



DOCUMENT SUBMITTAL CHECKLIST
Residential Swimming Pool Projects

<p>The items listed below are necessary to submit your pool project for plan check. In general, all plans must be:</p> <ul style="list-style-type: none"> Clearly delineated, showing all existing and new construction Drawn to ¼ per ft. scale and fully dimensioned <p align="center">PLANS MUST BE CLEAR AND LEGIBLE; ILLEGIBLE PLANS WILL NOT BE ACCEPTED</p>	
General Submittal Requirements	CHECK OFF
Provide two (2) complete sets of plans including plot/site plan, engineering, energy forms, cut sheets, etc.	
Structural plans including: Reinforcing plan with section drawings, trench and over excavation compaction requirements and all structural details as appropriate.	
Electrical plan including: Sizing, location of pool sub panels, GFCI receptacles, conductor and conduit sizing and type, locations, bonding grid, pool light locations, etc.	
Plumbing plan including: Location of drowning safety prevention devices, anti entrapment grates, skimmers, vacuum supply lines, water features, air gaps, auto fill devices, backflow prevention, etc.	
Pool equipment cut sheets including: Filters, pool sub panels, motors, pumps, etc.	
Gas and electrical load calculations and proposed location of trenches.	
Title 24 Energy Calculations: Two (2) complete sets of all applicable pages.	
Cover Sheet	CHECK OFF
Project name & address, as well as project owner's name, address and phone number.	
Title block with all current applicable codes listed.	
List drowning safety prevention devices, anti-entrapment grates, and provide corresponding specifications.	
Description of scope of work and pages numbered (x of y).	
Index of drawings included in plan set.	
Vicinity map, location and North arrow.	
Stamp & wet signature of design professional (all sheets).	
Special Inspection Program (if applicable) For a detailed checklist refer to CBC § 1701. Identify each item requiring special inspection considering items such as excavation and filling, embedded anchors, structural masonry, welding, high strength bolts, smoke control systems, etc.	
Plot/Site Plan Plan view required – ¼ inch per foot scale	CHECK OFF
Lot dimension showing whole parcel and property lines.	
Pool top view - providing pool dimensions (depths, length, width, etc.), dimensions to property lines and to other adjacent remaining structures (e.g. pools, detached garages, septic tanks, patio covers, etc.).	
Engineer to identify that soil and site conditions of the specific address of project if or if not requires a pool hydrostatic relief valve is required.	
Plot plan must show all easements, existing structures, retaining walls, electrical panel location and all overhead and underground electrical lines.	
Pool equipment and other structures such as diving boards, ladders, diving rocks, slides and other devices must be shown on the plans.	
All forms of compliance with Swimming Pool Safety Act Compliance (door alarm locations, self-closing gate swing direction, etc.).	
Suction and return line plumbing sizes and type of material, location of skimmer(s), split suction drain(s), equalizers, and return lines.	
Illustrate all drainage using arrows on the plot plans.	
Indicate fence location and design on pool plans.	
Show thickness of pool shell, footings for water features/ bond beams and thickened deck edges as applicable.	
Show minimum 3" pad for equipment and its setbacks from adjacent property lines, water's edge, etc.	

Show locations and provide installation details for all embedded metallic items and reinforcing steel and bonding of such.	
Construction details and site specific plans stamped and signed by a licensed engineer.	
Further information to consider	
Minimum setback from a structure and property lines is 4 feet when engineered and surcharged.	
Pools and equipment are not allowed in any easement.	
Venting for gas pool heaters shall terminate not less than 4 feet from any opening or air inlet to the building.	
A waterfall exceeding 30" in height requires a building permit and an engineered design and may not exceed three (3) feet in height in a front (20' setback) or street side yard (12 ½' setback) area or eight (8) feet in height, in an interior side yard (5' setback) or rear yard (10' setback) EXCEPT in the Northeast Specific Plan Area, where the maximum height is six (6) feet in an interior side yard (5' setback) or rear yard (10' setback).	
All fences and gates must be in place when work is completed daily so pool is not accessible by anyone other than property owners.	
All broken sidewalks must be fully repaired prior to the final inspection.	
No pool shall be filled with water before the pre-plaster inspection is approved and all barriers and alarms are in compliance.	
The grading must be complete prior to final inspection. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of the California Building Code.	
Location of all pool equipment, and other accessory equipment, and shall not be visible from the public right-of-way and shall not be closer than ten feet (10') to a rear or side yard unless a solid six foot high fence separates the equipment from the property line, in which case a minimum setback would be five (5) feet from a rear or side property line.	
Before your Building Permit can be issued, clearance from other Departments/Agencies will be required.	
A. The Planning Division (209- 366-7230) will review the submittal and provide clearance to assure compliance with zoning codes land use, setbacks, heights, address, parcel location etc.	
B. The Public Works Department (209-366-7260) will review the submittal and provide information and clearance regarding encroachment requirements. Either an encroachment permit will be issued or a notice of exemption provided.	
All construction shall comply with the minimum requirements of the following codes effective January 1, 2014	
Title Block to include all applicable California Codes , the Galt Municipal Code (GMC) 2006 Uniform Swimming Pool, Spa, and Hot Tub Code (USPSHTC) 2013 California Building Code (CBC) www.bsc.ca.gov 2013 California Plumbing Code (CPC) 2013 California Mechanical Code (CMC) 2013 California Electrical Code (CEC) 2013 Residential and Residential Energy Standards www.energy.ca.gov/title24/2008standards 2013 CALGreen www.bsc.ca.gov/CALGreen/greencode.htm Other prevailing City Ordinances and State Laws	
Design requirements shall apply as follows:	
Minimum soil bearing pressure of 1,500 pounds per square foot (without soils analysis) Site Class C Soil (very dense) The Basic Wind Speed is 85 mph, Exposure C Seismic Site Design Category D (without soils analysis) Climate Zone 12 Snow Load Zero (0)	

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CERTIFICATE OF INSTALLATION		CF2R-PLB-03-E
Pool And Spa Heating Systems		(Page 1 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

A. POOL AND SPA SYSTEM TYPE	
01	Pool and Spa System Type

B. POOL AND SPA SYSTEMS AND EQUIPMENT REQUIREMENTS (SECTION 110.4(a) and 110.5)	
01	Heater has a thermal efficiency that complies with the Appliance Efficiency Regulations.
02	A readily accessible on-off switch is mounted on the outside of the heater, which allows the heater to be shut off without the user adjusting the thermostat setting.
03	A weatherproof plate or card containing instructions for the energy-efficient operation of the pool or spa heater is permanently mounted.
04	No electric resistance heating except for listed package units that have fully insulated enclosures and tight fitting covers that are insulated to at least R-6. Or if documentation is provided that at least 60 % of the annual heating energy is from site solar energy or recovered energy.
05	Heating system has no pilot light.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

C. POOL AND SPA SYSTEM INSTALLATION REQUIREMENTS (SECTION 110.4(b))	
01	To allow for the future addition of solar heating equipment, at least 36" of pipe is installed between the filter and heater, or dedicated suction and return lines are installed, or built-in or built-up connections for future solar heating are provided.
02	A cover is provided for outdoor pools or spas that have a heat pump or gas heater.
03	Pool system has directional inlets to adequately mix the pool water
04	Pool system has a time switch that allows the pump to be set or programmed to run during off-peak periods only
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

D. POOL PUMP SIZING AND FLOW RATE SPECIFICATION (SECTION 150.0(p))			
01	The pool pump specified is listed in the CEC database of certified pool pumps.		
02	The pool pump flow rate shall not exceed the maximum pump flow rate calculated based on pool sizing in the table below. The return pipe diameter, suction pipe diameter, and filter area shall be at least as large as the required minimums shown in the table. Alternatively, a flow calculation or flow test result shall be provided to demonstrate that the pump flow rate is less than 6 hour filtration turnover, and the return pipe flow rate does not exceed 8 feet per second and that the suction pipe flow rate does not exceed 6 feet per second.		
03	An alternative compliance calculation or a flow test result is provided for this pool or spa use (must attach flow calculation or flow test result to this form)		
04	The pump is capable of operating at 2 or more speeds (not applicable if pump is less than 1 horsepower).		
05	Each auxiliary pool load is served by either a separate pump, or the system is served by a multi-speed pump.		
06	Volume of Pool (gallons)		
07	Filter Type (Cartridge, Sand, DE)		
	08a	08b	08c
	Required Min Return Pipe Diameter (inches)	Required Min Suction Pipe Diameter (inches)	Required Min Filter Area (ft ²)
			08d
			Required Max Pump Flow (gpm)
09	Return Pipe Diameter (inches)		
10	Suction Pipe Diameter (inches)		
11	Filter Surface Area (ft ²)		
12	Max Pump Flow Rate (gallons per minute)		
13	Measured flow rate return line (feet per second)		
14	Measured flow rate suction line (feet per second)		
15	Compliance statement:		
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.			

POOL AND SPA HEATING SYSTEMS

CEC-CF2R-PLB-04-E (Revised 03/15)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF INSTALLATION		CF2R-PLB-03-E
Pool And Spa Heating Systems		(Page 2 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

E. POOL SYSTEM PIPING (Section 150.0(p)2)

01	The suction side pipe is straight for at least 4 pipe diameters before entering the pump (See table below for the required straight run lengths for various pipe sizes).
02	All elbows are sweep elbows, or an elbow type that has a pressure drop that is less than the pressure drop of a straight pipe with a length of 30 pipe diameters.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

F. POOL FILTERS AND VALVES (Section 150.0(p)3 and 4)

01	If a filter is used in a pool intended for public use: The size of the filter is at least the size specified in NSF/ANSI 50.
02	If a backwash valve is used: The diameter of the backwash valve is at least 2 inches, or the diameter of the return pipe, whichever is greater.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

POOL AND SPA HEATING SYSTEMS

CEC-CF2R-PLB-04-E (Revised 03/15)

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CERTIFICATE OF INSTALLATION		CF2R-PLB-03-E
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Installation documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
Address:	CEA/HERS Certification Identification (If applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Installation is true and correct.
- I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation, and attest to the declarations in this statement (responsible builder/installer), otherwise I am an authorized representative of the responsible builder/installer.
- The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations, and the installation conforms to the requirements given on the plans and specifications approved by the enforcement agency.
- I reviewed a copy of the Certificate of Compliance approved by the enforcement agency that identifies the specific requirements for the scope of construction or installation identified on this Certificate of Installation, and I have ensured that the requirements that apply to the construction or installation have been met.
- I will ensure that a registered copy of this Certificate of Installation shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Builder/Installer Name:	Responsible Builder/Installer Signature:	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)	Position With Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone	Date Signed:

Registration Number:

Registration Date/Time:

HERS Provider:

CA Building Energy Efficiency Standards - 2013 Residential Compliance

March 2015

CF2R-PLB-03-E User Instructions

A. POOL AND SPA SYSTEM TYPE

Pick from Pool only, Spa only, or Pool and Spa

B. SYSTEMS AND EQUIPMENT (SECTION 114.0(A))

Before any pool or spa heating system or equipment may be installed, the manufacturer must certify to the Energy Commission that the system or equipment complies with §110.4 and §110.5. The requirements include minimum heating efficiency according to Appliance Efficiency Regulations, an on-off switch outside the heater, permanent and weatherproof operating instructions, no continuous pilot light, and no electric resistance heating

C. INSTALLATION (SECTION 114.0(B))

A time switch or similar control mechanism must be installed as part of the pool water circulation control system that will allow all pumps to be set or programmed to run only during the off-peak electric demand period and for the minimum time necessary to maintain the water in the condition required by applicable public health standards

D. PUMP SIZING AND FLOW RATE SPECIFICATION (SECTION 150.0(P))

The pool filtration flow rate may not be greater than the rate needed to turn over the pool water volume in 6 hours or 36 gpm, whichever is greater. Calculate Max Flow Rate using the following equation:

$$\text{Max Flow Rate (gpm)} = \frac{\text{Pool Volume (gallons)}}{360\text{min.}}$$

Pool piping must be sized according to the maximum flow rate needed for all auxiliary loads. Show work to calculate return and suction line flow rate, minimum filter area, and the maximum pump flow rate correspond to the pool volume in accordance to section 150.0(p), or refer to Table C below for the prescriptive values. The maximum velocity allowed is 8 fps in the return line and 6 fps in the suction line, and the maximum pump flow rate is less than 6 hour filtration turnover.

03 Select whether the alternative calculation is used.

06 Enter the Pool volume

07 Enter the Return Pipe Diameter (inches).

09 Enter Suction Pipe Diameter (inches).

10 Enter Filter Type (Cartridge, Sand, DE).

11 Enter Filter Surface Area (ft²).

12 Enter the Max Pump Flow Rate (gpm).

13 Enter the measure flow rate of the return line in feet per second. This is only used if the alternative calculation is used.

14 Enter the measure flow rate of the return line in feet per second. This is only used if the alternative calculation is used.

15 Verify that an alternative compliance calculation or flow test result is provided for this pool or spa use (D. 03 = Yes), and verify whether D. 13 is less than or equal to D. 08, and D. 14 is less than or equal to D. 06. Indicate Yes or No. If no, project fails prescriptive compliance.

E. SYSTEM PIPING

There must be a length of straight pipe that is greater than or equal to at least 4 inches pipe diameters installed before the pump. Refer to Table D below for the required pipe length. Traditional hard 90° elbows are not allowed. All elbows must be sweep elbows or a type of elbow that has a pressure drop less than the pressure drop of straight pipe with a length of 30 pipe diameters.

F. FILTRATION EQUIPMENT

Backwash valves must be sized to the diameter of the return pipe or two inches, whichever is greater. Multiport backwash valves have a high pressure drop and are discouraged.

Table C
Pool sizing (Values are based on a maximum allowable turnover rate of 6- hours)
Note: For pumps greater than 1 hp. The maximum Pump Flow is the lowest speed default filtration

Max Pool Volume (gallons)	Min Pipe D or Greater (inches)		Min Filter Area or more (square feet)			Max Pump Flow (gpm)
	Return	Suction	Cartridge	Sand	DE	
13,000	1.5	1.5	100	2.4	20	36
17,000	1.5	2	130	3.1	25	47
21,000	2	2	160	3.9	30	58
28,000	2	2.5	210	5.2	40	78
42,000	2.5	3	320	7.8	60	117
48,000	3	3	360	8.9	70	133

Table D
Pipe Diameter/Pipe Length

Pipe Diameter (inch)	Required Pipe Length leading into pump (inch)
1.5	6
2	8
2.5	10
3	12