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2009

SOUTHERN NEVADA

POOL CODE

Approved by SNBO

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2009
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 (702) 759-0571.

Chapter 1: SCOPE AND ADMINISTRATION

101.0 Title. This document shall be known as the “Southern Nevada Pool Code”, may be cited as such, and will be referred to herein as “this code”.

101.2 Purpose. This code is an ordinance providing minimum requirements and standards for the protection of public health, safety and welfare.

101.3 Scope. The provisions of this code shall apply to the erection, installation, alteration, repair, relocation, replacement, addition, use, or maintenance of artificially constructed bodies of water.

Exceptions: The following bodies of water shall be exempt from these requirements:

- (A) Manmade lakes as defined in local ordinance or administrative code.
- (B) Water features utilized in a family entertainment theme park as regulated in local ordinance or administrative code.
- (C) Water feature not greater than eighteen (18) inches (457 mm) 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.

Chapter 2: DEFINITIONS

201.0 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.

202.0 Definition of Terms.

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. Any manmade decorative water feature exceeding eighteen (18) inches (457 mm) in depth shall meet the requirements of a swimming pool as specified in Chapters 3 through 8.

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 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.

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

SPA: An artificially constructed body of water, either portable or permanent with a maximum water level greater than eighteen (18) inches (457 mm) in depth, 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.

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 and are capable of holding water to a maximum depth of forty-two (42) inches (1067 mm), or a pool with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of dimension. Such items are not subject to this code.

SUCTION OUTLET: The aperture or fitting, other than a skimmer, on the bottom or side wall of a pool, spa or water feature through which the water under negative pressure (vacuum) is drawn from the pool, spa or water feature to the pump.

SWIMMING POOL: A permanently installed artificial body of water with a maximum water level greater than eighteen (18) inches (457 mm) in depth, which includes all equipment necessary for its use.

UNBLOCKABLE DRAIN: The term “unblockable drain” means a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard.

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.

Chapter 3: SITE WORK, SETBACKS AND CLEARANCE REQUIREMENTS

301.0 Site Work. Excavation areas shall be protected so 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.

302.0 Pool Location. In-ground pools, spas, and water features shall not be placed closer than sixty (60) inches (1524 mm) 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.

303.0 Drainage. Site drainage shall be provided to direct all drainage from site, perimeter decks, and roofs away from the pool, spa and adjacent buildings and structures.

304.0 Equipment. Any outdoor equipment pad shall not be in contact with any foundation. Equipment shall be installed with adequate drainage. Equipment in vaults or pits shall have an approved means to drain water. Equipment shall be installed in accordance with the currently adopted Codes, listing requirements and the manufacturer's installation instructions.

305.0 Equipment Clearances. All electrical equipment clearances shall comply with requirements specified per National Electrical Code and manufacturer's listing guidelines. A twenty-four (24) inch (610 mm) wide access path is required to all pool and mechanical equipment. Equipment shall be mounted on a permanent, secure wall, fence or other approved structure.

306.0 Overhead electrical conductor clearances. Existing service-drop conductors or other open, overhead wiring shall not be left in place or be installed above the following:

- (1) Pools and the area extending ten (10) feet (3.05 m) horizontally from the inside of the walls of the pool;
- (2) Diving structures;
- (3) Observation stands, towers or platforms.

Exceptions:

1. Where such installations meet the requirements of NEC Table 680.8, as follows:

Table 680.8 Overhead Conductor Clearances

Clearance Parameters	Insulated supply or service drop cables or wiring, 0-750 volts to ground, supported on and cabled together with an solidly grounded bare messenger or solidly grounded neutral conductor	All other Conductors Voltage to Ground	
		0-15 kV	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 (A) and (B) of this table but not to less than 10 ft. (3.05 m).		

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 (10) feet (3.05 m) 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.)

307.0 Additional Clearances. All clearances must comply with the currently adopted edition of the National Electrical Code.

Chapter 4: STRUCTURAL REQUIREMENTS

401.0 General Materials. Pools, spas, and water features shall be constructed of reinforced concrete conforming to the provisions of the currently adopted Building Code, Southern Nevada Code Amendments or alternate materials approved by the Building Official. Approved, listed manufactured pools, spas and water features shall be installed in accordance with manufacturer's installation instructions and their listing.

402.0 Design. Structural design for pools, spas and water features shall be engineered by a registered design professional or approved by the Building Official. Construction documents (material specifications, sections and details) shall be wet sealed and signed by the engineer-of-record.

403.0 Geotechnical Investigation Report. All areas of Southern Nevada shall have a geotechnical investigation report at completion of excavation or prior to permit application. Geotechnical investigation report must be prepared by a registered design professional. Geotechnical investigation report shall be accompanied by appropriate substantiation test including: sampling data, suitability for the intended project, and recommendations on treating the sub-grade soil and/or modifications to the swimming pool design.

When a geotechnical report is not used for structural design, the design shall comply with the provisions of the currently adopted Building Code and the Southern Nevada Code Amendments.

Exceptions:

1. The site is specifically identified as outside a special geologic consideration zone as identified on the Clark County Soils Guidelines Map
2. Areas of Clark County not covered by the Clark County Soils Guidelines Map
3. At the option of the Building Official
4. Any excavation less than twenty-four (24) inches (610mm) in depth.

404.0 Ground Water Protection. If groundwater is present, a hydrostatic valve or other approved means shall be installed at the lowest point.

405.0 Site Condition. Additional loads due to sloping backfill and surcharges shall be designed and detailed. Plans and sections shall include all permanent structures from the pool wall within a horizontal distance of seven (7) feet (2.1m) or maximum depth of the pool, whichever is greater. The setback for permanent structures and pool shall comply with the provisions of the currently adopted Building Code and the Southern Nevada Code Amendments.

406.0 Seismic Consideration. In-ground pools, spas and water features are not required to be designed for a seismic load.

407.0 Concrete Strength, f'c. Minimum specified compressive strength in the construction document shall be 4,500psi with a maximum water to cement ratio of 0.45.

408.0 Bond Beam. A continuous bond beam shall not be interrupted for the installation of skimmers and/or similar apparatus. An alternate method may be used when approved by the Building Official.

409.0 Special Inspection. Unless required by a registered design professional or by the Building Official, special inspections are not required for a private swimming pool, spa or water feature.

Chapter 5: ELECTRICAL REQUIREMENTS

501.0 Electrical Requirements. 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, Southern Nevada Code Amendments and the Southern Nevada Health District.

502.0 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. Fiber Optic lighting used for pool and spa lighting shall be installed in accordance with their listing and labeling.

503.0 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.

504.0 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.

505.0 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.

506.0 Conductor Feeder, Overcurrent Protection and 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.

507.0 Bonding. Swimming pools and decks shall be bonded in accordance with the National Electrical Code, Article 680.26 and the Southern Nevada Code Amendments.

Chapter 6: PLUMBING REQUIREMENTS

601.0 Plumbing Requirements. Plumbing installation, modification, repair or alteration of a pool, spa or water feature shall conform to the provisions of the currently adopted Plumbing Code, Southern Nevada Code Amendments, Southern Nevada Health District and the additional following requirements:

602.0 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.

603.0 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 (76 mm) thick pad of concrete or other approved material. The top of the pad shall be a minimum of three (3) inches (76 mm) 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. 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.

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

604.0 Underground Installation. All underground installation of plumbing lines, including water supply lines, drains, vacuum and circulating lines and gas piping systems, shall be installed on a minimum three (3) inch (76 mm) base, a minimum one (1) inch (25.4 mm) side and four (4) inch (101.6 mm) cover of clean sand in place at time of inspection.

605.0 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.

606.0 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.

607.0 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 Southern Nevada Health District provisions. The water supply inlet on private pools shall be protected by a one (1) inch (25.4 mm) 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.

608.0 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 (3) inches (76 mm).

Exceptions:

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.
2. For private pools, spas, and water features, a hose connection may be used as a waste line.

609.0 Entrapment Avoidance: Each swimming pool, spa or water feature shall be constructed with at least one of the following means for entrapment avoidance. Public pools and spas shall comply with the Southern Nevada Health Districts requirements.

609.1 Minimum of two (2) suction outlets:

- (a) Each suction outlet must be sized to the maximum pipe size used in that outlet system.
- (b) The tee feeding the common suction line between the suction outlets, to the pump(s) shall be located approximately midway between the outlets, and without valves, with the branch side of the tee providing flow to the pump.
- (c) Each suction outlet shall be separated a minimum of thirty-six (36) inches (914.4mm) on a horizontal plane, or located on two (2) different planes. (For example: one on the bottom & one on a vertical plane, one each on two (2) separate walls). (One skimmer and one drain cover on a single suction line shall not be permitted)
- (d) Each suction outlet pipe must have a cover installed per the manufacturers instructions, complying with ASME/ANSI A112.19.8a-2008 or any successor standard.
- (e) The flow rate of each cover shall be at least the system's maximum flow rate.

609.2 One (1) or more unblockable drains:

- (a) All unblockable drains must be installed as a complete drain & sump assembly or pre assembled by the manufacturer. No "field fabricated sumps" will be allowed.
- (b) Unblockable drains must be eighteen (18) inches (457 mm) x twenty-three (23) inches (737 mm) or have a diagonal measurement of twenty-nine (29) inches (737 mm) or greater.
- (c) Drains must be installed per manufactures instructions.
- (d) Anti- Entrapment devices or systems complying with ASME/ASNI A112.19.17-2007 or ASTM standard F-2387-04.
 1. The device or system must be installed & tested as per manufactures instructions.
 2. The instruction manual shall be left with property owner, management or owners representative.
- (e) Other means as approved by the Building Official.

610.0 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 (3) inch (76 mm) thick pad of concrete or other approved materials. The pad shall be a minimum of three (3) inches (76 mm) 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:

Type of Water Feature	Maximum Recirculation Time (Hours)
Public Pool	6.0
Private Pool	12.0
Public Spa	0.5
Private Spas	1.0
Water Feature	8.0

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.

611.0 Sewer Lines. 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.

612.0 Septic Systems. All Swimming pool and spa water filler and circulation piping within twenty-five (25) feet (7.5m) of a septic system shall conform to Health District regulations.

Chapter 7: ARCHITECTURAL REQUIREMENTS

700.0 Public Pools and Spas. Public pools and spas shall also comply with the Southern Nevada Health District requirements.

701.0 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 and the Southern Nevada Code Amendments. 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.

702.0 Entry/Egress.

702.1 Pools. Pools with a depth greater than twenty-four (24) inches (610 mm) at pool walls shall be provided with a means of Entry/Egress. Pools exceeding thirty (30) feet (9.14 m) in width or length shall have egress provided on opposite ends of those sides greater than thirty (30) feet (9.14 m). A seat meeting the requirements of Section 704.0 shall be considered as a second means of egress.

702.2 Spas. Spas with a depth greater than twenty-four (24) inches (610 mm) shall have an interior top step, which complies with Section 703.2 below. The distance from the top step to the bench shall comply with Section 703.2 on one side of the top step. Spas with a deck between twelve (12) inches (305 mm) and twenty-four (24) inches (610 mm) 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.

702.3 Water features. Water features and vanishing edge catch basins greater than twenty-four (24) inches (610 mm) in depth with walls that are inclined greater than forty-five (45°) degrees shall have a means of entry/egress.

703.0 Ladder, stairs, or recessed treads. 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:

703.1 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 (7) inches (178 mm) minimum and twelve (12) inches (305 mm) maximum, with a minimum width of eighteen (18) inches (457 mm). Vertical spacing variation within each ladder shall not exceed one (1) inch (25.4 mm). Treads shall have a minimum horizontal depth of one and one-half (1 ½) inches (38 mm). The top tread of the ladder shall be a maximum of twelve (12) inches (305 mm) below the top of coping, deck or exterior edge of the pool or spa.

703.2 Stairs/Steps. Stairs/steps shall have a slip resistant surface and no sharp edges. Public pools shall have a maximum riser height of ten (10) inches (254 mm) with a minimum horizontal tread depth of twelve (12) inches (305 mm). Riser height variation within each stair shall not exceed one (1) inch (25.4 mm). 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 (12) inches (305 mm), with a minimum horizontal tread depth of twelve (12) inches (305 mm). Steps shall extend to a depth of forty-two (42) inches (1067 mm) of water depth or within twelve (12) inches (305 mm) 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.

703.3 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 (7) inches (178 mm) minimum and twelve (12) inches (305 mm) maximum. Recessed treads shall have a minimum depth of five (5) inches (127 mm) and a minimum width of twelve (12) inches (305 mm). The uppermost tread shall be a maximum of twelve (12) inches (305 mm) below the coping, deck or exterior edge of the pool or spa.

704.0 Deck, Seat or Handholds. Pools and spas greater than thirty-six (36) inches (914.4 mm) in water depth shall be provided with a deck made of a slip resistant material or other alternate materials, 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 spaced a maximum of every forty-eight (48) inches (1219 mm) around the perimeter of the pool or spa where deck interruptions occur. Decks shall be mandatory at each required entry and egress point. This deck section shall meet the width requirements as stated below and shall be a minimum of forty-eight (48) inches (1219 mm) in length. This decking may be up to twenty-four (24) inches (610 mm) below the maximum water level. The deck, seat or handholds shall comply with the following requirements, respectively:

704.1 Deck. The deck shall be a minimum of thirty (30) inches (762 mm) wide and slope one quarter ($\frac{1}{4}$) inch per foot (6.4 mm per 305 mm) away from pool, property lines and house footings. The deck shall be placed a maximum of twelve (12) inches (305 mm) above the normal operating water level to qualify as a handhold. Public pools and spas shall have a minimum deck width of forty-eight (48) inches (1219 mm).

The finished surface of pool decks shall be a minimum of two (2) inches (51 mm) below the bottom of any adjacent exterior wall weep screed. A drain feature allowing a two (2) inch (50.8mm) vertical clearance along the weep screed shall be acceptable.

Decks shall be sloped to effectively drain to either deck drains or perimeter areas away from the pool or spa. Deck drains must terminate a minimum of twenty-four (24) inches (610 mm) from the foundation of any structure.

704.2 Seat. An underwater seat, bench or swim-out, utilized as a means of egress, shall be a minimum of twelve (12) inches (305 mm) long, a minimum of twelve (12) inches (305 mm) wide and a maximum of twenty-four (24) inches (610 mm) below the water surface.

Exception: Spa seats.

704.3 Handhold. A handhold shall consist of any of the following:

- (a) A continuous coping, ledge or handhold shall be placed a maximum of twelve (12) inches (305 mm) above the water surface or no greater than six (6) inches (152.4 mm) below water level. A ledge shall have a minimum projection of three (3) inches (76 mm). Individual handholds must be at least six (6) inches (152.4 mm) in length and one and one-half ($1\frac{1}{2}$) inches (38 mm) 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 (15) inches (381 mm) when used as a handhold.
- (b) A permanently secured railing of one and one-quarter ($1\frac{1}{4}$) inches (32 mm) to two (2) inches (51 mm) in diameter placed at a maximum of twelve (12) inches (305 mm) above the water surface and a maximum of six (6) inches (152.4 mm) below the water surface.
- (c) Ladders, steps or recessed treads complying with Section 703.0 as listed above.

705.0 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.

706.0 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.

Chapter 8: ACCESS BARRIERS AND SAFETY REQUIREMENTS

800.0 Public Pools and Spas. Public pools and spas shall also comply with the Southern Nevada Health Districts requirements.

801.0 Access Barrier Requirements. Pools and spas 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.
- 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.

802.0 Access Barrier Construction Requirements: Access barriers shall comply with the following:

802.1 Height. The top of the barrier shall not be less than sixty (60) inches (1524 mm) in height above adjacent grade measured from outside the enclosed area or eight (8) feet (2.4 m) vertical, non-climbable, measured on the inside. The vertical clearance between grade and the bottom of the barrier shall be four (4) inches (101.6 mm) maximum. When permanently installed pools or spas are in adjacent yards the common barrier may be reduced to forty-eight (48) inches (1219.2 mm) on either side.

802.2 Wrought Iron. Wrought iron fence with open guardrails shall have intermediate rails or an ornamental pattern such that a sphere four (4) inches (101.6 mm) in diameter cannot pass. Horizontal support members shall be spaced at least thirty-two (32) inches (813 mm) and shall comply with Section 802.1.

802.3 Wrought Iron with Masonry. Mixed use of masonry and wrought iron walls shall comply with all of the following:

- (1) Masonry or wrought iron portion of the wall shall be a minimum of thirty-two (32) inches (813 mm) in height.
- (2) The wrought iron portion of the wall shall comply with Sections 802.1 and 802.2 with a maximum of two horizontal members, one near the bottom, within four (4) inches (101.6 mm) of the masonry wall below, and one a minimum of sixty (60) inches (1524 mm) above grade.

802.4 Chain Link. Chain link fences shall not exceed one and one quarter (1¼) inch (32 mm) mesh size. The fence shall have top and bottom horizontal supports. The fence height must be a minimum of sixty (60) inches (1524 mm) and shall be constructed of not less than 11 gauge wire.

803.0 Gates or Doors. All gates or doors eight (8) feet (2.4 m) in width or less shall meet the following requirements:

- (1) Gates and doors shall be self-closing and self-latching.
- (2) Gates shall open outward from the enclosed pool area.

803.1 Latching Devices. The self-latching devices of gates or doors shall be one of the following:

- (1) A device that is an ASTM F-1908-08 approved latching device. It shall be installed per the manufacturer's installation instructions.
- (2) A device mounted inside the enclosed area and be designed to be inoperable from outside the enclosed area. Manual catch latch devices shall not be less than three (3) inches (76 mm) or more than six (6) inches (152.4 mm) below the top of the door or gate. It shall be inaccessible from outside the enclosed area for a distance of twenty (20) inches (508 mm) in all directions from the latch except that an opening not greater than one-quarter (1/4) inch (6 mm) diameter shall be permitted. This protection is not required to extend above the top of the gate.
- (3) Keyed lockset devices shall be mounted at a minimum of forty-two (42) inches (1067 mm) above grade.

803.2 No other device shall impede operation or obstruct closing of self-latching device.

803.3 Large Access Barrier Gates. Access barrier gates, greater than eight (8) feet (2.4 m) in width, 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.

803.4 Single Access Gates. Single access gates or doors integral to perimeter fences shall comply with the requirements of Section 802.0 and shall have latching devices capable of keeping the door or gate securely closed and latched.

803.5 Double Gates. Double gates integral to perimeter fences shall comply with the requirements of Section 802.0 and shall be permanently locked. If double gates are used as a component of the access barrier, one gate shall be pinned and locked in the closed position and the adjoining gate must meet the requirements of Section 803.0.

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

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

804.0 Secondary Access Barrier Requirement. An additional barrier that isolates all openings in the dwelling unit from the pool or spa shall be erected. The barrier shall be a minimum of forty-eight (48) inches (1219 mm) in height and shall not allow the passage of a sphere four (4) inches (102 mm) in diameter. All gates shall be self-closing and latching at the top of the barrier. No other device shall impede operation or obstruct the closing of self-latching gate.

Exception 1: Self-closing and self-latching devices installed on all openings in dwelling unit that provide direct access to the pool or spa. Openings to include doors; operable windows with a sill height of forty-eight (48) inches (1219 mm) or less; and pet doors allowing the passage of a sphere of four (4) inches (102 mm) in diameter.

Exception 2: An alarm installed on all openings in dwelling unit that provide direct access to the pool or spa. Openings to include doors; operable windows with a sill height of forty-eight (48) inches or less; and pet doors allowing the passage of a sphere of four (4) inches (102 mm) in diameter. 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 a minimum of capable of providing 85 dB when measured indoors at ten (10) feet (3.05 m) (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 (54) inches (1372 mm) (54") above the threshold of the door.

Exception 3: A laser or light beam activation alarm installed that provides an active beam barrier across the access to the pool from the dwelling unit or installed around the entire perimeter of the pool. 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.

Exception 4: Power safety covers installed that comply with ASTM F1346-91.

Exception 5: An alternate means or method approved by the Building Official provided the degree of protection afforded is equal to or greater than that afforded by a secondary barrier.

805.0 Safety Glazing. Glazing in walls and fences within sixty (60) inches (1524 mm) or less, measured horizontally from the water's edge and less than sixty (60) inches (1524 mm) measured vertically above grade shall be considered hazardous locations. In these locations, tempered glazing, laminated glass or Plexiglas shall be used.

806.0 Barrier Timeliness. All required access barrier elements shall be installed prior to:

- (1) Installation of a pre-manufactured pool or spa.
- (2) The pre-plaster inspection of a conventionally constructed pool or spa.
- (3) The filling of any water feature.

807.0 Surveillance Substitute. In lieu of access barriers required by this code, resort hotel facilities and therapeutic facilities used by or under the direct control of licensed medical personnel may provide a dedicated guard so that observation is maintained at all times. An alternate method may be submitted in writing and approved by the Building Official. Such submittal shall become a permanent part of the job record.

808.0 Responsible Party. The owners of the property upon which pools, spas or artificial bodies of water are located are 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.

809.0 Alternate Materials or Methods: An application for alternate materials or methods must be reviewed and approved by the Building Official for any proposed access barrier which does not meet the requirements of this code. If approved by the Building Official, the owner remains responsible for establishing and maintaining such approved alternate materials or methods.