RESIDENTIAL POOL AND SPAS GUIDELINE
One-and two-family dwellings

Revised 11/2026

These are general requirements that should be considered as a part of your pool, hot tub, or spa project associated with single family dwellings and are not 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 require a permit and approval by the Johnson County Department of Health and Environment - https://www.jocogov.org/department/environment/swimming-pools

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 30 inches deep 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 fence permits will not be issued. If there is an existing fence there will be no fee charged for the required fence.

- Please contact a License and Permit Technician for permit cost information at 913.477.7725.

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 staff at 913-477-7725 or permits@lenexa.com 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.
   - Provide measurements from the edge of the deck to the property line. Also provide measurements showing the width of all deck areas.

B. Show location of fence and linear 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 required setbacks.
- Decks more than 18 inches above grade are not permitted to encroach in required side or rear yards.

- Pool deck setbacks:
  - Pool with <= 3 feet of decking: Edge of decking may be at a 2-foot setback from property line. Edge of water may be at a 5-foot setback from property line.
  - Pool with >3 feet of decking: Edge of decking may encroach no more than 3 feet into the zoning district's required setback.
    - If the decking is 18 inches above grade, no encroachment is allowed.
    - Example: Decking over 3 feet in width and under 18 inches in height may be no closer than 17 feet from the rear property line and 4 feet from the side property line for properties zoned R-1/RP-1. The standard rear setback for these districts is 20 feet, and the standard side setback is 7 feet.
  - Over 3 feet of decking around a pool is considered a patio and is subject to the setback for Decks, Porches, and Patios in UDC Section 4-1-B-26-B-7-a.
- The pool area (water surface) 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 septic tanks.
  - Pools and decks are not permitted within 25 feet of lateral lines.
- 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]			
<3' of pool/hot tub, or spa deck or walkway at grade[5]	N/P	2'	2'	2'
>3' pool/hot tub, or spa deck or walkway at grade [7]	N/P	4'	17'	17'
Pool/hot tub, or spa deck or walkway > 18" from grade [7]	N/P	7'	20' from side streets	20'
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 from property lines at least 2 feet.
6. Decks more than 18 inches above grade must be set back in accordance with the deck setback requirements of the specific zoning district in which the deck is located.
7. R-1/RP-1 Zoning District setbacks are used as an example for this table. Please check your zoning district and its required setbacks.

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:
https://lenexa.com/Your-Residence/Home-Improvement/Decks-Fences-Sheds

Retaining walls - Retaining walls are not allowed in utility easements or engineered drainage swales. Engineered calculations are 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 the *International Swimming Pool and Spa Code*.

- Please note: entrapment protection is required.
  - 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 approved covers and fittings
- Decks and elevated walking surfaces
  - Decks for one- and two-family dwellings shall be designed and constructed in accordance with the *International Residential Code*. (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 the *International Residential Code*
- 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.
- Heated pools
  - Outdoor heated pools and spas will be provided with a vapor-retardant cover or other means per section 303.1.3 ISPSC

Inspections – Call 913.477.7725

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 913.477.7725 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:

https://lenexa.com/Your-Residence/Home-Improvement/Decks-Fences-Shes#section-4

Enclosures requirements

All outdoor pools, spas and hot tubs with water over 30 inches deep must be protected with a barrier as outlined below. See Fig 1. on page 5.

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 (wood fences) 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 seven 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.

Swimming pools with an automatic safety cover complying with ASTM F1346 are still required to be surrounded by a 4’-0 tall fence that will not allow passage of 4” sphere. The gates shall be self-closing and latching and swing out from the pool area.

Spas and Hot Tubs: Safety covers may be substituted for ICC compliant barrier fences provided such covers meet standard ASTM F1346.

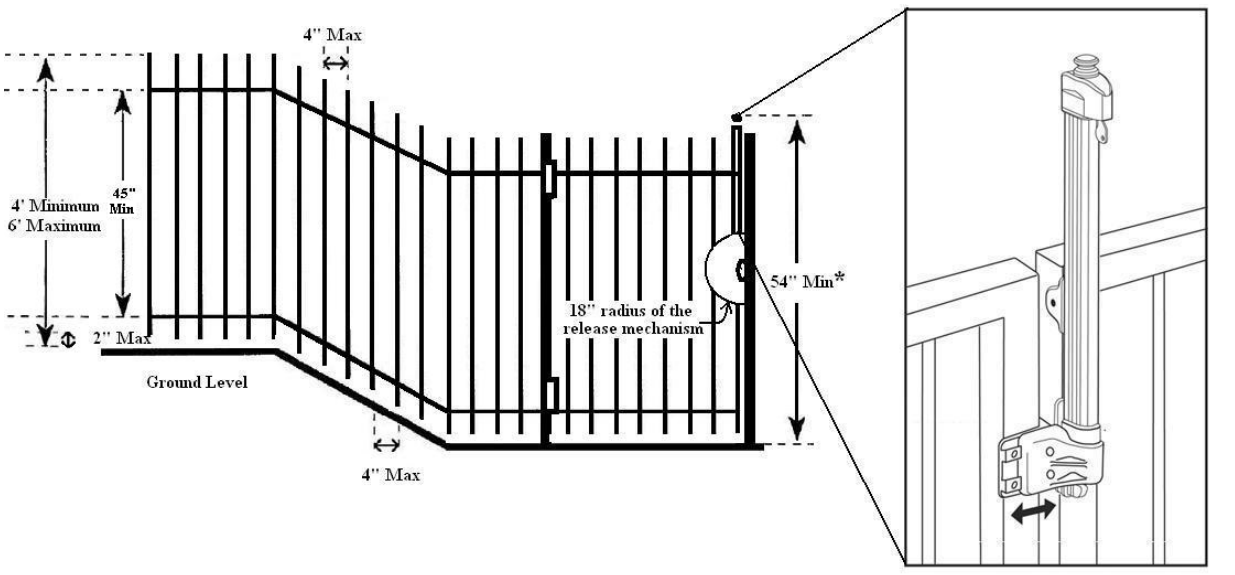


Fig 1. Pool Gate and Enclosures

* LATCHES MOUNTED ON OUTSIDE OF GATE

Draining swimming pools

Water from pools, hot tubs, 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 4 feet from adjacent property lines. Care should be taken to minimize the impact on adjacent property, and discharge 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.

Pool permit application checklist

Plans should include the following information when uploaded to the permit portal.

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.

Residential pools and spas
plot plan
Permit and guidelines

Builders and homeowners are required to obtain a permit prior to constructing, altering or replacing a pool or spa.

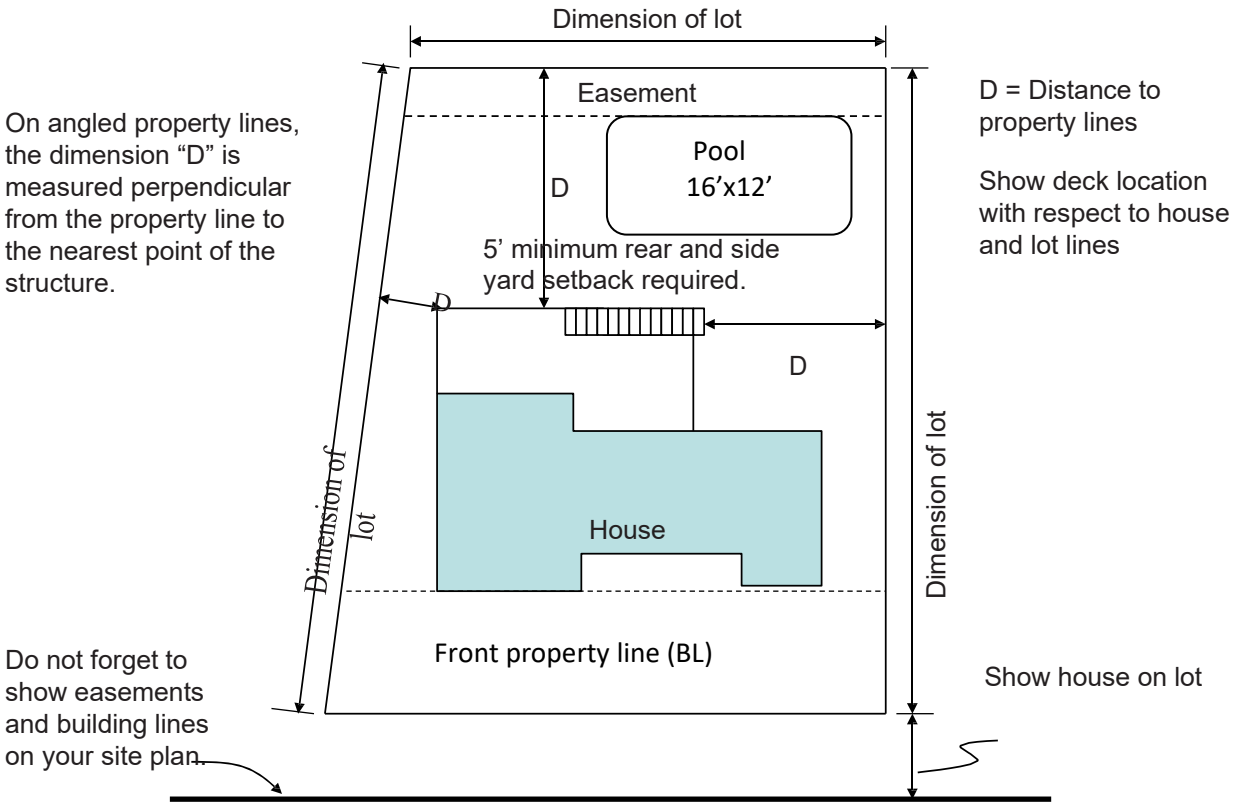
Plan Submittals

The following information shall be submitted to the building department for their review in order to obtain a permit. All the information shown on the sample documents should be contained in all plan submittals. Additional information may be necessary. Plan review fees and permit fees will be required prior to permit release.

The first requirement is submittal of an official **plot plan/site plan**, drawn to scale, for the property where the deck is to be built. Please provide all the information shown on the sample. Call 913.477.7725 to see if an official plot plan can be obtained.

Site plan/plot plan

All lot dimensions shall be shown on the site plan/plot plan. The distances to property lines must meet any side and rear yard setback requirements. This site plan/plot plan may be drawn by the builder or the homeowner and does not have to be sealed by a design professional.



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