Development Services Department
Building Division
311 Vernon Street
Roseville, California 95678-2649

Swimming Pool Plan Requirements

Plans shall indicate the following:

- ❑ Project address on every plan sheet
- ❑ Signature of responsible party who drew the plans on every plan sheet
- ❑ Current codes by which the construction design complies
- ❑ Dimensions of all property lines with a north arrow
- ❑ Drawn to an appropriate scale with pool depths shown on the pool and dimensions to other structures
- ❑ Have an engineer address any surcharge loads on the pool or from the pool.
- ❑ Construction details must be stamped and signed by a licensed engineer.
- ❑ Wall height and slope of grade for any retaining walls that are part of the proposed construction
- ❑ Other structures such as diving boards, ladders, diving rocks, slides and other devices
- ❑ **Location of all mechanical equipment, type and size of pool equipment and plumbing**
- ❑ Location of electric panel and gas meter
- ❑ Type and size of electric service currently on home (overhead / underground)
- ❑ BTU rating of gas appliances including diameter, length and pipe material of each segment of gas run from meter
- ❑ Location of all easements (including Public Utility Easements) and required setbacks
- ❑ Direction of surface water drainage and direction of flow of the deck drain (using arrows), reflecting where drainage will exit property to public right-of-way.
- ❑ Pool fencing design and location to show enclosure around the pool area
- ❑ All gates to indicate swing away from pool
- ❑ Point of access across property line for pool construction equipment
- ❑ Indicate if there is existing damage to sidewalk at access route to yard

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Plumbing, Mechanical & Energy Requirements

Based on the California Mechanical Code (CMC), the California Plumbing Code (CPC), and the California Energy Code (CEC T-24)

1) Backflow prevention required at water supply per **CPC**

a.) Manual fill: use AVB (Atmospheric Vacuum Breaker)
b.) Auto fill / auto chlorinator: use PVB (Pressure Vacuum Breaker)

2) The swimming pool or spa shall have at least two circulation drains per pump that shall be hydraulically balanced and symmetrically plumbed through one or more T fittings, and that are separated by a distance of at least 3' in any dimension between the drains. Suction outlets that are less than 12" across shall be covered with anti-entrapment grates, as specified in the ASME/ANSI standard A 112.19.8, that cannot be removed except with the use of tools. Slots of openings in the grates or similar protective devices shall be of a shape, area and arrangement that would prevent physical entrapment and would pose any suction hazard to bathers.

3) At least 36" of pipe between the filter and the heater to allow for future addition of solar heating required. Per California Energy Code **(CEC T-24)**

4) All pools constructed with pool heaters require a pool cover. Per California Energy Code **(CEC T-24)**

5) A mechanical draft venting system of other than direct vent type shall terminate at least 4' below, 4' horizontally from or 1' above any door, operable window, or gravity air inlet into any building. The bottom of the vent terminal shall be located at least 12" above grade. Per **CMC**

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Swimming Pool Electrical Requirements

Based on the California Electrical Code (CEC)

1) All metals within 5' horizontally of the inside walls of the pool and 12' vertically of maximum water level of pool to be bonded. Per **CEC**

2) Receptacles that provide power for water pump motors or for other loads directly related to the circulation and sanitations system that are 125v or 240v whether by receptacle or direct connection shall be provided with GFCI protection. They shall also be located at least 10' from the inside walls of the pool, or not less than 6' from the inside walls of the pool if they meet all of the requirements of the **CEC**

3) Where a permanently installed pool is installed at a dwelling unit, no fewer than 1 – 125 volt, 15 or 20 amp receptacle on a general purpose branch circuit shall be located not less than 6' from and not more than 20' from the inside wall of the pool. Per **CEC**

4) Equipotential Bonding Grid: The parts specified in 680.26(B) shall be connected to an equipotential bonding grid with a solid copper conductor, insulated, covered or bare, not smaller than 8AWG or rigid metal conduit of brass or other identified corrosion resistant metal conduit. Connection shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are of stainless steel, brass, copper or copper alloy. The equipotential common bonding grid shall extend under paved and unpaved surfaces for 3' horizontally beyond the inside walls of the pool and shall be permitted to be any of the following:

4.1) Structural reinforcing steel. The structural reinforcing steel of a concrete pool where the reinforcing rods are bonded together by the usual steel tie wires or the equivalent

4.2) Bolted or welded metal pools. The wall of a bolted or welded metal pool

4.3) Alternate means. This system shall be permitted to be constructed as specified (A)-(F)

A.) Materials and connections. The grid shall be construction of minimum 8AWG bare solid copper conductors. Conductors shall be bonded to each other at all points of crossing. Connections shall be made per **CEC**.

B.) Grid structure. The equipotential bonding grid shall cover the contour of the pool and the pool deck extending 3' horizontally from the inside walls of the pool. The equipotential bonding grid shall be arranged in a 12" x 12" network of conductors in a uniformly space perpendicular grid pattern with tolerance of 4".

C.) Securing. The below grade grid shall be secured within or under the pool and deck media. Per **CEC**.

D.) Swimming pools made of fiberglass and vinyl shall be considered nonconductive.

E.) All metal parts used to secure vinyl pool liners shall be bonded to the equipotential bonding grid.

F.) An intentional bond of 9" sq shall be installed in contact with the pool water of nonconductive swimming pools per **CEC**

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Swimming Pool Safety Act

Based on California Health and Safety Code section 115922 and the California Building Code (CBC)

When a Building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa at a private single family home, the respective swimming pool or spa shall be equipped with at least two of the following seven drowning prevention safety features. In addition, per Roseville Municipal Code section 16.04.870, one of the two drowning prevention safety features must be option #1 below.

(1) An enclosure that meets the requirements of Section 115923 and isolates the swimming pool or spa from the private single-family home.

(2) Removable mesh fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.

(3) An approved safety pool cover, as defined in subdivision (d) of Section 115921.

(4) Exit alarms on the private single-family home's doors that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or a verbal warning, such as a repeating notification that "the door to the pool is open."

(5) A self-closing, self-latching device with a release mechanism placed no lower than 54 inches above the floor on the private single-family home's doors providing direct access to the swimming pool or spa.

(6) An alarm that, when placed in a swimming pool or spa, will sound upon detection of accidental or unauthorized entrance into the water. The alarm shall meet and be independently certified to the ASTM Standard F2208 "Standard Safety Specification for Residential Pool Alarms," which includes surface motion, pressure, sonar, laser, and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water, is not a qualifying drowning prevention safety feature.

(7) Other means of protection, if the degree of protection afforded is equal to or greaterthan that afforded by any of the features set forth above and has been independently verified by an approved testing laboratory as meeting standards for those features established by the ASTM or the American Society of Mechanical Engineers (ASME).

CITY OF ROSEVILLE CALIFORNIA

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Swimming Pool Fence Requirements

Based on California Health and Safety Code section 115923 and the California Building Code (CBC)

An enclosure shall have all of the following:

1) Any access gates through the enclosure open away from the swimming pool and are self-closing with a self-latching device placed no lower than 60" above the ground.
2) A minimum height of 60".
3) A maximum vertical clearance from the ground to the bottom of the enclosure of 2".
4) Gaps or voids, if any, do not allow passage of a sphere equal to or greater than 4" in diameter.
5) An outside surface free of protrusions, cavities or other physical characteristics that would serve as handholds or footholds that could enable a child below the age of 5 years to climb over.

Fencing Requirements:

1) Closely spaced horizontal members:

   a.) Where the barriers is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45", the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75" in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75" in width.

2) Widely space horizontal members:

   a.) Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45" or more, spacing between vertical members shall not exceed 4". Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75" in width.

3) Vehicle access gates:

   a) Driveway gates that are part of the enclosure are to be electronically operated and automatically close within one minute of being opened or shall be equipped with lockable hardware or padlocks and shall remain locked at all times when not in use. A permanent sign shall be posted which reads: "This access to be kept locked at all times."

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Notice to Pool Contractors

ADDITIONAL DESIGN REQUIREMENTS not included on Swimming Pool Plan Requirements:

- Minimum setback for pool structures is 3 feet from the back of the bond beam, and 4 feet from water's edge, to the property line.
- Pool structure must not encroach into any easement(s).
- Venting for gas pool heaters shall terminate not less than 4' from any opening or air inlet to the building.
- Clearance from combustibles to pool heaters shall be per manufacturer's specifications.
- Pools must meet the requirements of the Uniform Swimming Pool Code, the California Electric Code (CEC) and the California Building Code (CBC).

CONSTRUCTION REQUIREMENTS:

- It will be the responsibility of the pool contractor to keep all streets, curbs, gutters and sidewalks clean and free of dirt, concrete and other debris, used in the construction of swimming pools.
- Construction materials such as dirt, sand and cement shall not be washed into the gutter or storm drain.
- The City of Roseville Grading Ordinance and the California Penal Code Section 374.3(b) prohibit dumping of material on public or private property within the City limits and without the consent of the owner. Violators will be subject to fines.
- 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.
- The grading must be complete prior to final inspection. This includes 2% drainage away from the house and all drainage sloping to the street. Note: It is the responsibility of the contractor to see that the grading is completed. All homeowners will be referred back to the contractor for clarification.

Due to liability reasons, the City of Roseville **will not** make any inspections unless there is an adult present or an authorizing note is left on the front door allowing the inspector to enter the rear yard.
All animals must be restrained!

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The City of Roseville is enforcing the following field inspections on all swimming pools and spas. Following are some basic guidelines.

1. Pre-gunite:

- □ All reinforcement is in place
- □ Underground electrical conduit is in trench.
- □ Bonding to pool, equipment pad, light niche, **all** metal objects within 5' of pool
- □ Gas piping in trench and on test
- □ Water lines on test at 35 psi.

2. Pre-deck:

- □ All forms in place with drains installed
- □ Bonding of **all** metal objects within 5' of water's edge (handrails, ladders, umbrella pockets)
- □ Min. slab thickness with no exposed pipes or conduit (wrap if necessary)
- □ Protect PVC at equipment slab

3. Pre-plaster - <u>Prior to filling with water</u>:

- □ All Safety devices **<u>must be installed</u>** and operating properly:
  - Pool barrier / alarms / self-closing doors
  - Self-closing, self-latching gate(s) must swing away from pool
- □ "Listed" potting compound in all light niche fixtures.
- □ Equipment installed and ready for operation
  - Bonding in place
  - Pool sub panel completed
  - Correct breaker size at main panel for equipment installed
- □ All back- flow devices installed
  - AVB on supply line
  - Back-flow preventers on hose bibs
- □ Bonding of **all** metal objects within 5' of pool

4. Pool Final:

- □ Final electrical
  - Pool lighting
  - GFI's
  - Bonding of **all** metal objects within 5' of pool
- □ Safety glazing where required
- □ Check sidewalks for damage from equipment access
- □ Lot drainage to fall towards street

Please be ready for the inspection desired before scheduling an inspection request.

Construction Site Stormwater Compliance Reminders

To comply with the requirements of your Construction General Permit, or City Stormwater Ordinance, you must:

1) Implement effective best management practices (BMPs) for all pollutants at your site including ~ sediment, concrete waste, stucco waste, paint, fertilizers & fuels.
2) Implement effective combination of erosion and sediment control. Prevent erosion by stabilizing all disturbed soil, paying particular attention to exposed slopes.
3) Conduct site inspections before, during extended storm events, and after each storm event. Make sure all BMPs are installed properly and are working effectively. If State permitted; Note any problems and corrective actions taken in your on-site SWPPP.
4) Keep replacement supplies on hand and/or on site.
5) Cover all dumpsters ~ especially important during the wet season.
6) If you are dewatering ground water from your construction site, you must demonstrate the ground water quality meets all water quality standards prior to discharge.
7) If you are using soil amendments (such as lime, fly ash etc.) and they will be exposed to stormwater, you must implement a Sampling Analysis Program.
8) Ensure all site personnel are trained in erosion prevention/sediment control techniques, and know their responsibilities under the Construction General Permit and the City's Stormwater Ordinance.
9) Immediately report to the Development Services, Land Development Engineering Division any instances of sediment or other pollutant discharges from your construction site.
10) Maintain your construction access to minimize tracking.
11) Contain wash water from power washing operations and discharge it to porous areas.
12) Maintain drain inlet and perimeter protection year round.

For more information contact Development Services' Engineering Division at 916-774-5339, or visit the City's website at: City's Development Services.