

REQUIREMENTS In order to obtain a pool or spa permit, two (2) copies of a site plan and structural details (**shotcrete** pools/spas only) must be submitted with the engineer's stamp on each sheet including the site plan. Neighbors' consent and Homeowners Association or Architectural Control Committee approval is required. Portable spas require a permit and must have a listing form U.L., I.A.P.M.O., or approved agency.

BONDS \$ 500.00 refundable cash bond for shotcrete pools/spas.

POOL LOCATION PER APPROVED PLAN Measurements are taken from the inside wall of the pool or spa, therefore it must be set per approved plans prior to calling for the first inspection. Any change in location must be approved prior to inspections.

POOL ENCLOSURE Every pool or spa must be enclosed with a fence a minimum of 5 feet in height, with no vertical openings more than 4 inches or horizontal openings more than 2 inches. All doors providing access from the house to the pool shall be equipped with an alarm or are self closing with a self-latching device. Access gates shall be self-closing and self latching and open outwards away from the pool. Latch to be a minimum of 54 inches above grade. * See Ordinance 8.02.180 for detailed pool barrier requirements.

CONSTRUCTION REQUIREMENTS All pool construction shall conform to expansive soil details unless a soil report indicates otherwise. Use surcharge details as necessary. Continuous inspection by special inspector, approved by the Building Official, is required on pools constructed of concrete. High levels of sulfates are common in soils in Mission Viejo, therefore, in lieu of a soils report, **shotcrete** is required to be a minimum compressive strength of 4,500 psi with type V cement.

STAIRS, GUARDS AND HANDRAILS Stairs, guards and handrails are required along open sided walking surfaces or platforms located 30" or more above grade. For example slides, elevated platforms or seating areas. Handrails are required when the flight of stairs has 4 or more risers. Stair treads and risers shall be uniform in size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 3/8". Stairs shall have a maximum riser height of 7 3/4" and a minimum tread depth of 10" in Group R3 occupancies. Reference section 1009, 1012 and 1013 of the California Building Code for additional requirements.

OUTDOOR HEATER INSTALLATIONS All mechanical equipment shall be set on a concrete base above grade. Have Manufacture's installation instructions available on job site for inspection. The heater vent termination shall be a minimum of 4 feet from any door, window or gravity air inlet any building, measured from the closest edge of vent. Clearance to any wall shall be per manufacturer's installation instructions and listing. Where an integral bypass system is not provided as a part of the pool heater, a bypass line and valve shall be installed between the inlet and outlet piping for use in adjusting the flow of water through the heater. Outdoor Heater Installations must comply with sections 922 and 802.8 of the 2007 California Mechanical Code.

PLUMBING PVC Plastic schedule 40 pipe and fittings may be used for circulating piping systems. The entire system shall be tested and must hold a static water air pressure test of not less than 35 psi for 15 minutes. PVC water and air lines to be painted to protect from ultraviolet rays. A length of plumbing (36 inches minimum) is required between the filter and the fossil fuel heater for the future addition of solar heating equipment. Plastic pipe and fittings designed to be joined by solvent cementing shall comply with appropriate I.A.P.M.O. installation standards. A minimum of two outlets are required and must be separated by a minimum of 3 feet. Any pool or spa over 750 gallons require a minimum of three inches (3") P-trap and a backwash line. Pools or spas using a cartridge filter may reduce P-trap size to a minimum of one and one-half inch (1-1/2") for drainage.

PLUMBING CONTINUED

Section 115928 of the Health and Safety Code states: Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet all of the following requirements:

- (1) The swimming pool or spa shall have at least two circulation drains per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the drains.
- (2) Suction Outlets that are less than 12 inches across shall be covered with 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 or openings in the grates or similar protective devices shall be of a shape, area, and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.
- (3) Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth in (1) and (2) above shall meet the standards as published in the document, "Guidelines for Entrapment Hazards: Making Pools and Spas Safer," Publication Number 363, March 2005, United States Consumer Product Safety Commission.

Section 115928.5 of the Health and Safety Code states: Whenever a building permit is issued for the remodel or modification of an existing swimming pool, toddler pool, or spa, the permit shall require that the suction outlet of the existing swimming pool, toddler pool, or spa be upgraded so as to be equipped with an anti-entrapment cover meeting current standards of the ASTM or ASME.

GAS PIPING

1. **METALLIC PIPE** Per the 2007 California Plumbing Code Section 1211., as amended by the City of Mission Viejo, metallic pipe installed underground in exterior locations shall be protected from corrosion by approved factory applied coatings and wrapped with not less than 2 layers of minimum 10 mil wrapping. All metallic gas fittings shall be protected from corrosion by applying an approved primer and then wrapping the fittings with not less than 4 layers of minimum 10 mil wrapping. All horizontal piping shall have at least 18 inches of earth cover or other equivalent protections. Risers shall be protected from corrosion by applying an approved primer and then wrapping the risers with not less than 4 layers of minimum 10 mil wrapping to a point at least 6 inches above grade.
2. **NON-METALLIC PIPE** Per Section 507 of the 2005 Uniform Swimming Pool, Spa and Hot tub Code. PVC & PE plastic pipe installed underground in exterior locations shall have at least 18-inches of earth cover or other equivalent protection. Risers shall be metallic and shall be protected from corrosion by applying an approved primer and then wrapping the riser with **not less than 4 layers of minimum 10 mil wrapping** to a point at least 6 inches above grade. When a riser connects underground to PVC or PE Plastic Pipe, the underground horizontal metallic portion of the riser shall extend at least 30-inches before connecting to the plastic pipe by means of an approved transition fitting or adapter. An electrically continuous insulated number **14 AWG Yellow copper tracer wire** or other approved materials shall be installed with and attached to underground non-metallic gas piping and shall terminate above grade at each end. A pressure test, **provided by applicant**, is required and must hold 3 p.s.i. for 10 minutes, with no drop in pressure. Never cover or conceal piping until inspected and approved. For correct pipe size see Section 512.0 of the 2005 Uniform Swimming Pool, Spa and Hot Tub Code. Do not install or connect gas lines to the meter or appliance until pressure test has been approved. Gas shut off valve required outside of, and within 3 feet of heater.

ELECTRICAL Permanently installed pools or spas shall have at least one 125 volt convenience receptacle located a minimum of 10 feet from and not more than 20 feet of the inside walls of a pool/spa and shall be protected by G.F.C.I. Underwater lighting fixtures must have a metallic forming shell connected to pool light junction box with metallic or non-metallic raceway. A number 8 insulated copper conductor shall be installed. Junction boxes shall be located 4 feet minimum from level or ground level whichever is greater. Pool light branch circuit to be G.F.C.I. protected. Light fixtures closer than 5 feet horizontally from pool's edge shall be a minimum of 12 feet above water level. Overhead electrical and communication lines shall be shown on plans if they occur. Indicate height and horizontal distance from edge of pool.

All metal parts or components within 5 feet of the inside wall of the pool/spa (includes metal straps for posts, metal fences, aluminum window(s) and door frames, etc.) any enclosure (timer boxes, switch boxes, etc.) and if a pool light is installed, the housing and junction box thereof shall be bonded with a continuous number 8 AWG solid copper conductor.

Electrical conduit may be schedule 40 PVC plastic, below grade. Exterior underground locations shall have at least 18-inches of earth cover or 4-inches of earth cover when covered with concrete. Must be U.L. Listed conduit. Above ground, may be schedule 80 PVC or rigid galvanized steel.

For services less than 200 AMPS electrical load calculations are required to determine whether or not the existing service is adequately sized for the new electrical load. Please refer to the attached page for how to determine load calculations.

STATE ENERGY CODE All swimming pools/spas with fossil-fueled heaters must contain the following measures mandated by the State Energy Code.

1. System certified with 78% thermal efficiency, on-off switch, weatherproof operating instruction, no electric resistance heating and no pilot light.
2. System installed shall have at least 36" pipe between filter and heater for future solar heating.
3. Pool or Spa shall have a Cover
4. Pool system as directional inlet and a circulation pump tie switch.

REQUIREMENTS FOR SPECIAL INSPECTOR:

- ✓ **SPECIAL INSPECTOR IS REQUIRED FOR SHOTCRETE POOLS AND SPAS.**
- ✓ **SPECIAL INSPECTOR MUST REGISTER AT THE CITY PRIOR TO BEGINNING WORK ON THE JOB SITE. REGISTRATION IS REQUIRED FOR EVERY JOB INSPECTED.**
- ✓ **ALL FORMS MUST BE COMPLETED AND SUBMITTED ACCORDINGLY.**