spa or hot tub and shall be self-closing and have a self-latching device. Where the release mechanism of the self-latching device is located less than ***fifty-four inches (54")*** from the bottom of the gate or adjoining grade, (1) the release mechanism shall be located on the pool side of the gate at least ***three inches (3")*** below the top of the gate, and (2) the gate and barrier shall have no opening greater than ***one-half inch (1/2")*** within ***twenty-four inches (24")*** of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, 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 its screen, if present, are opened. The alarm shall sound continuously for a ***minimum of 30 seconds*** immediately after the door is opened and be capable of being heard throughout the house during

normal household activities. The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means, such as a touch pad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last not more than ***15 seconds***. The deactivation switch shall be located at least ***sixty inches (60")*** above the threshold of the door.

Exceptions to Item 9:

The Building Official may approve the following alternative:

1. *Self-closing exterior doors with self-latching devices, may be substituted installed at **fifty-four inches (54")** above inside floor lever **OR***

2. *An electrical automatic safety pool cover conforming to ASTM Standard F-l 346-91 is provided. The control for the pool cover shall be mounted at least **fifty-four inches (54")** above grade.*

3. *Other means of protection may be acceptable as long as the degree of protection provided is not less than that required by any of the devices described above.*

10. Where an above ground 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 (1) the ladder or steps shall be capable of being serviced, locked, or removed to prevent access or (2) the ladder or steps shall be suspended by a barrier which meets the requirements of items 1 through 9 above. When the ladder or steps are secured, locked, or removed, any opening created shall not allow passage of a ***four inches (4")*** diameter sphere.

(a) Access doors to indoor swimming pools shall be self-closing and self-latching in accordance with requirements of this code as stated above.

(b) A self-contained, portable above ground spa equipped with an approved locking safety cover meeting ASTM Standard ES 13-89 may be exempt from the requirements above.

(c) All swimming pool and spa water shall be maintained in a clear condition which is free of algae, insects, debris, and in a sanitary condition.

Pool Barrier Compliance

BI-17

CBC 2007

I hereby acknowledge that I/we have read, understand, and accept responsibility for compliance with the provisions set forth in the City of San Clemente Swimming Pool/Spa and Hot Tub Barrier, Pool Alarm, Glazing, Handrail and Guardrail requirements and Ordinance 1451 Section 2,QQ & CBC 2007, Section 3109. I further understand that these safety measures need to be in place prior to receiving the required plaster inspection for the pool and/or spa.

I further acknowledge and understand that as soon as my swimming pool/spa is filled with water and after final inspection, I am responsible to maintain the required pool barrier at all times.

_____ _____

Project Address **Permit Number**

_____ _____

Owner Name (print) **Date**

_____

Owner Signature

_____ _____

Contractor (Print) **Date**

_____

Contractor (Signature)

POOL BARRIER COMPLIANCE FORM SHALL BE SIGNED PRIOR TO PERMIT ISSUANCE

Pool Enclosures and Safety Devices

Any swimming pool, hot tub, spa or similar outdoor body of water intended for swimming or recreational bathing, eighteen inches (18") or more depth and located on the premises of Group R Occupancies, shall contain an enclosure or barrier to conform to the following requirements:

1. The top of the barrier shall be at least sixty inches (60") above grade measured on side of the barrier which faces away from the swimming pool.

2. Openings in the barrier shall not allow passage of a four inch (4") diameter sphere. Shrubs, trees or landscape materials cannot be considered as part of the barrier.

3. Solid barriers, such as masonry, concrete or stone walls shall not contain indentations, protrusions or plants closer than forty-five inches (45") apart vertically, horizontally, or from top of wall, except for tooled masonry joints.

4. Any configuration providing ladder-like access allowing illegal entry to the pool area shall be prohibited. Ladder-like access shall mean any method or action such as climbing, crawling, pushing, jumping or other means to gain access to a pool or spa area.

5. Where the barrier is composed of horizontal and vertical members, the distance between the tops of the horizontal members shall be forty-five inches (45") or more. Openings between vertical members shall not exceed four inches (4").

6. Maximum mesh size for chain link fences shall be two and one-quarter inches (2¼") unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than one and three-quarter inches (1¾"). The wire shall not be less than 9 gauge.

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall be no more than one and three-quarter inches (1¾").

8. All required pool fence and gate enclosures shall extend to within two inches (2") of firm soil or pavement. All access gates shall be constructed in compliance with all requirements stipulated for pool fences in items 2 through 7 above, and shall be equipped to accommodate a locking device. Access gates shall open outward away from the pool, spa or hot tub and shall be self-closing and have a self- latching device. Where the release mechanism of the self-latching device is located less than fifty-four inches (54") from the bottom of the gate or adjoining grade, (1) the release mechanism shall be located on the pool side of the gate at least three inches (3") below the top of the gate, and (2) the gate and barrier shall have no opening greater than one-half inch (1/2") within twenty-four inches (24") of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, 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 its screen, if present, are opened. The alarm shall sound continuously for a minimum of 30 seconds immediately after the door is opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means, such as a touch pad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last not more than 15 seconds. The deactivation switch shall be located at least sixty inches (60") above the threshold of the door.

   Exceptions to Item 9:

   The Building Official may approve the following alternative:

   1. Self-closing exterior doors with self-latching devices, may be substituted, installed at fifty-four (54") above inside floor lever or
   2. An electrical automatic safety pool cover conforming to ASTM Standard F-l 346-91 is provided. The control for the pool cover shall be mounted at least 54 inches above grade.
   3. Other means of protection may be acceptable as long as the degree of protection provided is not less than that required by any of the devices described above.

10. Where an above ground 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 (1) the ladder or steps shall be capable of being serviced, locked, or removed to prevent access or (2) the ladder or steps shall be suspended by a barrier which meets the requirements of items 1 through 9 above. When the ladder or steps are secured, locked, or removed, any opening created shall not allow passage of a four inch (4") diameter sphere.

    a) Access doors to indoor swimming pools shall be self-closing and self-latching in accordance with requirements of this code as stated above.
    b) A self-contained, portable above ground spa equipped with an approved locking safety cover meeting ASTM Standard ES 13-89 may be exempt from the requirements above.
    c) All swimming pool and spa water shall be maintained in a clear condition which is free of algae, insects, debris, and in a sanitary condition.

P:/AinsworthK/doc/BI-17 Pool Barrier Compliance doc 2/1/08

City of San Clemente
Building Division

Residential Pools and Spas Circuit Card and Load Summary

THIS CARD MUST BE FILLED OUT AND SIGNED AND DATED

Address:	Permit No.
Owner: Phone:	APN No.
Contractor: Phone:	Area in sq.ft.
PANEL _____ _____A.I.C.	_____VOLTS_____Ø _____WIRE

LOCATION	CKT	BKR SIZE	WIRE SIZE	WIRE TYPE	MISC	LTG	REC	REC	LTG	MISC	WIRE SIZE	WIRE TYPE	BKR SIZE	CKT	LOCATION
	1													2	
	3													4	
	5													6	
	7													8	
	9													10	
	11													12	
	13													14	
	15													16	
	17													18	
	19													20	
	21													22	
	23													24	
	25													26	
	27													28	
	29													30	
	31													32	
	33													34	
	35													36	
	37													38	
	39													40	
	41													42	

MAIN:□_____AMP BKR/FUSE □ MLO
BUS:_____AMP
Service entrance or feeder conductors:
A) Size No._____B) Type: □ CU □ AL
C) Insulation:_____D) Conduit Size:_____

Service ground/bond:
A) Size No._____B) Type: □ CU □ AL
C) Clamp location(s):
□ UFER 250-50(c)
□ Water Pipe 250-104(a)
□ Ground Rod 250-52
□ Metal Gas Pipe 250-104(c)

GFCI locations
□ Bathroom(s) □ Kitchen
□ Garage(s) □ Hydro massage Tub
□ Outdoors □ _____

Computed Load_____AMPS
See Calculation Worksheet on back.
Branch circuits required:

A) Lighting circuits	220--70
B) Two small appliance circuits	210-52(b)
C) Laundry circuit	210-52 (f)
D) Outdoors	210-52(e)
E) Bathrooms	210-52(d)
F) Bedrooms/AFCI	210-12(b)

Separate Card is required for each Sub-Panel_____

_____

I certify that all terminations have been torqued in accordance with manufacture's instructions and that the work shown on this circuit card represents the full extent of the work performed under this permit.
□ Owner _____
□ Contractor_____

Signed_____Date_____

SINGLE FAMILY DWELLING
ELECTRICAL SERVICE LOAD CALCULATION

OPTIONAL METHOD NEC 220-30
As an alternative method, the STANDARD METHOD,
Found in ARTICLE 220 of the National Electric Code, may be used

1) GENERAL LIGHTING LOADS
Dwelling_____sq.ft. x 3 VA = _____VA
Small appliance loads – 220-16(a) 1500 VA x_____circuits = _____VA
Laundry load – 220-16(b) 1500 VA x_____circuits = _____VA
General Lighting Total_____VA

2) COOKING EQUIPMENT LOADS – Nameplate Value
Range_____VA = _____VA
Cooktop_____VA = _____VA
Oven(s)_____VA = _____VA
Cooking Equipment Total_____VA

3) ELECTRIC DRYER 220-18 (Nameplate, 5000 VA minimum)
Dryer_____VA = Dryer Total_____VA

4) FIXED APPLIANCE LOADS 230-30(b3)
Dishwasher = _____VA
Disposal = _____VA
Compactor = _____VA
Water Heater = _____VA
Hydromassage Bathtub = _____VA
Microwave Oven = _____VA
Built-in Vacuum = _____VA
_____= _____VA
Fixed Appliance Total_____VA

5) OPTIONAL SUBTOTAL (Add all of the above totals) _____VA

6) APPLYING DEMAND FACTORS – TABLE 220-30
Optional Subtotal (from line 5) { First 10,000 VA x 100% = 10,000 VA
Remaining_____VA x 40% = _____VA

7) HEATING OR AC LOAD – TABLE 220-20
Larger of the Heating or AC Load = _____VA

8) OPTIONAL LOADS TOTAL (Add totals from lines 6 and 7) = _____VA

9) POOL LOADS $\frac{\text{Optional Loads Total}}{\text{240 Volt}}$ _____VA

10) MINIMUM SERVICE SIZE = = _____Ampere

(Please put total on front of card under Computed Load)

POLLUTION PREVENTION FOR CONSTRUCTION

BI-27

4 Pages

All construction projects regardless of size are required, at a minimum, to implement an effective combination of erosion and sediment control methods and follow Best Management Practices (BMP's) during the construction process.

Construction sites need to follow good housekeeping practices in order to prevent pollutants from entering the storm drains.

Typical construction site issues to address include:

- Stockpile Management
- Concrete & Mortar Waste Management
- Solid Waste Management
- Sanitary / Septic Waste Management
- Hazardous Materials – Delivery, Storage & Use

City of San Clemente, Building Division, 910 Calle Negocio, Suite 100, San Clemente, CA 92673
Phone (949) 361-6100 Fax (949) 361-8281 – www.san-clemente.org

***MUST BE IMPRINTED ON ALL NEW CONSTRUCTION/ADDITION PLANS

3.2 Minimum Requirements

All construction projects regardless of size are required, at a minimum, to implement an effective combination of erosion and sediment controls and waste an materials management Best Management Practices. These minimum requirements are summarized in Table 3-2 and must conveyed to construction contractors as part of the plan notes or on a separate erosion control plan as required by the agency.

Table 3-2
Minimum Requirements for All Construction Sites

Category	Minimum Requirements
Erosion and Sediment Control	Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
Waste and Materials Management Control	Construction-related materials, wastes, spills or residues shall be retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

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Remember: The ocean begins at your front door!

BMPs: Easy Solutions for Keeping Our Ocean Waters Clean

Best Management Practices (BMPs) are activities such as good housekeeping practices, pollution prevention techniques, educational practices and maintenance procedures. Many BMPS are easy and inexpensive. Construction sites should follow the tips below to prevent pollutants from entering storm drains in the first place, and help protect our environment, our families' health and safety and our local economy.

Stockpile Management:

- Protect all stockpiles from storm water run-on using temporary perimeter sediment barriers such as berms, dikes, fiber rolls, silt fences, sand or gravel bags, or straw bale barriers.
- During the rainy season, stock piles must be covered and have a temporary sediment barrier at all times.
- During the non rainy season, stockpiles must be covered at the end of each work day and have a temporary sediment barrier at all times. Implement wind control practices as appropriate.

Concrete Waste Management:

- When obtaining ready mix concrete from a supplier, discuss their BMP procedures such as handling of concrete waste and washout before deliveries are made.
- Avoid mixing excess amounts of fresh concrete on-site.
- Perform washout of concrete trucks off site or in designated areas only and never wash out concrete trucks on the street or into storm drains, open ditches, or streams
- Never wash any concrete products including dust and silt down into the gutter or storm drain. Always monitor on-site concrete tasks, such as saw cutting, coring, grinding, and grooving to ensure proper methods are implemented.
- Concrete cutting residue should be vacuumed and never allowed to flow across pavement or left on the surface of pavement.
- A sign should be installed adjacent to each wash out facility to inform concrete equipment operators to utilize the proper facilities.
- Wash out only from mixer truck shoots into concrete washout.
- Concrete washout from concrete pumper bins can be washed out into pumper trucks and discharged into designated washout area or properly disposed of off site.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and properly disposed of.

Solid Waste Management:

- Select designated waste collection areas on site and locate containers in a covered area and / or in a secondary containment. Be sure to have enough conveniently located containers throughout the project.
- Collect site refuse daily, especially during rainy / windy conditions and plan for an adequate number of pickups. Never overfill a dumpster.
- Remove refuse promptly from all erosion and sediment control devises as well as storm drains.
- Always make sure that toxic liquids and chemicals are never disposed of in dumpsters designated for construction debris. Liquid and hazardous wastes must always be disposed of properly.
- Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the refuse hauler.
- Recycle or salvage as much construction and demolition debris as possible.

Sanitary / Septic Waste Management

- Use only reputable, licensed sanitary / septic waste haulers.

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- Temporary sanitary facilities must be located in a convenient location away from drainage facilities, watercourses, as well as traffic and should always have secondary containment.
- Untreated raw wastewater must never overflow, be discharged or buried within the project site.
- Be sure to have enough restrooms conveniently located throughout the project.

Hazardous Material Delivery and Storage:

- Minimize storage of hazardous materials onsite, and consider storage in a covered area.
- Store materials in a designated area on pallets with secondary containment (Earth Dikes, Drainage Swales, or Lined Ditches) away from traffic, waterways, and storm drains.
- Keep ample supply of appropriate spill clean up material near storage areas.
- Conduct regular weekly inspections as well as before and after any rain events. Train employees and subcontractors.
- Be able to supply Material Safety Data Sheets (MSDS) for all materials stored and keep an accurate, up to date inventory of materials delivered and stored on site.
- Storage of reactive, ignitable or flammable liquids must comply with fire codes.
- Those trained in emergency spill cleanups must be present when dangerous materials are unloaded.
- Contain and clean up any spill immediately.
- Clean spills on dirt areas by digging up and properly disposing of the contaminated soil.

Hazardous Material Use:

- Minimize use as much as possible
- Follow manufacture instructions regarding uses, mixing, conditions, and warnings of chemicals.
- Never over apply and prepare only the amount needed.
- Never apply any chemicals immediately before a rain event, and always use the entire product before disposing the container.
- Never clean tools, paintbrushes, or rinse containers into a street, gutter, storm drain, or watercourse and always dispose of any hazardous chemicals / materials as hazardous waste.
- Use recycled and less hazardous products whenever practical.
- Non-toxic liquid wastes such as latex paints may be collected in a lined collection area. This area must be properly bermed and kept covered during rain events and at the end of every work day and must never be allowed to overflow or to be disposed of to uncovered ground.
- Liquid and hazardous wastes must always be disposed of appropriately.
- **Immediately report any significant spills to the County's 24-hour water pollution reporting hotline at 714-567-6363 or the City of San Clemente's 24 hour hot line at 949-366-1553.**

Routinely train all employees and require any contractors / sub-contractors to follow these BMPs.

Acknowledgement:

I _____(print name) certify that I have read the preceding document regarding construction site Best Management Practices (BMPs). I have been informed that these basic BMPs must be implemented and maintained on all construction sites, and that the City may impose fines or other civil or criminal sanctions against me or my business for allowing runoff and construction debris to enter the storm drain system. I take full responsibility for maintaining basic BMPs on construction sites for which I am accountable.

_____ _____

Contractor Signature **Date**

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DRAINAGE INFORMATION BI-26

Proper site drainage is important in order to carry surface water off your lot and deposit run-off to an acceptable location. Proper site drainage helps minimize potential damage to your property caused by excessive water ponding on your lot and improper drainage. Proper site drainage avoids improperly draining run-off over the top of a slope or onto your neighbor's property. When making changes to your yard's existing drainage patterns make sure to consider the following:

1. Provide yard drainage plan. **Do not show trees, plants or shrubs**. Identify hardscape, lawns and planting areas. Show accurate contours (or spot elevations) to indicate proper drainage in all areas. Use arrows to indicate direction of surface drainage and show locations of all area drains.

2. Paved (concrete) areas must be sloped to drain at 1% minimum.
   Unpaved areas must be sloped at least 2%.
   Indicate on plans minimum slope and direction.

3. Show location and slope of drain lines (0.5% minimum).
   Provide top of drain and drain invert elevations.

4. Specify 4" minimum diameter drain lines and specify materials:
   a. ABS or PVC, SDR 35
   b. ABS or PVC, Schedule 40

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SWIMMING POOL AND SPA NOTE SHEET
(TO BE IMPRINTED ON PLANS)

1. Special inspection is required on pools and spas during gunite or shotcrete placement in accordance with CBC section 1704.4 and 1913.10.

2. Due to sulfates in soils common in much of San Clemente, concrete, gunite and shotcrete used in pool construction must be resistant to sulfates, per CBC Section 1904.2.2, & 1904.3. Shotcrete shall have minimum f'c = 4,500 psi 28 day compressive strength with Type V cement and maximum water/cement ratio = 0.45.

3. After excavation is completed, but prior to the placement of forms, footings, reinforcing steel or concrete, the Geotechnical Engineer shall observe the site and excavation / soil conditions and provide a written field memorandum that states the pool / spa location and soil conditions are satisfactory from a geological standpoint.

4. All metallic parts of the pool structure, reinforcing steel, light fixture housing, metal ladders, diving boards, and any metal structures or objects within 5 feet from pool or spa require electrical bonding.

5. Prior to approval to place concrete or gunite, electrical inspection shall approve grounding of reinforcing steel, plumbing and conduit.

6. Gas piping must be buried 18 inches minimum below grade (or 12" minimum if buried under concrete).

7. Exposed PVC pipe must be U.V. approved or painted with water base paint.

8. Prior to FINAL inspection, a SOUND TEST MUST BE PERFORMED by a licensed acoustical engineer on the pool / spa equipment to demonstrate that at the property line the noise level is:
   MAX 55 Dba 7:00AM – 10:00 PM
   MAX 50 Dba 10:00 PM – 7:00 AM