2006

SOUTHERN NEVADA

POOL CODE

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PREFACE

This document comprises the Southern Nevada Pool Code and was developed by the jurisdictions listed on the cover page as a document to be adopted by reference. These provisions are not code unless adopted and codified by governmental jurisdictions. These provisions are not intended to prevent the use of any material or method of construction not specifically prescribed herein, provided any alternate has been approved and its use authorized by the building official. This document is available to be adopted as code by any jurisdiction without permission or approval from the jurisdictions listed on the cover page.

In addition to the requirements set forth in this document, public swimming pools, wading pools, spas and water features, designed for full or partial human submersion and open to the public must be constructed in compliance with the Southern Nevada Health District rules and regulations. In the event that conflicts between this document and those regulations occur, the more restrictive condition will apply.

For further information on public pools, please contact the **Southern Nevada Health District at 383-1266**.

SOUTHERN NEVADA POOL CODE

SECTION **PAGE**

SCOPE

This code contains provisions considered necessary for the safety with regard to artificially constructed bodies of water.

100 DEFINITIONS, GENERAL: For the purpose of this code, certain terms, phrases, words and their derivatives shall be construed as specified in this chapter and elsewhere in this code where specific definitions are provided. Terms, phrases, and words used in the singular include the plural and the plural singular. Terms, phrases, and words used in the masculine include the feminine and the feminine masculine.

Where terms are not defined, they shall have their ordinarily accepted meanings within the context with which they are used. *Webster's Third New International Dictionary of the English Language, Unabridged*, copyright 1986, shall be considered as providing ordinarily accepted meanings.

ACCESSIBLE: When applied to a fixture, connection, appliance or equipment shall mean having access thereto, but which may require the removal of an access panel, door or similar obstruction without damaging the structure or finish.

ACCESSIBLE, READILY: When applied to a fixture, connection, appliance or equipment shall mean having direct access without the necessity to remove an access panel, door or similar obstruction.

ACCESS BARRIER: A fence, wall, building wall or combination thereof that completely encloses a pool, spa or water feature and obstructs access.

APPROVED: Approval by the Building Official as the result of investigation and tests conducted by the Building Official, or by reason of accepted principles or tests by recognized authorities, technical or scientific organizations.

GATE OR DOOR: A single movable panel that swings or hinges, rotates or slides used for entrance into or closing off an opening in the required barrier.

HEALTH DISTRICT: Southern Nevada Health District.

LISTED and LISTING: Equipment or materials included in a list published by an approved testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of current productions of listed equipment or materials. The published list shall state that the material or equipment complies with approved nationally recognized codes, standards or tests and has been tested or evaluated and found suitable for use in a specified manner.

MANMADE DECORATIVE WATER FEATURE: Any manmade stream, fountain, waterfall, or other water feature that does not meet the definition of a swimming pool and contains water that flows or that is sprayed into the air, constructed for decorative, scenic or landscape purposes. Such items shall not exceed eighteen (18") inches of maximum water level. The following bodies of water shall be exempt:

(A) Manmade lakes as defined in local ordinance or administrative code.

(B) Swimming pools or spas as regulated in this document.

(C) Water features utilized in a family entertainment theme park as regulated in local ordinance or administrative code.

(D) Water feature not greater than eighteen (18") inches of maximum water level, used in conjunction with and on the same property as a single-family residence, and available only to the family of the householder or their private guests.

MANUFACTURED: A pool, spa or water feature that is manufactured or constructed at another location, transported to the property, and placed and/or assembled at the property.

MAXIMUM WATER LEVEL: The highest level that water can reach before it spills out.

NORMAL OPERATING WATER LEVEL: The overflow point on overflow gutters or the midpoint in the throat of skimmers.

POOL: See "SWIMMING POOL."

POOL DEPTH: The distance between the lowest point of the pool floor and the maximum water level.

PRIVATE SWIMMING POOL OR SPA: All artificially constructed swimming pools or spas which are used in conjunction with and on the same property as a single-family residence, and available only to the family of the residence or their private guests.

PUBLIC POOL or SPA: Any swimming pool or spa, other than a private pool or spa, which is intended to be used for swimming or bathing, and is operated by an individual or a group regardless of whether a fee is charged for use.

SLIP RESISTANT: A surface that has been so treated or constructed as to significantly reduce the chance of a user slipping when wet.

SPA: An artificially constructed body of water, either portable or permanent, designed for recreation or therapeutic use that is not drained, cleaned or refilled for each individual user. It may include, but is not limited to: hydro-jet circulation, hot tubs, hot water, cold water, mineral baths, air induction bubbles, or any combination thereof. It shall not include therapeutic facilities used by or under the direct control of licensed medical personnel.

STAIR, RECESSED TREAD, LADDER: A means of entry and exit to and from the pool or spa that may be used in conjunction with each other.

(A) **Stair**: A riser/tread or series of risers/treads extending down from the deck into the pool/spa.

(B) **Recessed Tread**: A series of vertically spaced cavities in the pool or spa wall creating tread areas for step holes.

(C) **Ladder**: A series of vertically separated treads or rungs connected by vertical rail members or independently fastened to an adjacent vertical wall.

STORABLE SWIMMING OR WADING POOL: Those that are constructed on or above the ground with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of dimension. Such items are not subject to this code.

SWIMMING POOL: A permanently installed artificial body of water with a maximum water level greater than eighteen (18) inches in depth which includes all equipment necessary for its use.

WASTEWATER: Water from filter cleansing, draining of a pool or spa, or lowering of the water level in a pool or spa.

WATER FEATURE: See “MANMADE DECORATIVE WATER FEATURE”.

WIDTH or LENGTH: The actual dimension taken at the maximum location from inner wall to inner wall at the normal operating water level of a pool or spa.

200 SITE WORK, SETBACKS AND CLEARANCES: Excavations shall be so constructed or protected that they do not endanger life or property. Temporary barricades shall be maintained in place and kept in good order until permanent barriers are installed. It shall be the responsibility of the contractor or owner to verify property line locations prior to excavation.

(A) **Equipment Clearances:** All electrical equipment clearances shall comply with requirements specified per National Electrical Code and manufacturer's listing guidelines. A twenty-four inch (24") wide access path is required to all pool and existing mechanical equipment. Equipment shall be mounted on a permanent, secure wall, fence or other approved structure.

(B) **Equipment:** The equipment pad shall not be in contact with any foundation system of a property line structure. Equipment shall be installed with adequate drainage. Equipment in vaults or pits shall have automatic means to drain water. Equipment shall be installed in accordance with the currently adopted Codes, listing requirements and the manufacturer's installation instructions.

300 ELECTRICAL INSTALLATION: All electrical installations, modifications, repairs or alterations of pools, spas and water features shall conform to the provisions of the currently adopted National Electrical Code and Local Amendments.

(A) **Pool and Spa Lighting:** Pools and spas shall be equipped with lighting that illuminates the entire bottom and volume, and shall be an underwater or overhead type. Underwater lighting shall be a minimum of one-half (1/2) watt or equivalent lumens per square foot of water surface area. Overhead lights shall be a minimum of two (2) watts or equivalent lumens per square foot of water surface area. Any glass parts shall be protected from breakage. Optical fiber lighting used for pool and spa lighting shall be installed in accordance with their listing and labeling.

(B) **Area Lighting of Public Pools and Spas:** Area lighting shall be provided to illuminate the surface areas of the pool deck and spa deck. The lights shall be a minimum of six-tenths (6/10) watt or equivalent lumens per square foot of deck area.

(C) **Disconnecting Means:** Time clocks are not permitted as a means of disconnect for motors unless listed for the purpose or approved by the Building Official.

(D) **Load Calculations:** Electrical load calculations will be required for any pool, spa, or combination that utilizes more than one pump motor. This is required to verify that the existing electrical system is adequate for the additional loads being added.

(E) **Conductor Feeder, Overcurrent Protection & Grounding:** All pool panels shall have a minimum #10 AWG copper wire feeder or equal and a thirty ampere (30A) breaker with an insulated ground wire to the existing panel.

400 PLUMBING INSTALLATION: Plumbing installation, modification, repair or alteration of a pool, spa or water feature shall conform to the currently adopted Plumbing Code and the additional following requirements:

(A) **Water Quality:** All water treatment, filtration and recirculation devices, and hydraulic lines and systems shall be approved by the Health District prior to permit issuance for a public pool or spa. Water features designed for full or partial human submersion open to the public shall be reviewed and approved by the Health District prior to permit issuance. Water quality in water features which do not come in contact with the public, and private pools and spas shall be maintained in such a manner that a nuisance is not created pursuant to NRS 40.140.

(B) **Heating Equipment:** Heating equipment shall conform to the provisions of the currently adopted Mechanical, Plumbing and Electrical Codes. Installation of such equipment shall be according to the manufacturer's instructions and listing. Heating equipment shall be located on a minimum three (3") inch thick pad of concrete or other approved material. The top of the pad shall be a minimum of three inches above adjacent grade and shall be appropriately sized to accommodate all equipment. Equipment installed in alternate locations, such as vaults or pits, must be listed for the location or be approved by the Building Official approval. When pool or spa water heating equipment is installed with a full-way type shutoff valve between the outlet of the heater and the pool or spa, an approved pressure relief valve shall be installed on the discharge side of the water heating equipment.

Vents shall terminate with clearances as follows: Vents shall terminate as per the currently adopted Uniform Mechanical Code and per the manufacturers listing.

(C) **Underground Installation:** Underground installation of plumbing lines to include water supply, drain, vacuum and circulating lines and gas piping systems shall be installed on a minimum three inch (3") base, a minimum one inch (1”) side and four inch (4") cover of clean sand in place at time of inspection.

(D) **Water Piping:** Swimming pools, spas, and water features shall use approved type "L" copper , approved PVC pipe of a minimum schedule 40 PVC meeting the NSF PW-14 Standard (or equal), or other approved materials. PVC pipe shall be bent using heat by thermostatically controlled equipment. All plastic pipe exposed to sunlight shall be protected with an approved tape wrapping or paint. Water piping shall be pressure tested at twenty (20) PSI for fifteen (15) minutes. For the purpose of this code the factory installed pressure gauge shall be adequate.

(E) **Gas Piping:** Natural gas piping systems shall conform to the provisions of the currently adopted Plumbing Code. All other approved systems shall be tested at sixty (60) PSI for thirty (30) minutes. Liquefied petroleum gas piping systems shall conform to the provisions of the National Fuel Gas Code, NFPA 54. Threaded ferrous metal gas pipe systems shall be pressure tested at ten (10) PSI for fifteen (15) minutes.

(F) **Water Supply:** Pools, spas, and water features shall have water directly supplied through a water supply inlet. The water supply inlet for public pools shall comply with Health District standards. The water supply inlet on private pools shall be protected by a one-inch (1") air gap or approved backflow protection device.

> **Exception:** Private pools and spas may be provided with a water supply consisting of an approved back flow protection device (vacuum breaker) located on the discharge side of the last valve or a sill cock (hose bib) from which a water hose may be attached.

(G) **Wastewater:** Wastewater from pools, spas, and water features shall be discharged to the public sewer through a permanently installed waste line. Wastewater shall not be discharged to a septic tank.

The permanently installed waste line shall discharge through an indirect waste connection of the following type: an approved interceptor; a sand trap which is vented and provided with a clean-out on the discharge side; or a "P" trap of a minimum size of three inches (3").

> **Exception (1):** If a public sewer service is not available, the Building Official may authorize the wastewater to be discharged above ground and used for irrigation purposes. The wastewater shall not be allowed to drain to adjacent properties or the public way. This authorization may be revoked if a hazardous, nuisance or unsanitary condition occurs.
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> **Exception** (**2):** For private pools, spas, and water features, a hose connection may be used as a waste line.

(H) **Entrapment Avoidance:** The suction inlet for pool and spa cleaning systems shall be protected against user entrapment by installation of an anti-vortex cover. A minimum of two suction inlets shall be provided in the suction system, each inlet shall be sized to the maximum pipe size used on the suction system. Separation of such inlets cover openings shall be a minimum of three feet (3') on the horizontal plane, or located on two different planes. (For example: one on the bottom and one on a vertical plane, one each on two separate walls, or one skimmer and one main drain on the same suction line). The suction outlets shall be plumbed so water is drawn

simultaneously without valves, through the inlets to a common line to the pump system.

(I) Filtering and Recirculation: Pools, spas, and water features shall be equipped with a filtering and recirculation system. Equipment shall be mounted on a minimum three-inch (3") thick pad of concrete or other approved materials. The pad shall be a minimum of three inches (3") above adjacent grade and sized to accommodate all equipment. All equipment shall be listed by a nationally recognized testing agency for the appropriate use. The circulation system shall provide a complete turnover of water within the time frame specified below:

Public Pool	6 Hours
Private Pool	12 Hours
Public Spa	½ Hour
Private Spa	1 Hour
Water Feature	8 Hours

Filler, circulation systems, scum gutters and skimmers that are located in public pools, spas and water features shall conform to Health District regulations. Inlets for fresh or repurified water in all pools, spas, and water features shall be located to produce uniform circulation of water throughout the entire pool, spa or water feature.

(J) Over Sewer: Swimming pools, in-ground spas, or water features shall not be constructed over a sewer, unless the sewer line is of cast iron material and prior approval from the Building Official is obtained.

(K) Septic Systems: All Swimming pool and spa water filler and circulation piping within twenty-five feet (25') of a septic system shall conform to Health District regulations.

500 STRUCTURAL DESIGN AND INSTALLATION

(A) **General:** Pools, spas, and water features shall be constructed of reinforced concrete conforming to the currently adopted Codes or as approved by the Building Official. If groundwater is present, a hydrostatic valve or other approved means shall be installed at the lowest point. Approved, listed manufactured pools, spas and water features shall be installed in accordance with manufacturer's installation instructions and their listing.

(B) **Soils:** All areas of Southern Nevada shall have a geotechnical investigation report at completion of excavation or prior to permit application, unless specifically identified as outside a special geologic consideration zone as identified on the Clark County Soils Guidelines Map. Areas of Clark County not covered by the Clark County Soils Guidelines Map may be exempted from submitting a geotechnical investigation report at the option of the Building Official. The geotechnical investigation report must be prepared by a registered design professional. The report shall be accompanied by appropriate substantiation including tests, sampling data, suitability for the intended project, and recommendations on treating the sub-grade soil and/or modifications to the swimming pool design. The pool contractor is responsible to provide the report to the Building Official and the registered design professional responsible for the swimming pool design. The registered design professional will determine if any modifications to the original design are required and will submit such changes to the Building Official for approval. All projects designed without a geotechnical investigation report shall comply with IBC Tables 1610.1 and 1804.2 and ACI 318, Section 4.3. The minimum default design values shall be based on an active pressure of 45 psf/ft, an at-rest pressure of 60 psf/ft, Class 5 material, and a severe sulfate exposure level. Additional loads due to sloping backfill and surcharges shall be addressed by the registered design professional. Swimming pools are not required to be designed for a seismic load due to the soil.

(C) **Concrete and Steel Reinforcement:** Concrete and steel reinforcement of concrete pools, spas, and water features shall be designed by a licensed State of Nevada registered professional Engineer or Architect. The minimum design strength of the concrete shall be four thousand five hundred (4500 psi) pounds per square inch unless otherwise approved by the design engineer (special inspections [1701] will not be mandatory unless noted by the design professional.) The continuity of a bond beam shall not be interrupted for the installation of skimmers or similar apparatus. Alternate methods may be used when approved by the Building Official.

(D) **Walls and Floors:** The materials used in pool, spa, and water feature wall and floor construction shall conform to the provisions of the currently adopted

Building Code. Walls and floors shall be designed and constructed of non-absorbent material in a manner to be leak-proof and structurally sound under all the conditions of the site. The inner surface of the pool or spa shall be coved, rounded, or bull-nose at all joints, corners, angles of bases, walls, floors, or curbs. No sharp corners or projections shall be permitted.

(E) Entry/Egress:

(Note: Commercial pools shall comply with the Southern Nevada Health District standards.)

(1) Pools: Pools with a depth greater than two feet (2') at pool walls shall be provided with a means of Entry/Egress. Pools exceeding thirty feet (30') in width or length shall have egress provided on opposite ends of those sides greater than thirty feet (30'). A seat meeting the requirements of Section 500 (F) (2) shall be considered as a second means of egress.

(2) Spas: Spas with a depth greater than two feet (2') shall have an interior top step which complies with (4) (b) below. The distance from the top step to the bench shall comply with the (4) (b) on one side of the top step. Spas with a deck between twelve inches (12") and twenty-four inches (24") above grade that are entered by sitting on the rim deck and spinning into the spa shall not require exterior steps. Listed manufactured spas shall have entry and egress as per their listing.

(3) Water Features: Water features and vanishing edge catch basins greater than twenty-four inches (24") in depth with walls that are inclined greater than forty-five (45°) degrees shall have a means of entry/egress.

(4) Entry/Egress Elements: An entry/egress for a pool, spa or water feature shall be constructed to minimize hazards and consist of a ladder, stairs, or recessed treads or an alternate method approved by the Building Official. The ladder, stairs or recessed treads shall comply with the following requirements, respectively:

(a) Ladder: Ladders shall be of a corrosion resistant material and be provided with two handholds or handrails. Ladder treads shall have a uniform vertical spacing of seven-inch (7") minimum and twelve-inch (12") maximum, with a minimum width of eighteen inches (18"). Vertical spacing variation within each ladder shall not exceed one inch. Treads shall have a minimum horizontal depth of one and one-half inches (1 ½"). The top tread of the ladder shall be a maximum of twelve

inches (12") below the coping, deck or exterior edge of the pool or spa.

(b) **Stairs/Steps:** Stairs/steps shall have a slip resistant surface and no sharp edges. Public pools shall have a maximum riser height of ten inches (10") with a minimum horizontal tread depth of twelve inches (12"). Riser height variation within each stair shall not exceed one inch (1"). The distance from the bottom of the pool to the bottom step shall not be considered a riser. Private pools, private and public spas and water features shall have a maximum riser height of twelve inches (12"), with a minimum horizontal tread depth of twelve inches (12"). Steps shall extend to a depth of forty-two inches (42”) of water depth or within twelve inches (12”) of a portion of the pool floor. The distance from the bottom of the pool to the bottom step shall not be considered a riser.

(c) **Recessed Treads:** Recessed treads shall be provided with a set of handrails or handholds to serve all treads and risers. Recessed treads shall have a uniform vertical spacing of seven inches (7") minimum and twelve inches (12") maximum. Recessed treads shall have a minimum depth of five inches (5") and a minimum width of twelve inches (12"). The uppermost tread shall be a maximum of twelve inches (12") below the coping, deck or exterior edge of the pool or spa.

(F) **Deck, Seat or Handholds:** Pools and spas greater than three (3') feet in water depth shall be provided with a deck made of a slip resistant material or alternate method as approved by the Building Official. Man-made decorative water features and design features may interrupt the deck. In these cases seats or handholds may be used for safety and emergency provisions, and shall be a maximum of every four feet (4') around the perimeter of the pool or spa where deck interruptions occur. Decks shall be required at each required entry and egress point. This deck section shall meet the width requirements as stated below and shall be a minimum of four feet (4’) in length. This decking may be up to twenty-four inches (24”) below the maximum water level.

The deck, seat or handholds shall comply with the following requirements, respectively:

(1) **Deck:** The deck shall be a minimum of thirty inches (30") wide and slope ¼ inch per foot away from pool, property lines and house footings. The deck shall be placed a maximum of twelve inches (12") above the normal operating water level to qualify as a handhold. Public pools and spas shall have a minimum deck width of four feet

(4'). Decks shall be sloped to effectively drain to either deck drains or perimeter areas away from the pool or spa. Decks shall have a minimum of two inches (2") vertical clearance from weep screed. A drain feature allowing a two inch (2") vertical clearance along the weep screed shall be acceptable.

Decks shall comply with the National Electrical Code, article 680.26 and the Southern Nevada Amendments to the National Electrical Code.

(2) **Seat:** An underwater seat, bench or swim-out utilized as a means of egress shall be a minimum of twelve inches (12") long, a minimum of twelve inches (12") wide and a maximum of twenty-four inches (24") below the water surface.

Exception: Spa seats.

(3) **Handhold:** A handhold shall consist of any of the following:

(a) A continuous coping, ledge or handhold shall be placed a maximum of twelve inches (12") above the water surface or no greater than six inches (6") below water level. A ledge shall have a minimum projection of three inches (3"). Individual handholds must be at least six inches (6") in length and one and one-half (1 ½") inches in depth. Attachment must be made by an approved listed waterproof epoxy. Vanishing edges sloping into the main body of water shall have a maximum wall thickness of fifteen inches (15") when used as a handhold.

(b) A permanently secured railing of one and one-quarter (1 ¼") inches to two inches (2") in diameter placed at a maximum of twelve inches (12") above the water surface and a maximum of six (6") inches below the water surface.

(c) Ladders, steps or recessed treads complying with Item (E) Entry/Egress as listed above.

(G) **Site Drainage:** Site drainage shall be provided to direct all perimeter deck drainage, general site and roof drainage away from the pool, spa and adjacent buildings and structures. Deck drains must terminate a minimum of twenty-four inches (24") from the foundation of any structure.

(H) **Wind Sensors:** Water features and fountains on commercial properties shall be equipped with an integral automatic wind sensor device calibrated to shut off airborne and moving water when wind velocity exceeds twenty miles per hour.

(l) **Diving Boards/Slides:** Pools equipped with diving boards or slides shall be engineered and designed to comply with published ANSI standards. Slides and diving boards shall be installed per manufacturer's listing.

600 SETBACKS AND CLEARANCES

(A) Location: In-ground pools, spas, and water features shall not be placed closer than five feet (5') to any building or structure and shall not encroach within public utility easements. An exception may be permitted when substantiation is provided by a Nevada Licensed Structural or Civil Engineer that no damage will occur to buildings, structures or adjacent properties and that no unsafe structural conditions will exist.

(B) Overhead electrical conductor clearances: The following parts of pools shall not be placed under existing service-drop conductors or any other open, overhead wiring; nor shall such wiring be installed above the following:

(1) Pools and the area extending ten feet (10') horizontally from the inside of the walls of the pool;

(2) Diving structures;

(3) Observation stands, towers or platforms.

Exceptions (1): Structures listed in items (1), (2), and (3) above shall be permitted under supply lines or service drops where such installations provide the following clearances:

	Insulated supply or service drop cables or wiring, 0-750 volts to ground, supported on and cabled together with an effectively grounded bare messenger or effectively grounded neutral conductor	All other supply or service drop conductors	
		VOLTAGE TO GROUND	
		0-15 kV	Greater than 15 to 50 kV
A. Clearance in any direction to the water level, edge of water surface, base of diving platform, or permanently anchored raft	22.5 ft. (6.9 m)	25ft. (7.5 m)	27 ft. (8.0 m)
B. Clearance in any direction to the diving platform or tower	14.5 ft. (4.4 m)	17 ft. (5.2 m)	18 ft. (5.5 m)
C. Horizontal limit of clearance measured from inside wall of the pool	This limit shall extend to the outer edge of the structures listed in (1) and (2) above but not less than 10 ft. (3.05 m).		

Figure NEC 680.8. Exception No. 1.

Exceptions (2): Utility-owned, operated, and maintained communications conductors, community antenna system coaxial cables complying with Article 820, and the supporting messengers shall be permitted at a height of not less than ten feet (10') above swimming and wading pools, diving structures, and observation stands, towers, or platforms.

(See Sections NEC 225.18 and 225.19 for clearances for conductors not covered by this section.)

(C) Additional Clearances: All clearances must comply with the currently adopted edition of the National Electrical Code.

700 ACCESSIBILITY AND SAFETY

(A) Access barrier required: Pools, spas and hot tubs shall be completely enclosed with access barriers.

Exceptions (1): Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy in which the pool walls are entirely above the adjacent grade and the capacity does not exceed 5,000 gallons.

Exceptions (2): Spa or hot tub with an approved lockable cover in the closed position meeting the most recent addition of ASTM Standard F1346-91, or equal, requiring structural support capacity of two-hundred seventy-five (275) lbs.

(B) Access Barrier Construction Requirements: Access barriers shall comply with the following:

(1) The top of the barrier shall not be less than sixty (60") inches in height above adjacent grade measured from outside the enclosed area or eight feet (8') vertical, non-climbable, measured on the inside. The vertical clearance between grade and the bottom of the barrier shall be four inches (4") maximum. If pools are in adjacent yards the common barrier may be reduced to forty-eight inches (48") on either side.

(2) Wrought iron fence with open guardrails shall have intermediate rails or an ornamental pattern such that a sphere four inches (4") in diameter cannot pass. Horizontal support members shall be spaced at least thirty-two inches (32") and shall comply with 700 (B) (1).

(3) Mixed use of masonry and wrought iron walls shall comply with all of the following:

(a) Masonry or wrought iron portion of the wall shall be a minimum of thirty-two inches (32") in height.

(b) Wrought iron portion of the wall shall comply with 700 (B) (1) and (2) with a maximum of two horizontal members, one near the top of the masonry wall (maximum of four (4") inches above top of wall) and one a minimum of sixty (60") above grade.

(4) Chain link fences shall not exceed two and one-quarter (2 ¼") mesh size. The fence shall have top and bottom horizontal supports. The fence height must be a minimum seventy-two inches (72") and shall

be constructed or not less that 11 gauge wire. When approved slats are installed, fence height may be reduced to sixty inches (60").

(5) Public pools and spas shall comply with the Health Districts requirements.

(C) Gates or Doors: All gates or doors eight feet (8') in width or less shall be self-closing and self-latching. Gates shall open outward. The self-latching device for gates shall be mounted inside the enclosed area and be designed to be inoperable from outside the enclosed area. Keyed lockset devices shall be mounted at a minimum of forty-eight inches (48") above grade. Manual catch latch devices shall not be less than six inches (6") nor more than twelve inches (12") below the top of the door or gate. The devices shall be inaccessible from outside the enclosed area for a distance of twenty inches (20") in all directions from the latch except that opening not greater than one-quarter inch (1/4") diameter shall be permitted. Access barrier gates not required to be self-closing and self-latching shall be equipped with protected self-latching, lockable hardware and shall remain locked at all times when not in use.

Exception: Electronic remote latches without manual devices and panic hardware where required shall not be subject to height restrictions.

Single access gates and doors integral to fences shall comply with the requirements of Section 700 (B) and have latching devices capable of keeping the door or gate securely closed and latched.

Double gates used to close an opening shall be permanently locked. If the double gates are the only access to the protected area, one gate shall be pinned and locked in the closed position and the adjoining gate must meet the requirements of (C) above.

Electric operated gates shall start to close within thirty seconds (30) of entry.

Key-operated, self-latching locks that are integral to the gate or door may be used as latching devices, provided they are permanently locked from the outside and comply with the above installation requirements.

(D) Private Pool and Spa Safety Requirements: One of the following shall be used:

(1) Door Devices: Self-closing and self-latching devices installed on all doors with direct access to the pool with the release mechanism located a minimum of fifty-four inches (54") above the floor.

(2) Alarm System: Residential dwelling units that do not have a separate pool or spa enclosure barrier shall have an alarm permanently installed on all doors with direct access to the pool. The alarm shall be listed to meet UL standard 2017 for Residential Water Hazard Entrance Alarms. The alarm shall sound continuously for a minimum of thirty (30) seconds within seven (7) seconds after the door is opened, and be capable of providing minimum 85 dB when measured indoors at ten feet (10'). 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. The deactivation switch shall be located at least fifty-four inches (54") above the threshold of the door.

(3) Laser, Light Beam, or Infra-red Sensors: A laser or light beam perimeter alarm that provides an active beam barrier around the total perimeter or isolates the pool or spa may be used. The laser or light beam must have an adjustable height capability and sound an alarm of at least eighty-five (85) dB both inside and outside of the home when the beam is crossed. The alarm must automatically reset after alarming. The alarm shall meet ASTM's Provisional Standard Specifications for Pool Alarms (PS 128-01) and be listed.

(4) Addition Barriers: Addition barriers that isolate the dwelling from the pool a minimum forty-eight (48") inches in height through which a four inch (4") sphere will not pass. Any gate shall be self-closing and latching at the top of the barrier.

(5) Power Safety Covers: Power safety covers meeting ASTM F1346-91.

(6) Other Means: When approved by the Building Official, other means of protection may be acceptable provided the degree of protection afforded is not less than that afforded by any of the devices described above.

(E) Safety Glazing: Glazing in walls and fences sixty inches (60") or less from the water's edge measured horizontally and less than sixty inches (60") measured vertically above grade shall be considered hazardous locations. In these locations, tempered glazing, laminated glass or Plexiglas shall be used.

(F) Barrier Timeliness. All required access barrier elements shall be in place prior to:

(1) Setting a manufactured pool, spa or water feature.

(2) The pre-plaster inspection of a conventionally constructed pool, spa or water feature.

(3) The filling with water of artificial bodies of water.

(G) Surveillance Substitute: For resort hotels type facilities only: in lieu of access barriers required above for water features, swimming pools or spas a pool guard may be provided so that observation is maintained at all times or an alternate method submitted in writing and approved by the Building Official. Such submittal shall become a permanent part of the job record.

(H) Responsible Party: The owner of the property upon which pools, spas or artificial bodies of water are located is responsible to establish and maintain access barriers. The owner or developer of land adjacent to an access barrier required by this section shall not reduce, degrade, or infringe on the access barrier's compliance with this code.

(I) Alternative Plans or Devices: Written alternative plans or devices for access barriers shall be submitted to the Building Official. If approved by the Building Official, the owner remains responsible for establishing and maintaining such approved alternate methods.