This packet contains general requirements that should be considered as a part of your pool, hot tub, or spa project associated with single family dwellings and should not be considered as a complete list of all code requirements. Complete information is available in the codes and ordinances adopted by the City of Lenexa. Note: Public and semi-public (such as subdivision pools) require separate approval process through the City of Lenexa, and also require a permit and approval by Johnson County Environmental - http://jced.jocogov.org/swimming_pools/pool_index.htm

Permits

A building permit is required for the construction and installation of all swimming pools, hot tubs, or spas except for prefabricated swimming pools less than 24 inches deep, and which are installed entirely above ground. A permit is also required for any electrical lighting or circulation system installations associated with any swimming pool, hot tub, or spa.

- **Permit fee**: The permit fee is based on the area of the pool, the lineal footage of the fence being installed and the combined value of the pool and the fence. A plan review fee is also required in addition to the permit fee.

  Note: The pool, hot tub, or spa permit includes the required fence enclosure as part of the permit. Separate permits will not be issued. If there is an existing fence there will be no fee charged for the required fence.
- Please contact a City of Lenexa Customer Services Representative for permit cost information for pool, hot tub, or spa installations at 913.477.7500.

Required Plan Information

To obtain a building permit, an application accompanied with a plan must be submitted to the City of Lenexa, Department of Community Development. Plans are required to be of sufficient detail and size to show code compliance. Typically, plot plans are used to show most of this information. If you do not have a **plot plan** of your lot, the City may have a copy. Please contact a City of Lenexa Customer Service Representative for more information regarding plot plans.

Plot Plan - The following information should be included on the plot plan:

A. Show lot dimensions and the distance from the pool and deck to adjacent buildings, easements, and property lines.
   - Swimming pools, hot tubs and spas shall comply with the table below.

B. Show location of fence and lineal feet of fence to be installed around pool or yard.
   - Minimum fence height is 4 feet. Maximum fence height is 6 feet. Special permission is required to cross easements or landscape buffers. See the enclosure section below for additional specifications.

C. Show proposed mechanical equipment pad and type of equipment screening to be used.

D. Show the location of any retaining walls.

Pool, hot tub, or spa location limitations:

- Pools, hot tubs, or spas and elevated decks are not permitted in easements or beyond platted setbacks.
- Decks more than 18 inches above grade are not permitted to encroach in required side or rear yards.
- The pool area cannot exceed the size of the dwelling.
- Flatwork and sidewalks are not permitted within 2 feet of property lines.
- Retaining walls supporting the pool deck are required to be set back a minimum 2 feet from property lines. An engineered design is required for surcharged walls or walls more than 4 feet in height.
- For lots with septic system tanks and lateral lines
  - Pools and decks are not permitted within 10 feet of lateral lines or septic tanks.
- Provide dimensions from overhead or underground electric lines to pool, hot tub, or spa.
  - A minimum 10 foot horizontal clearance for overhead lines and minimum 5 foot horizontal clearance for underground lines is required.

Pool, hot tub, or spa setbacks:

Zoning District	Setbacks in feet – Measured to edge of pool [2,3,6]			
	Front Yard[4]	Side Yard	Side yard abutting street	Rear Yard
AG RE / RP-E R1 / RP-1	N/P[1]	5’	20’	5’
	Setbacks - Pool and hot tub deck – Measured to edge of deck[5, 6]			
Pool/hot tub, or spa deck or walkway at grade[5]	N/P	2’	2’	2’
Retaining wall	2’ measured from the property line			

1. N/P = Not permitted
2. Pool not permitted to encroach into engineered swales or utility easements.
3. Pools within enclosed structures shall maintain the required setbacks for accessory structures.
4. Pools are not allowed in the front yard.
5. Pool decks and paved walkways are required to setback form property lines at least 2 feet.
6. Decks more than 18 inches above grade must be setback in accordance with the deck setback requirements of the specific zoning district in which the deck is located.

Pool Plans – The pool plans will show the area of the pool, the drain and pipe sizes for the circulation system, as well as, drain separation distance.

Deck Plans – If decks constructed of wood are used for walkways or for supporting hot tubs, provide a deck-framing plan. For more information go to:
http://www.lenexa.com/commdev/pdfs/Deck%20Construction%20Guidelines.pdf

Retaining Walls - Retaining walls are not allowed in utility easements or engineered drainage swales. Engineered calculations required for retaining walls more than 4 feet in height above grade.

Pumps and Filters

- Pumps shall be sized to provide a turnover of the water at least once every twelve hours.
- Pool and hot tub, or spa pumps shall be listed by a nationally approved testing laboratory such as NSF. Pumps less than 3 HP shall comply with ANSI/UL 1081, "*Standard for Swimming Pool Pumps, Filters and Chlorinators."*
- Filters shall be capable of maintaining water clarity.

Building code requirements

The pool, spa or hot tub must be constructed in accordance with *Chapter 41* and *Appendix G* of the *2006 International Residential Code (IRC)*:

- In-ground pools shall be designed and constructed in conformance with *ANSI/NSPI-5*.
- Above-ground pools shall be designed and constructed in conformance with *ANSI/NSPI-4*.
- Permanently installed hot tubs, or spas shall be designed and constructed in conformance with *ANSI/NSPI-3*.
- Portable spas and hot tubs shall be designed and constructed in conformance with *ANSI/NSPI-6*.
- Entrapment protection: Suction outlets shall be designed and installed in accordance with ANSI / APSP-7 or the following requirements. http://www.wvdhhr.org/phs/pools/Virginia%20Graeme%20Baker%20Act/ANSI-APSP-7%202006%20suction%20entrapment%20PDF%20with%20covers.pdf
- Please note, entrapment protection is not voluntary per APSP-7.
    - A pool or spa having single-outlet systems, such as automatic vacuum cleaner systems, or multiple suction outlets, whether isolated by valves or otherwise, shall be protected against user entrapment.
    - Pool and spa suction outlets shall have a cover that conforms to ANSI/ASME A112.19.8M, or an 18 inch x 23 inch or larger drain grate, or an approved channel drain system.
    - A pool or spa with single- or multiple-outlet circulation systems shall be equipped with a safety vacuum relief system (SVRS) in the event a grate cover is removed or becomes broken or an approved gravity drain system.
    - With a dual drain system, the minimum separation between outlets is 3 feet horizontally or vertically from edge of drain to edge of drain.
- Decks and elevated walking surfaces
    - Decks for one- and two- family dwellings shall be designed to support a minimum 40 pounds per square foot live load (see *Residential Decks* for design information). Decks supporting hot tubs or spas shall be designed to support the weight recommended by the manufacturer plus a 40-pound per square foot live load on adjacent deck areas. A plan of the deck is required to verify that adequate support is provided.
- Electrical installations
    - All electrical wiring for the pool must be in accordance with *Chapter 41* and *Appendix G* of the *2006 IRC.*
- Clearance from services
    - Residential pools, hot tubs or spas must be located so that there is at least a 10-foot horizontal clearance from the edge of the pool to any overhead power line and at least a 5-foot horizontal clearance from the edge of the pool to any underground electrical wiring.

- Receptacles
  - Receptacles that provide power for water-pump motors or other loads directly related to the circulation and sanitation system **shall be permitted** to be located between 5 feet and 10 feet from the inside walls of pools, outdoor hot tubs and spas, and, where so located, shall be a single receptacle of the locking and grounding type, and shall be GFCI-protected.
  - At least one 125-volt, 15- or 20-ampere receptacle supplied by a general-purpose branch circuit shall be located a minimum of 10 feet from, but not more than 20 feet from the inside walls of pools, outdoor hot tubs, or spas. This receptacle shall be located not more than 6 feet, 6 inches above the floor, platform or grade level serving the pool, hot tub, or spa.
  - All 125-volt receptacles located within 20 feet of the inside walls of pools and outdoor hot tubs or spas shall be GFCI-protected.
  - All 125-volt through 250-volt receptacles that supply pool pump motors shall be GFCI-protected.
- Underground utility lines
  - Care should be taken when excavating to minimize potential problems with buried gas, water, sewer, and underground electrical lines. Applicants may obtain assistance regarding the location of underground utilities by calling 811.

Inspections – Call 477-7500

All work, especially if underground, needs to be inspected prior to coverage or concealment. One working day advance notice is required for inspection scheduling. Call (913) 477-7500 if you have questions regarding inspections. Below is a list of common inspections required for pool, hot tub or spa installation projects. Depending on the type of pool, hot tub or spa, all of the inspections listed below may not be applicable. **All pool, hot tub or spa installations require a final inspection.**

- A bonding inspection is required prior to pouring concrete to verify that all metallic parts of the pool are electrically bonded (connected together) including reinforcing bars in the concrete for the pool walls, bottom and deck; diving boards, ladders, handrails, fixtures for pool lights, electrical conduits and metal fences.
- An inspection is required for underground plumbing and drain separation before it is covered.
- A gas line inspection is required for any relocated or added gas line. The line must be inspected and tested prior to covering.
- A wet or dry niche light electrical inspection should be performed prior to filling the pool with water. Fiber optic lighting inspections are not required.
- A final inspection must be performed after all work is complete.

Accessory structures

Solid or membrane covers including shade structures shall meet the setback requirements for accessory structures – separate plans are required. For more information go to:

http://www.lenexa.com/commdev/pdfs/residential%20Accessory%20Structures.pdf

Enclosures requirements

All outdoor pools, spas and hot tubs with water over 24 inches deep, must be protected with a barrier as outlined below. See Fig 1

Height:

- 48 inches minimum above grade measured from the outside face of the barrier.

Openings:

- 2 inches maximum between grade and bottom of barrier.
- 4 inches maximum between top of above-ground pool wall and bottom of barrier when barrier is attached to top of pool wall.
- All other openings shall not allow the passage of a 4-inch diameter sphere.

Climbability:

- Solid barriers (stone walls, etc.) must have no protrusions or indentations except for normal construction tolerances and tooled masonry joints
- Horizontal members less than 45 inches apart must be located on the inside face of the barrier. In such cases, the space between corresponding vertical members must be 1.75 inches or less.
- Chain link or lattice-type barriers with diagonal members must have openings less than 1.75 inches measured horizontally or 1.25 inches measured diagonally. Slats may be placed in openings to reduce size to the required dimension.
- Maximum mesh size for chain link fences shall be a 2.25-inch square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1.75 inches.
- Decorative cut-outs within a vertical member must not have openings greater than 1.75 inches.

Access Gates:

- Must meet height, opening and climbability requirements for barriers.
- Must be self-closing and self-latching, and must open outward away from pool.
- Latches less than 54 inches from the bottom of the gate must be located on pool side at least 3 inches from top of the gate. There shall be no openings 1/2 inch or greater within 18 inches of the latch.
- Latches located greater than 54 inches from the bottom of the gate may be located on either side of the gate.

Wall of dwelling used as part of barrier: A dwelling unit wall that serves as part of a barrier shall comply with the following:

- Doors with direct access to the pool through the dwelling unit wall shall be equipped with an alarm which produces an audible warning when the door is opened.
- The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds after the door is opened and be capable of being heard throughout the house during normal household activities.
- The alarm shall automatically reset under all conditions.

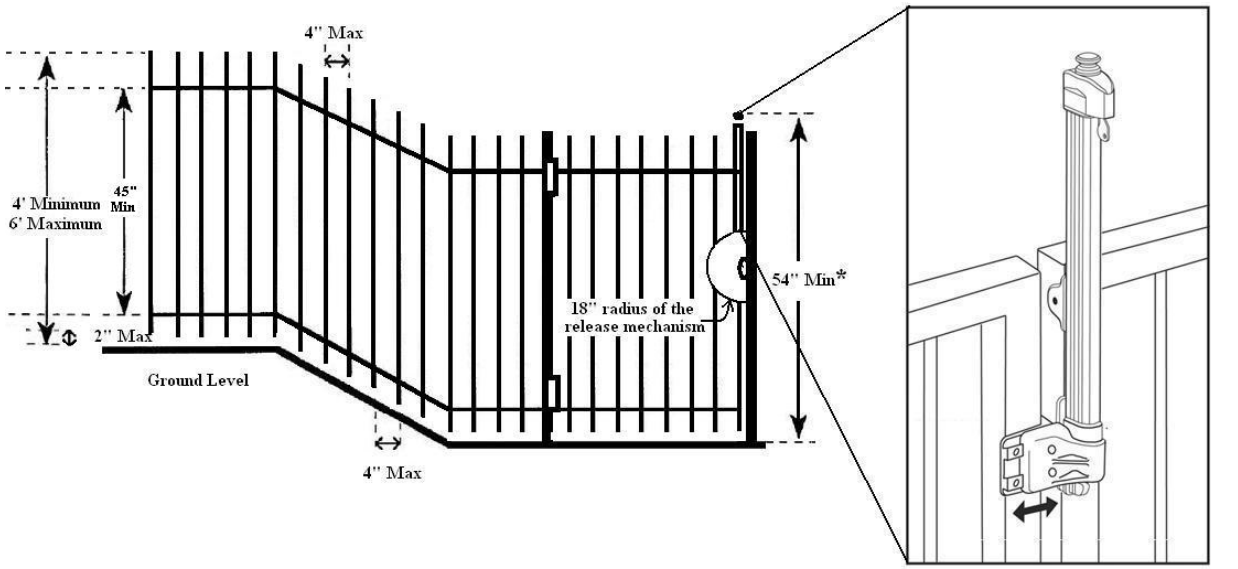

Fig 1. Pool Gate and Enclosures

* LATCHES MOUNTED ON OUTSIDE OF GATE

Spas and Hot Tubs: Safety covers may be substituted for barriers provided such covers meet standard ASTM F1346.

Draining Swimming Pools

Water from pools and hot tub, or spas serving single family dwellings, may be discharged to the ground or to the street or storm sewer under the following circumstances:

Backwash from pools may be discharged directly to the ground.

- Discharge shall be set back a minimum of four (4) feet from adjacent property lines. Care should be taken to minimize the impact on adjacent property and discharges shall not flow directly into a stream, pond, or storm sewer.

Complete or partial draining of all pools or hot tubs, or spas shall be accomplished as follows:

- Discontinue adding chlorine to the water and allow the water to stand for at least two weeks to allow the chlorine to dissipate.
- After dissipating the chlorine, the water may be used for irrigation on the property or discharged to a curb, ditch, or storm sewer.
- Discharge on the property for irrigation purposes should be accomplished so the water will remain on the property and not create odor problems, breeding areas for mosquitoes, or create a nuisance on adjoining property.

Referenced code sections
LCC 4-1-B-24-F-13; 4-1-B-24-F-2; 4-1-B-26-B-10
2006 IRC Appendix G

Pool Permit Application Checklist

Plans – two complete sets of plans with the following information

Plot plan to scale:

- ☐ Property address
- ☐ Lot dimensions, street and property lines
- ☐ Location of the pool and all structures
- ☐ Setbacks from adjacent property lines
- ☐ Location of utility and drainage easements
- ☐ Location of overhead and underground electrical lines and underground gas lines
- ☐ Location and height of the required barrier to enclose the pool
- ☐ Pool dimensions
- ☐ Location of pool equipment- If equipment is visible from street, screening is required.
- ☐ Pool elevation and arrows showing how the pool installation will affect lot drainage (show arrows showing lot drainage)
- ☐ Location, height and materials for any decks or walking surfaces around the pool
- ☐ Location and height of any retaining walls associated with the pool

Pool Design information

- ☐ Type of pool – above ground/in-ground; concrete, vinyl lined, etc.
- ☐ Pool dimensions, area and depths
- ☐ Entrapment protection specifications
- ☐ Pool pump and filter equipment specifications
- ☐ Alarm system and specifications where the dwelling is to be used as part of the barrier to enclose the pool the dwelling has doors that are part of the barrier.

FOR MORE INFORMATION

City of Lenexa
Department of Community Development
12350 W 87th St Pkwy
Lenexa, KS 66215
913-477-7500 / FAX 913-477-7730
www.lenexa.com

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