

CLARK COUNTY DEPARTMENT OF BUILDING



SWIMMING POOL INSPECTION CHECKLIST 2006 CODE

August 30, 2010

GENERAL NOTES

- This checklist is intended for use as a GUIDE to assist and promote consistency in the application of the Southern Nevada Pool Code and standard practices within Clark County. This list is for the use of county inspectors and for the public in general.
- This checklist is intended for pools and spas. The information in this checklist is not, nor is it intended to be, all-inclusive. It does not include all code or individual plan requirements. It is intended to reflect local policies, procedures and practices within Clark County. This checklist does not waive any specific code requirement not listed or allow for the decrease in the requirements of an engineered design. It also does not add requirements where the minimum of the code has been met.
- All approved plans, documents and revisions to plans must be maintained on site and available for review at all times the pool is under construction.
- All plans and paperwork will be reviewed before performing inspections.
- The owner, permit holder or responsible person on the job site is responsible for establishing safe access to perform all inspections.
- In the event that ladders are necessary to perform inspections, all ladders and equipment shall meet minimum OSHA standards. Inspectors are not responsible for setting up or moving ladders from one location to another.
- Inspectors are not responsible for unscrewing/unbolting of items to verify information that is part of an inspection.

Code references coding

- A= amendment
- E= energy code
- EL= NEC, electrical code
- R= residential code
- B= Building code

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

GENERAL NOTES

PAGE 1 of 1

POOL FIRST INSPECTION (6613)

Plans	Check site plan for other structures to be built (i.e. BBQ's, water features, equipment screen walls, retaining walls, patios, etc.). Make sure whoever pulled permit for pool or spa is aware of any other permits needed.
Plans	Check site plan to make sure it reflects conditions: <ul style="list-style-type: none">• Location of pool (min 5 feet from property line and structures).• Pool equipment.• Pool heater.• Retaining walls.• Location of structures adjacent to pools that will result in a surcharge to the pool shell.
Plans	Check approved structural calculations for:
ACI 318	Correct placement, grade and clearance of reinforcing steel per approved plans and engineering details.
500A	Surcharges on the pool reflected in the structural calculations.
500B	Check for added steel requirements for surcharges, depth of pool or soil conditions.
ACI 318	Steel to be min 3 inches clear to soil.
ACI 318	Verify steel is clean, no mud, flaky rust, grease, oil or paint.
Plans	Check for water features. If natural rock, then plans shall have an engineered pad to support the rock. If they are to have an artificial feature, then the work shall be per the approved plans.

NOTE: POOL PRE-GUNITE INSPECTION- FIRST INSPECTION MAY HAVE ONLY THE PLUMBING AND ELECTRICAL STUBBED OUT OF THE FORMING SHELL FOR APPROVAL OF THIS INSPECTION.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

POOL FIRST INSPECTION (6613)

PAGE 1 of 1

POOL FIRST INSPECTION FIBERGLASS POOLS (6613)

- Plans Check site plan for other structures to be built (i.e. BBQs, water features, equipment screen walls, retaining walls, patios, etc.). Make sure whoever pulled permit for pool or spa is aware of any other permits needed.
- Plans Check site plan to make sure it reflects conditions:
- a. Location of pool (min **5 feet** from property line and structures).
 - b. Pool equipment.
 - c. Pool heater.
 - d. Retaining walls.
 - e. Location of structures adjacent to pools that will result in a surcharge to the pool shell.
- ES Report Check approved structural calculations and compliance with the ES report:
- a. Surcharges on the pool reflected in the structural calculations.
 - b. Check for added requirements for surcharges, depth of pool or soil conditions.
 - c. Check for water features. If natural rock, then they must have an engineered pad to support the rock. If they are to have an artificial feature, then the work shall be per the approved plans.
- All piping and wiring needs to be complete.
- 300A Lighting level 1/2 watt per square foot of pool level.
- Plans Fiber optic light conversion level to be approved plans.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

UNDERGROUND ELECTRICAL (6611)

- EL680.26C Verify that the bonding conductor is in the proper location based on the approved plan and equipment location.
- EL250.8 All bonding is to be done with clamps listed for proper location.
- EL680.26B If any of the following equipment has been installed, bond the following with #8 solid copper wire:
- Pool steel, light niches, any metal items over 16 square inches within **5 feet** of the pool (including fences, windows).
 - Pool deck steel.
 - All motors.
 - Metal heaters and filters.
 - Diving board, slide or hand rail jigs.
 - Automatic pool covers.
- EL352.24 No scorch marks on conduits - if any, it must be replaced, use thermostatically controlled benders only – no torches.
- AEL352.10 Schedule 80 non-metallic conduit used above grade.
- EL352.26 Maximum **360 degrees** total of bends in any conduit run between pull points.
- EL300.5 Conduits to be **18 inches** deep, unless under a **4 inch** concrete slab.
- EL300.5 If the underground circuit is GFCI protected and 120 volts protected with a 20A maximum over-current protection device, burial depth may be reduced to **12 inches**.
- EL680.10 Conduit for fiber optics shall be **18 inches** deep.
- EL680.24 Pool light conduit terminates in an approved listed pool junction box and equipped with hubs or threaded entries.
- EL680.24 The junction box shall be located a minimum of **4 inches** above grade level, or **8 inches** above the maximum water level, whichever is greater.
- EL680.22C Fiber optic boxes (lighting towers) are to be at least **5 feet** from pool or spa edge.
- EL680.22C4 Check for existing lights and switches within **10 feet** of pool area for compliance with NEC Article 680-6.

NOTE: POOL PRE-GUNITE INSPECTION- FIRST INSPECTION MAY HAVE ONLY THE PLUMBING AND ELECTRICAL STUBBED OUT OF THE FORMING SHELL FOR APPROVAL OF THIS INSPECTION

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

POOL UNDERGROUND ELECTRICAL (6611)

PAGE 1 of 1

UNDERGROUND PLUMBING (6612)

- FIG-P-005 Waterlines are to be minimum **12 inches** deep, unless covered by decking.
- 400C Plumbing piping shall be bedded with clean fill sand.
- 400C Shading to be under the piping **3 inches** thick with sand no larger than **3/8 inch**.
- 400C Material on site for shading **4 inches** above the pipe with sand.
- 400H Minimum of 2 pool drains located at least **3 feet** apart, or in different planes
- P313.2 No plumbing to be in concrete pours or slabs.
- 400D Plumbing to have proper listing (nsf-pw or equal) (UPC or UL).
- P1211.6 Check for any scorch marks or dents in PVC piping. If any, it must be replaced.
Use only thermostatically controlled benders – no torches.
- P313.2 Keep PVC lines out of bond beam unless permitted by engineer.
- Plans Lines should be minimum **6 inches** down from top of bond beam in pools and spas. PVC in spa dam walls to be kept **1½ inches** from steel.
- P316.1.6 All PVC is to have purple primer on all joints (ASTM-F656).
- P316.1.6 No one step cements are permitted. Cement is to be ASTM-D-2564.
- 400D Test pressure on piping system **20 pounds for 15 minutes (water test only)**.
- 400D Test gauge maximum 40 PSI with 1 pound increments (may use the system gage).
- 400E Gas piping installed and approved.

NOTE: POOL PRE-GUNITE INSPECTION- FIRST INSPECTION MAY HAVE ONLY THE PLUMBING AND ELECTRICAL STUBBED OUT OF THE FORMING SHELL FOR APPROVAL OF THIS INSPECTION

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

POOL UNDERGROUND PLUMBING (6612)

PAGE 1 of 1

POOL GAS LINE INSPECTION (6622)

Plastic gas line (PE)

Plans	Sized per approved plan (site plan).
400E	Pressure test to 60-PSI, if butt and socket fusion is used (welded pipe).
Manufacturer	Need installer's card onsite if piping is welded.
Manufacturer	Pressure test to 10-PSI, when compression fittings are used.
400E	Proper gauge for test is used (1 pound increments and max 2 times test pressure).
P1211.1	Lines to be minimum 18 inches deep to top of pipe.
400C	Shading to be under the piping 3 inches thick with sand no larger than 3/8 inch .
400C	Material on site for shading 4 inches above the pipe with sand.
AP1211.1.6	Risers passing through concrete must have sleeve on risers with PVC pipe 1/2 inch larger than pipe.
P1211.1.7C	Continues #14 AWG copper tracer wire with yellow insulation or marker tape wrapped around or taped to the plastic gas line and terminating at least 6 inches above ground at each end.
P1212.4	Shut-off valve with maximum length flex connector of 3 feet at equipment.
P1209.4.1	Flex connector sized for the heater demand.
UL	Flex connector approved for outside use.
AP1211.1.6	Venting and sleeving required when gas line is installed under any structure (patio, carports, etc.).
BI-PP-025	If passing pressure test, tag system, included in the computer history.

Metal gas lines installed underground

Plans	Sizing per approved plans (site plan):
	<ol style="list-style-type: none">1. Maximum length of non-factory coated metallic piping is 12 inches.2. Cut or tool mark in factory coated pipe and all non-factory coated piping up to 6 inches above grade shall have a minimum of two wraps or ten-mil tape.3. Venting and sleeving required when gas line is installed under any structure (patio, carports, etc.).4. If installed above grade, must be 6 inches above grade and secured per Plumbing Code.5. Shut-off valve with maximum length flex connector 3 feet of all pool equipment.6. All gas lines installed above grade shall be kept a minimum of 6 inches above grade and supported per Table 3-2 (UPC).
	<ol style="list-style-type: none">2. Pressure test to 10-PSI for 15 minutes.3. If passing pressure test tag system, include included in the computer history.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

PRE-PLASTER INSPECTION (6671)

Plans	Check approved site plans for any items that might have been added which are not on the plans (waterfalls, BBQ's, retaining walls, enclosed walls, etc.).
Manufacturer	Heater vent termination per manufactures listing requirements for clearance to property line, combustibles and building openings.
400B	All pool pumps, equipment and heater to be on pad 3 inches above grade.
700C	All man gates used for pool barrier must swing out.
700C	Man gates must be non-climbable, self-closing and self-latching minimum 60 inches high measured from outside the enclosed area.
700C	The latch or locking device must be at least 48 inches above grade and at least 6 inches below the top of the gate. This device must be inaccessible from outside the enclosed area for a distance of 20 inches in all directions, except openings not greater than $\frac{1}{4}$ inch in diameter.
700B1	Maximum clearance under the gate is 4 inches .
700C	Double gates may be locked with no other modifications as long as there is another code compliant man gate.
700C	Double gates that are the only access to the rear yard and each leaf of the gate is 8 feet or less, requires one side of the gate pinned and locked down and the other portion of the gate must be self-closing, self-latching and protected.
700C	If a self-latching type device is used on a double gate, the 20 inch protective barrier will be also required.
700B1	Fences are required to be 60 inches in height above grade measured from outside the enclosed area OR 8 feet vertical, non-climbable, measured on the inside.
700B2	Wrought iron fences with horizontal members 32 inches or greater apart must have verticals so that a 4 inch sphere will not pass through.
700B3	Combination fences of block and wrought iron must total at least 60 inches height and one element (the block or iron portion) at least 32 inches high.
700B1	Maximum clearance under fences is 4 inches .
Plans	Existing fences fronting common area or golf courses etc. that do not meet the above codes must be approved on a case-by-case basis by the supervisor.
700B1	Fence between two yards both containing a pool needs to be only 48 inches high.
700B1	A vertical wall in excess of 8-feet high is an approved barrier.
22.02.190	Any additions to block walls to meet 60 inch height requires (adding new courses) a permit.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

- 100def Water features, **18 inches** or less in water depth, do not require barriers.
- 500F Hand holds are required around pool areas <**3 feet deep**; the deck provides a hand hold as long as the deck is not more than **12 inches** above water level.
- 500F3 At raised bond beam greater than **12 inches** above water, level hand holds are required maximum every **4 feet** as follows:
- a. Soap dish style that are a least **6 inches** wide and must be epoxied.
 - b. Vanishing edge sloping to the water max thickness of **15 inches**.
 - c. A ledge **3 inches** wide, maximum **6 inches** below waterline.
- 500E4b Residential steps shall have a maximum rise of **12 inches**, with a variation of not more than **1 inch**. The minimum run is **12 inches**.
- 500E4b Commercial steps shall have a maximum rise of **10 inches**, with a variation of not more than **1 inch**. The minimum run is **12 inches**.
- 500E4b Steps shall extend to a depth of **42 inches** or within **12 inches** of pool floor.
- 500E4b The distance from the bottom of the pool to the bottom step is not considered a step.
- 700E Safety glazing is required on windows within **60 inches** of water edge and within **60 inches** from grade.
- 500E1 Pool over **30 feet** in length or width require a second means of egress.
- 500F2 Underwater seat, bench or swim out shall be a minimum of **12 inches** wide by **12 inches** long and a maximum of **24 inches** below water surface.
- Manufacturer Slides must have depth requirements per manufacturer's listing.
- 500G Deco drains shall terminate at least **24 inches** from any foundations.
- 500F1 Concrete patios and decks to be a minimum of **2 inches** below the stucco weep screed.
- 700D Secondary alarm or barrier is in place for all doors leading to the pool area.
- 300A Lighting level 1/2 watt per square foot of pool level.
- Plans Fiber optic light conversion level to be approved plans.
- 300B Area lighting for commercial pools to be 6/10 watt per square foot of deck area.
- 500F1 Site drainage is way from pool and house.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

PRE-DECK INSPECTION (FIBERGLASS POOLS) (6645)

ES report	Fiberglass pool deck inspections must follow the ICC Evaluation Services Report details.
AEL680.26	Bonding of the deck per NEC (#8 copper mat, 12” by 12” with 4” tolerance, 3 foot wide around pool).
500F1	Concrete patios and decks to be a minimum of 2 inches below the stucco weep screed.
EL680.26	Bonding connections in place for all embed items or sleeves.
700	Pool barrier complete, fences and gates.
500F1	Site drainage away from pool and house.
700D	Secondary alarm or barrier is in place.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

PRE-DECK INSPECTION (FIBERGLASS POOLS) (6645)

PAGE 1 of 1

ROUGH ELECTRICAL (6631)

1. Verify size and type of breaker in main panel feeding pool subpanel.
 - 300E Feeders require a minimum of #10 wire and 30 amp breaker. Ground wire to sub-panel must be insulated.
Overcurrent and disconnecting means for electrical equipment with approved breakers in subpanel.
Proper working clearances in front of panels (**30 inches** wide and **36 inches** deep)
Conduit supported within **3 feet** of panel.
Must use machine screws to mount ground bars or lugs to inside of subpanel
Time clock cannot act as motor disconnecting means.
 - EL680.12 Check for proper circuit identification on breakers and controls (labeling) pool lights, pumps and blowers.
 - EL680.22A5 Pool lights must be GFCI protected (Class “A” GFCI is required).
 - EL680.24A2 Verify light junction box has proper mounting and support.
 - EL680.24E Verify light junction box make-up (grounds, sealing, strain relief).
 - EL680.23B2 Ground connection in light niches is properly sealed (silicone).
 - EL680.23B2 Conduit at light niche is properly sealed (silicone).
 - EL680.23B2 Ground from light niche to junction box to be insulated #8 conductor.
 - Manufacturer Light cord at light long enough to place light on pool or spa deck . Manufacturer Light must be **18 inches** below water level to lens glass or be listed for reduced depths and installed per the manufacturer’s listing.
 - EL680.24A2 Waterproof junction boxes require proper support.
No lights (even low voltage) permitted within **5 feet** of water’s edge.
 - EL680.22A3 No receptacles within **10 feet** of waters edge unless an existing GFCI receptacle no closer than **5 feet**.
 - EL680.22C Check any lights and switches within **10 feet**.
 - EL680.27B2 Motorized pool covers required GFCI protection (Class “A” GFCI is required).
 - EL680.22 No switching devices within **5 feet** of water’s edge.
 - EL680.22A2 Receptacles required within **20 feet** of pool equipment, but must be **10 feet** from water’s edge.
 - 200A Ensure that **24 inch** access path is clear to any equipment.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

- EL 680.26C Verify that #8 AWG solid copper is bonding the following:
- Pool shell.
 - Pool deck reinforcement.
 - Heater.
 - Pumps.
 - Light junction box on external lug.
 - Metal items associated with the pool equipment.
 - Pool cover, metal cover and motor.
 - Do not bond sub-panel unless equipped with external lug, then its optional.
- EL680.26B3 Verify that all metallic items within **5 feet** of the edge of the pool are bonded with a #8 AWG solid copper conductor (fences, patio covers, windows).
- EL680.26B3 Verify that gates used in a metallic fence have adequate bonding jumpers to ensure that all portions of the fence is bonded when the gates are in the open position.
Proper wire and size to each motor.
All flex is properly supported.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

FINAL PLUMBING (6699)

- 400D All PVC water lines above grade must be painted to protect it from UV
Pumps securely bolted down to pad **3 inches** above grade.
- 400F Double chamber backflow prevention device on auto fill line.
- 400F If manual fill, atmospheric vacuum breaker.
- Manufacturer Heater vent termination per manufactures listing requirements for clearance to
property line, combustibles and building openings.
- P1211.1 Gas shut off and maximum **6 feet** flex connector to gas appliances in place
- E504.7.1 Manual shut off at pool heater.
- 400H Entrapment avoidance cover in place at main drains.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.

POOL FINAL PLUMBING (6699)

PAGE 1 of 1

FINAL INSPECTION (6699)

Pool Final

- 500F1 Site drainage is not obstructed.
AB1803.3 Site drainage flows away from pool and buildings. Drainage shall slope at a rate of 1% (1/8 inch per foot) to the street or other approved location.
700D Secondary alarm or barrier is in place.

Electrical

- EL680.22A5 GFCI protected (Class "A" GFCI is required) for light or pool covers.
EL680.5 Verify proper operation of GFCI, with proper shut off of light.
Verify that no electrical has been added adjacent to the pool.

Above Ground Manufactured Spas

- EL680.22A5 Required GFCI protection (Class "A" GFCI) on the supply conductors.
EL680.26B1 All pumps, heaters and metal junction boxes under spa shall be bonded with a #8 solid copper.
700Aexp2 Must have pool code fence and gates unless there is a lockable cover meeting ASTM standard F1346 or equal.
Disconnecting means must be at least **5 feet** from waters edge, and insight of and no more that **50 feet**.
EL680.22B4 Any light fixture or paddle fans within **5 feet** of waters edge must be **12 feet** above maximum water level and be GFCI protected.

Note: This is not a complete list and is not inclusive of all construction methods, materials or practices. Checklists are intended to serve as a reference point for a basic inspection only. Compliance with all the provisions of applicable codes shall be required.