

## PRIVATE ABOVE-GROUND SWIMMING POOLS PERMIT REQUIREMENTS

This guideline is intended to provide the homeowner/contractor with the basic information needed to apply for a building permit to erect most above-ground swimming pools. A building permit is required for all swimming and bathing pools, spas, and hot tubs which equal or exceed 24" in water depth, or the wall depth equals or exceeds 26", or the surface water area equals or exceeds 250 square feet, or which are equipped with a water-recirculating system.

1. Fill out and sign the building permit application and complete the supplemental application information form titled "Supplemental Application Information Relative To Swimming Pools, Spas, or Hot Tubs" (BP1003-A). Indicate on the application if electrical, plumbing, and/or mechanical work is included in the project. All electrical, plumbing, and mechanical work must be performed by licensed and bonded electrical contractors, master plumbers, registered financial responsible (bonded and insured) or licensed contractors authorized to do mechanical work, or a certified homeowner in accordance with St. Louis County Ordinances, each of whom must also sign the bottom of the building permit application form in the appropriate location. All signatures must be furnished to Public Works before the permit can be issued. Most above-ground pools do not include plumbing or mechanical (pool heater) work that requires licensed contractor(s). All above-ground pools require a licensed Electrical Contractor's Signature on the building permit application prior to the issuance of the building permit.

Exception: Storable swimming or wading pool (nonmetallic, molded polymeric, or inflatable fabric pool walls) as defined by Article 680 of the 2002 National Electric Code may be plugged into an existing exterior grounding type outlet with ground fault protection. Form BP1003-C may be completed by the owner/contractor and attached to the building permit application in lieu of a licensed electrical contractor's signature on the building permit application

2. Submit four (4) separate copies of your plot (site) plan showing existing structures with new above ground pool and its perpendicular distances to the lot lines and from other structures on the lot, if any.
3. Obtain zoning approval from the St. Louis County Department of Public Works (if unincorporated) or from municipality. In municipalities site plans must be marked "Approved" and the Municipal Zoning Approval Form submitted prior to permit issuance.
4. One of the following must be filed with your application request:
  - Provide Master Plan Number for Pool. Many local pool suppliers have had their pool plans and specifications reviewed and pre-approved so that the homeowner/contractor can obtain their permits easier. Pre-approved pools have been assigned a Master Plan Number by the County. Consult your pool supplier for this number, or

- For pools 42" or less in depth, provide four (4) copies of the pool brochure(s) or preferably, the Manufacturer's Installation Instructions. For pools exceeding a depth of 42", provide four (4) complete sets of detailed pool plans and specifications, prepared and sealed by a Missouri Licensed Architect or Professional Engineer, or
- Complete Public Works Form BP1003-B entitled "Required Information for Above Ground Swimming Pool Permit Requests Filed Without Detailed Plans". The requested plot (site) plan and pool enclosure barrier information including the elevation and section drawings of the fence must still be furnished. There will be a preconstruction site inspection consultation before permit issuance. There is an additional fee for this extra inspection.

5. Indicate type, location, and height of pool enclosure barrier on your site plan. When fences/gates are provided to meet the pool enclosure barrier requirements submit four (4) separate copies of an elevation drawing (showing both gate and fence) and a sectional drawing (fence) of the fence/gate enclosure with your application request.

The pool must be protected on all sides by an enclosure barrier to prevent small children from entering the pool area unsupervised, as well as make it more difficult for unauthorized use by others. The barrier, which may be one or any combination of the following, must be at least 48" in height above finished ground level measured on the side of the barrier which faces away from the swimming pool. . A 2" maximum clearance from ground level to bottom of the barrier shall be maintained. Openings in barriers shall prohibit the passage of a 4" diameter sphere, and designed to prevent the barrier from being readily climbed by children.

The pool structure will be accepted as a barrier, provided the 48" minimum height requirement is met, or mount the barrier on top of the pool structure. A removable ladder shall not constitute an acceptable alternative to barrier requirements. When the pool structure qualifies as the barrier, the ladder access area must be enclosed with an approved minimum 48" high fence with self-closing and latching gate.

For fences having horizontal and vertical members where the distance between the tops of the horizontal members is 45" or more, the spacing between the vertical members shall not exceed 4". When the distance between the tops of any horizontal members of the fence is less than 45", the horizontal members shall be on the pool side of the fence and the spacing between the vertical members shall not exceed 1 3/4". Maximum mesh size for chain link fences shall be 1 1/4" square. Gates in fences shall open outward away from the pool, be self-closing and self-latching. Where the release mechanism of the self-latching device is located less than 54" from the bottom of the gate: (a) the release mechanism shall be located on the pool side of the gate at least 3" below the top of the gate; and (b) the gate and barrier shall not have an opening greater than 1/2" within 18" of the release mechanism.

Where a wall of the house serves as part of the enclosure barrier, either all doors with direct access to the pool shall be equipped with an approved automatically resetting audible alarm, or doors shall be self-closing and self-latching with the release mechanism for the latch installed 54" minimum above the threshold, or the pool shall be

equipped with an approved power safety cover.

6. Provide four (4) complete sets of building construction plans drawn to scale for any field constructed deck and/or stairs. Obtain Public Works guideline entitled "Building Permit Requirements for Sun-decks" for additional information. If a prefab deck is to be installed that is included on the pool master plan, no additional information is required. If not included on the master plan furnish four (4) complete sets of building construction plans for the prefab deck.

Refer to attached drawings for typical information and requirements that need to be shown on your site plan and fence/gate elevation and section drawings.

Some of the more common code requirements related to above-ground pools which are usually not reflected on the plans but will be verified through the pool installation and inspection process are as follows:

#### Grades

Surrounding grades shall be leveled to set the pool structure. No alteration of the existing stormwater drainage pattern of the area is permitted without the prior approval of the Department of Public Works.

#### Discharge Water

Pool shall be constructed and equipped to allow the pool to be completely emptied of water. All discharged water must be to a location that does not create a nuisance to adjoining property. Connection to the sanitary sewer system is not permitted.

#### Water Supply

A back flow prevention device must be installed on the hose bibb used to fill the pool or in the water supply piping if the pipe discharge is below the maximum pool water level. Installation of the device on the supply piping must be done by a Licensed Master Plumber.

#### Electrical

The installation must comply with Article 680 of the 2002 National Electrical Code. All electrical work must be done by a licensed Electrical Contractor in accordance with St. Louis County Ordinances.

- All overhead wires must be a minimum of 10' horizontally away from the edge of the pool or 22.5' vertically above the water level. Certain Union Electric lines have greater clearances, check with Union Electric.
- Underground wiring is not permitted under the pool or within 5' of the pool wall. If space limitations prevent wiring from being re-routed beyond 5', wiring may be permitted if installed by a method listed in Article 680.
- No lighting shall be located closer than 5' from the edge of the pool unless installed at a height of 12' or more above the maximum water level.. All lighting within 10' of the edge of the pool must be ground fault circuit interrupter protected.
- A ground fault circuit interrupter must be installed in the electrical system for underwater lighting fixtures or cord connected pumps.

- No receptacles within 10' from the edge of the pool, except one single receptacle may be located between 5' and 10' from the edge of the pool for connecting the pump by a flexible cord provided with the pump. No extension cords are permitted. This receptacle must be the single, locking and grounding type and be protected by a G.F.C.I.

Exception: Storable swimming or wading pools (non-metallic, molded polymeric or inflatable fabric pool walls) as defined by Article 680 of the 2002 National Electrical Code may be plugged into an existing ground type outlet with ground fault protection regardless of the distance between the pool and the outlet.

- At least one receptacle that is ground fault protected must be located a minimum of 10' from the edge of the pool but not more than 20'. All receptacles located within 20' of the edge of the pool must be G.F.C.I. protected.

Exception: Storable swimming or wading pools (non-metallic, molded polymeric or inflatable fabric pool walls) as defined by Article 680 of the 2002 National Electrical Code.

- All metal parts of the pool must be properly grounded and bonded as specified in Article 680.

Exception: Storable swimming or wading pools (non-metallic, molded polymeric or inflatable fabric pool walls) as defined by Article 680 of the 2002 National Electrical Code.

## Mechanical

Pool heating systems and gas line installations must comply with the manufacturer's installation instructions and Section 921 of the 1998 International Mechanical Code. All mechanical work must be done by a registered financial responsible (bonded and insured) or licensed contractor authorized to do mechanical work.

The preceding requirements apply to most above ground pool installations; however, the plan reviewer may determine that unusual circumstances dictate the need for additional information on any particular project.

All electrical, plumbing, and mechanical work must be performed by licensed and bonded electrical contractors, master plumbers, registered financial responsible (bonded and insured) or licensed contractors authorized to do mechanical work, or a certified homeowner in accordance with St. Louis County Ordinances, each of whom must also sign the bottom of the application form in the appropriate location. All signatures must be furnished to Public Works before the permit can be issued.

## ENCLOSURES FOR PRIVATE SWIMMING POOLS, SPAS & HOT TUBS

### Section 421.10 from BOCA National Building Code

#### 421.10 Enclosures for private swimming pools, spas and hot tubs:

Private swimming pools, spas and hot tubs shall be enclosed in accordance with Sections 421.10.1 through 421.10.4 or by other approved barriers.

**421.10.1 Outdoor private swimming pool:** An outdoor private swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be provided with a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above finished ground level measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between finished ground level and the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above finished ground level, such as an above-ground pool, the barrier shall be at finished ground level, such as the pool structure, or shall be mounted on top of the pool structure. Where the barrier is mounted on the pool structure, the opening between the top surface of the pool frame and the bottom of the barrier shall not allow passage of a 4-inch (102 mm) diameter sphere.
2. Openings in the barrier shall not allow passage of a 4-inch (102 mm) diameter sphere.
3. Solid barriers shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 3/4 inches (44 mm) in width. Decorative cutouts shall not exceed 1 3/4 inches (44 mm) in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Decorative cutouts shall not exceed 1 3/4 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 1 1/4-inch (32 mm) square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1 3/4 inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1 3/4 inches (44 mm).
8. Access gates shall comply with the requirements of items 1 through 7 of Section 421.10.1, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outwards away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate: (a) the release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and (b) the gate and barrier shall not have an opening greater than 1/2 inch (13 mm) within 18 inches

(457 mm) of the release mechanism.

9. Where a wall of a *dwelling unit* serves as part of the barrier and contains a door that provides direct access to the pool, one of the following shall apply:
  - 9.1. All doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and its screen, if present, are opened. The audible warning shall commence not more than 7 seconds after the door and door screen, if present, are opened and shall sound continuously for a minimum of 30 seconds. The alarm shall have a minimum sound pressure rating of 85 dBA at 10 feet (3048 mm) and the sound of the alarm shall be distinctive from other household sounds such as smoke alarms, telephones and door bells. The alarm shall automatically reset under all conditions. The alarm shall be equipped with manual means, such as touchpads or switches, to deactivate temporarily the alarm for a single opening from either direction. Such deactivation shall last for not more than 15 seconds. The deactivation touchpads or switches shall be located at least 54 inches (1372 mm) above the threshold of the door.
  - 9.2. All doors with direct access to the pool through that wall shall be equipped with a self-closing and self-latching device with the release mechanism located a minimum of 54 inches (1372 mm) above the floor. Swinging doors shall open away from the pool area.
  - 9.3. The pool shall be equipped with a power safety cover. Where in a closed position, the cover shall be capable of holding a weight of 485 pounds (2157 N), shall not have any openings that allow passage of a 4 1/2-inch (114 mm) sphere and shall incorporate a system to drain standing water that collects on the cover. The cover control switch shall be permanently installed in accordance with NFPA 70 listed in Chapter 35, and be key-operated and of a spring-loaded or momentary-contact type. Where the switch is released, the operation of the cover shall stop instantly and be capable of reversing direction immediately. The switch shall be in the line of sight of the complete pool cover.
10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a fixed or removable ladder or steps, the ladder or steps shall be surrounded by a barrier which meets the requirements of items 1 through 9 of Section 421.10.1. A removable ladder shall not constitute an acceptable alternative to enclosure requirements.

**421.10.2 Indoor private swimming pool:** All walls surrounding an indoor private swimming pool shall comply with Section 421.10.1, item 9.

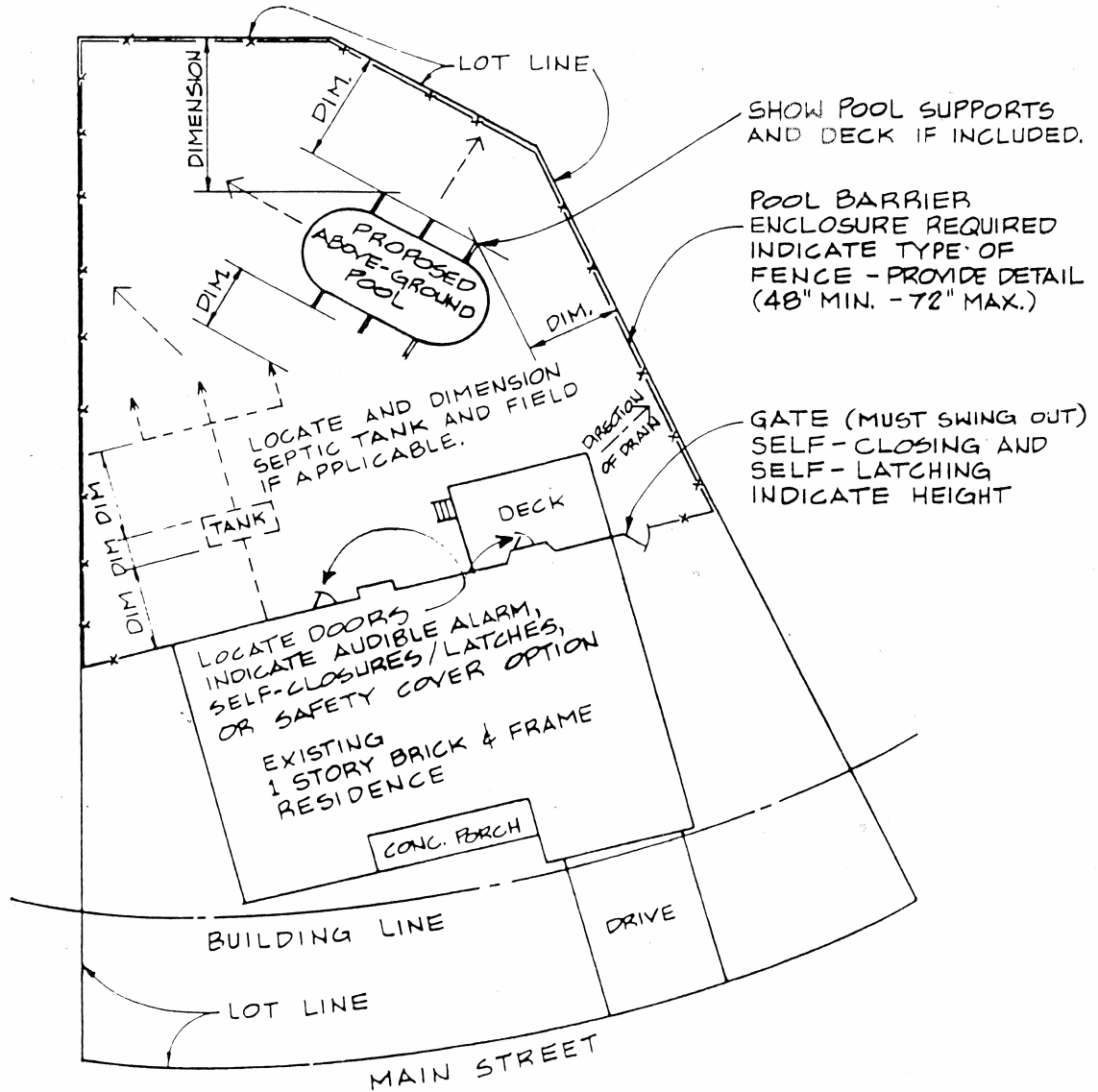
**421.10.3 Prohibited locations:** Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

**421.10.4 Exemptions:** The following shall be exempt from the provisions of this section:

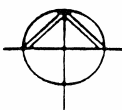
1. A spa or hot tub with an approved safety cover.
2. Fixtures which are drained after each use.

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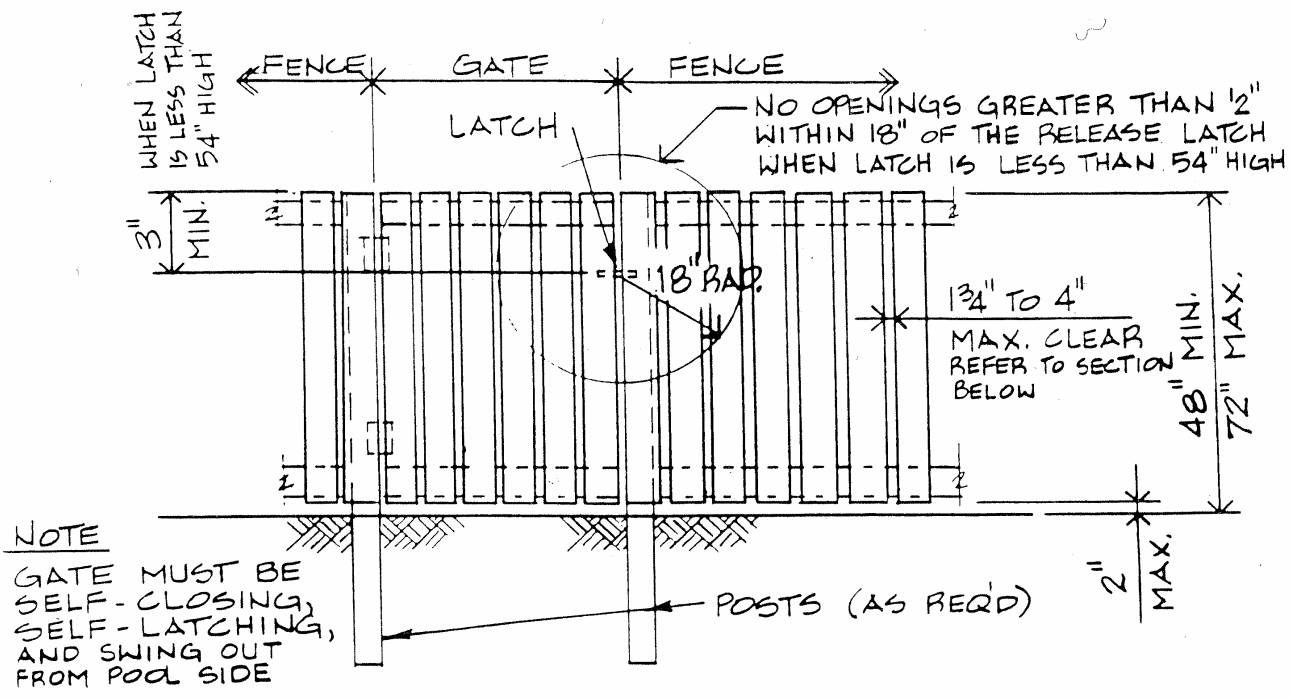
OWNER \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 SUBDIVISION \_\_\_\_\_ LOT NO. \_\_\_\_\_



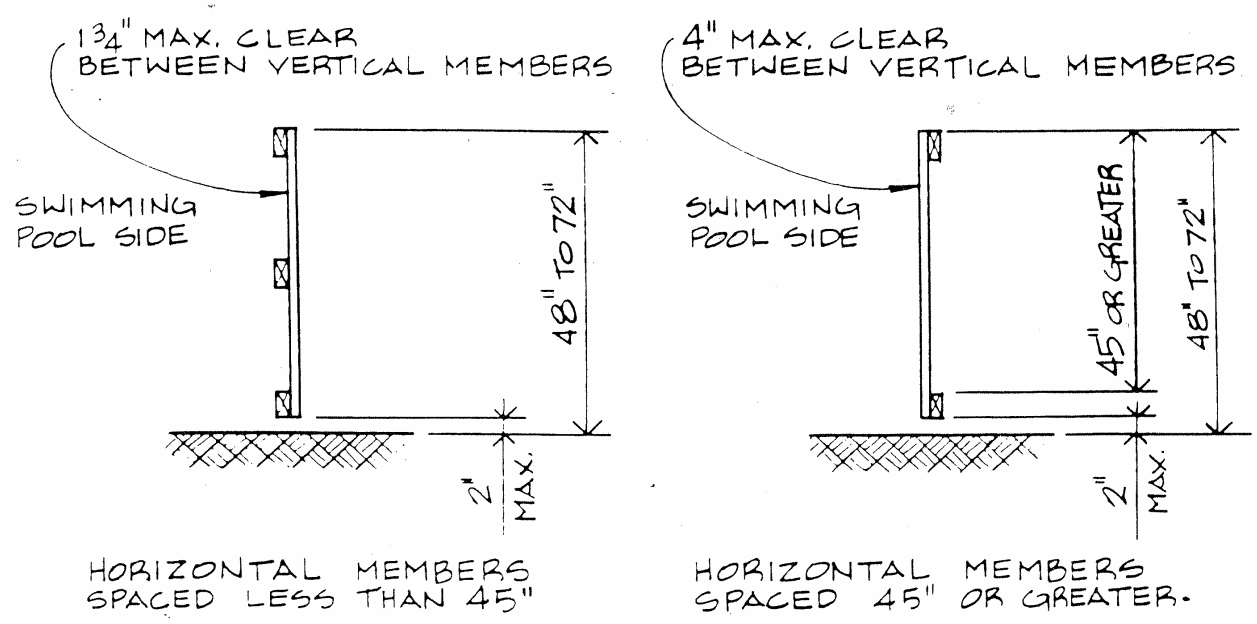
NORTH



TYPICAL PLOT PLAN FOR ABOVE-GROUND POOL  
 SCALE: 1" = 20'



POOL GATE AND BARRIER ELEVATION



POOL BARRIER SECTIONS

# St. Louis County Department of Public Works

## SUPPLEMENTAL APPLICATION INFORMATION RELATIVE TO SWIMMING POOLS, SPAS, OR HOT TUBS

1. Manufacturer of pool, spa, or hot tub \_\_\_\_\_  
Purchased from \_\_\_\_\_
2. Model Name and/or the Number \_\_\_\_\_ Shape \_\_\_\_\_
3. Master Plan No. \_\_\_\_\_
4. Diameter \_\_\_\_ feet OR \_\_\_\_ feet long X \_\_\_\_ feet wide X \_\_\_\_ feet deep
5. Cost including installation is \$ \_\_\_\_\_
6. The hose bibb used for filling the pool, spa, or hot tub shall be protected by either an approved back flow prevention device (vacuum breaker) or an air gap between the filling hose and pool.
7. Applicant must comply with all applicable sections of Article 680, 2002 National Electrical Code. Overhead wires over or near this structure may be required to be moved per NEC. All metal parts of the pool must be grounded and ground fault circuit interrupters must be installed in the electrical system. The applicant should also consult AmerenUE whose requirements usually are more restrictive than the NEC relative to location and clearances of overhead wires. All electrical work must be done by a licensed or certified person in accordance with St. Louis County Codes and Ordinances.
8. All gas piping for heating equipment must be installed in accordance with Section 921 of the 1998 International Mechanical Code.
9. Automatic resetting audible house door alarm (when applicable) information.  
Alarm Manufacturer \_\_\_\_\_  
Product Name and/or Model No. \_\_\_\_\_  
Number of doors to be protected \_\_\_\_\_
10. This is to certify that the proposed structure and fence will not alter the existing storm water drainage pattern of this area, and that this pool, spa, or hot tub shall be equipped to be completely emptied of water and the discharged water shall be disposed of in an approved manner that will not create a nuisance to adjoining property.
11. Caution: Homeowner's are advised that fences erected within a utility easement may be required to be removed, at any time, at the sole discretion of the Easement Holder. Homeowner's should obtain Easement Holders approval before erecting fences in close proximity to the utility structures (storm water inlets, manholes, electrical and cable TV boxes, etc.) located within the easement area.

\_\_\_\_\_  
Owner's/Owner's Agent Signature

\_\_\_\_\_  
Owner's/Owner's Agent Printed Name

\_\_\_\_\_  
Project Address

The Owner's Agent, if applicable, is responsible for advising the owner on these requirements.

# St. Louis County Department of Public Works

Required Information for Above Ground Swimming Pool Permit Requests Filed Without Detailed Plans:

1. Name \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

2. Location on lot: Distance from side property line \_\_\_\_\_ Distance from rear property line \_\_\_\_\_

3. Size: Length \_\_\_\_\_ Width \_\_\_\_\_ Depth \_\_\_\_\_ Diameter \_\_\_\_\_

4. Frame type: Wood \_\_\_\_\_

Metal \_\_\_\_\_ (Metal frame must be grounded)

5. Grade: \_\_\_\_\_ Essentially level. No grading needed.

\_\_\_\_\_ Needs grading to level.

\_\_\_\_\_ Existing surface drainage of water will not be changed.

6. Barrier: \_\_\_\_\_ Pool structure fenced with approved fence min. 48" high on all sides with self-closing and latching gate(s).

\_\_\_\_\_ Yard or pool structure fenced with approved fence min. 48" high with self-closing and latching gate(s). Doors in house wall protected (alarmed or self-closing) or pool has approved power safety cover.

\_\_\_\_\_ Pool walls (or walls with mounted guard) are min. 48" high with access ladder area protected by an approved fence min. 48" high with self-closing and latching gate.

7. Water: \_\_\_\_\_ Hose bib for filling protected by either a vacuum breaker or by an air gap between filling hose and pool.

\_\_\_\_\_ Pool water draining will be by \_\_\_\_\_ to \_\_\_\_\_.

8. Electrical: \_\_\_\_\_ Electrical power will be installed by licensed electrical contractor

\_\_\_\_\_ An existing electrical grounding type outlet with ground fault protection is available located a minimum of 10' from the edge of the pool but not more than 20'. A second single locking and grounding type outlet with ground fault protection may be located between 5' and 10' from the edge of the pool to serve the pool pump. No extension cords are permitted.

9. Site Plan: \_\_\_\_\_ A site plan (4 copies) with dimensions is presented with application.

10. Installed \_\_\_\_\_ by Owner \_\_\_\_\_ By Contractor

OWNER'S/OWNER'S AGENT SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

\_\_\_\_\_

The Owner's Agent, if applicable, is responsible for advising the owner of these requirements.

**St. Louis County Department of Public Works**  
**Electrical Certification for Storable Swimming or Wading Pools**

Permit Application No \_\_\_\_\_

1. Owner Name: \_\_\_\_\_

2. Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ I certify there is an existing exterior grounding type outlet with ground fault protection that will serve the storable swimming or wading pool. I will hire an Electrical Contractor licensed with St. Louis County to correct any electrical violations, if applicable, concerning the installation of this pool.

\_\_\_\_\_ I certify I will hire an Electrical Contractor licensed with St. Louis County to install any necessary electrical work to serve this pool.

\_\_\_\_\_  
Owner/Owner' Agent (Please Print)

\_\_\_\_\_  
Owner/Owner's Agent (Signature)

\_\_\_\_\_  
Date

The Owner's Agent, if applicable is responsible for advising the Owner on these requirements.