St. Louis County Department of Public Works
Division of Code Enforcement

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 swimming pool permit to erect most above-ground swimming pools. A swimming pool permit is required for all swimming and bathing pools, and spas, and hot tubs which equal or exceed 24" in water depth, or the wall depth equals or exceeds 26", or if the volume of pool equals or exceeds 5,000 cubic feet. See item 4 of this handout for portable self-contained spa/hot tubs constructed on top of a slab-on grade.

1. Fill out and sign the swimming pool permit application. 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, or licensed contractors authorized to do mechanical work. 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 swimming pool permit application prior to the issuance of the swimming pool permit.

   Exception: Storable swimming or wading pools (nonmetallic, molded polymeric or inflatable fabric pool walls) as defined by Article 680 of the 2008 National Electric Code may be plugged into an existing exterior grounding type outlet with ground fault protection. Attached form titled "Electrical Certification For Storable Swimming or Wading Pools" may be completed by the owner/contractor and attached to the swimming pool permit application in lieu of a licensed electrical contractor's signature on the swimming pool 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. A swimming pool permit is not required for a portable, self-contained spa/hot tub constructed on top of a slab-on grade meeting the following criteria:
   - The unit placement on the lot meets the zoning setbacks.
   - The unit is equipped with a safety covering complying with ASTM F1346-91 (2003).
   - All submerged suction outlets comply with ANSI/APSP-7-06.

   Note: A spa or hot tub located adjacent to an in-grade basement may overstress the existing basement foundation wall.

5. 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 home-owner/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 the attached form titled "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.

6. 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 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 be 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 self-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 2 ¼” 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 then a) all doors into the enclosure shall be equipped with a UL2017-listed automatically resetting audible alarm with the deactivation switch installed at least 54" above the threshold, OR b) those doors shall be self-closing, self-latching, not swing toward the pool and have the release mechanism for the latch installed at least 54" above the threshold, OR c) the pool shall be equipped with an approved power safety cover.

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 holder's 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.

7. 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. Field constructed decks are reviewed and inspected under a separate building permit. If a prefab deck is to be installed that is included on the pool master plan, no additional information is required. The deck, if applicable, shall be shown on the site plan.

8. Issuance of a swimming pool permit for the project does not authorize construction access to the work site. If the existing driveway entrance to the site is unavailable for construction access, the owner/contractor shall apply for a permit to construct a temporary entrance from the owner of the Right-of-Way.

For additional information regarding the criteria in this handout, please contact:

	Contact
General Information	(314) 615-5184
Permit Processing	(314) 615-7155
Zoning Review	(314) 615-3763
Building Plan Review	(314) 615-5485
Right-of-Way Owner	
State	(888) 275-6636
County	(314) 615-8517
Municipality	Municipality

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

The 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

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. Installation of an approved backflow prevention device on the supply piping must be done by a Licensed Master Plumber.

Skimmer and Gutter Systems

The following is applicable to above ground pools where the water is returned to the pump using a submerged suction outlet(s). Skimmers and gutter systems are not considered a submerged suction outlet. All submerged outlet covers/grates shall comply with ANSI/APSP-7-06. A single blockable submerged suction outlet is not permissible. Two or more submerged suction outlets in parallel to a single suction line shall be located 3 feet apart (measured center to center from the suction pipes) or be located on separate planes. Water velocity in branch piping serving a minimum of 2 submerged suction outlets shall be designed for a maximum of 3 feet per second. This will result in a maximum velocity of 6 feet per second if 1 of the 2 submerged suction outlets is blocked. The water velocity between the tee of the branch piping and the pump shall not exceed 8 feet per second. The tee serving the branch piping between 2 or more suction outlets on a pump system shall be located between the suction outlets so the head loss in each branch run is essentially equal.

Electrical

The installation must comply with Article 680 of the 2008 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 Ameren Electric lines have greater clearances, check with Ameren Electric (800-552-7583).

- 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.

- Receptacle(s) supplying water pump or loads directly related to circulation and the sanitary system shall be located between 6’ and 10' from the edge of the pool. This receptacle**(s)** 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 2008 National Electrical Code may be plugged into an existing ground type outlet with ground fault protection. The outlet shall be within 20’ from the edge of the pool.

- At least one general purpose receptacle that is ground fault protected must be located a minimum of 6’ 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.

- All metal parts of the pool must be properly grounded and bonded as specified in Article 680. All metal parts of the pool, structural reinforcing steel, and electrical equipment associated with the pool shall be bonded and grounded in accordance with NEC Article 680. In addition, the perimeter walking surface (unpaved surfaces as well as poured concrete and other types of paved surfaces) within 3 feet of the inside wall of all pools, regardless of the method of pool construction, shall be bonded as specified in NEC Article 680 Section 26.

  Exception: Storable swimming or wading pools (non-metallic, molded polymeric or inflatable fabric pool walls) as defined by Article 680 of the 2008 National Electrical Code.

<u>Mechanical</u>

Pool heating systems and gas line installations must comply with the manufacturer’s installation instructions and Sections G2410 through G2424, and Section G2441 of the 2009 International Residential Code. All mechanical work must be done by a licensed contractor authorized to do mechanical work.

<u>Required Signatures</u>

All electrical, plumbing, and mechanical work must be performed by licensed and bonded electrical contractors, master plumbers, or licensed contractors authorized to do mechanical work. Each contractor must also sign the application form in the appropriate location. All signatures must be furnished to Public Works before the permit can be issued.

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.

Pool Barriers

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of 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 grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, 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 1¾ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1¾ 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). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1¾ inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 2¼-inch (57 mm) square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1¾ 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 1¾ inches (44 mm).
8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward 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, the release mechanism and openings shall comply with the following:

8.1. 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

8.2. The gate and barrier shall have no opening larger than ½ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or

9.2. 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/or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or

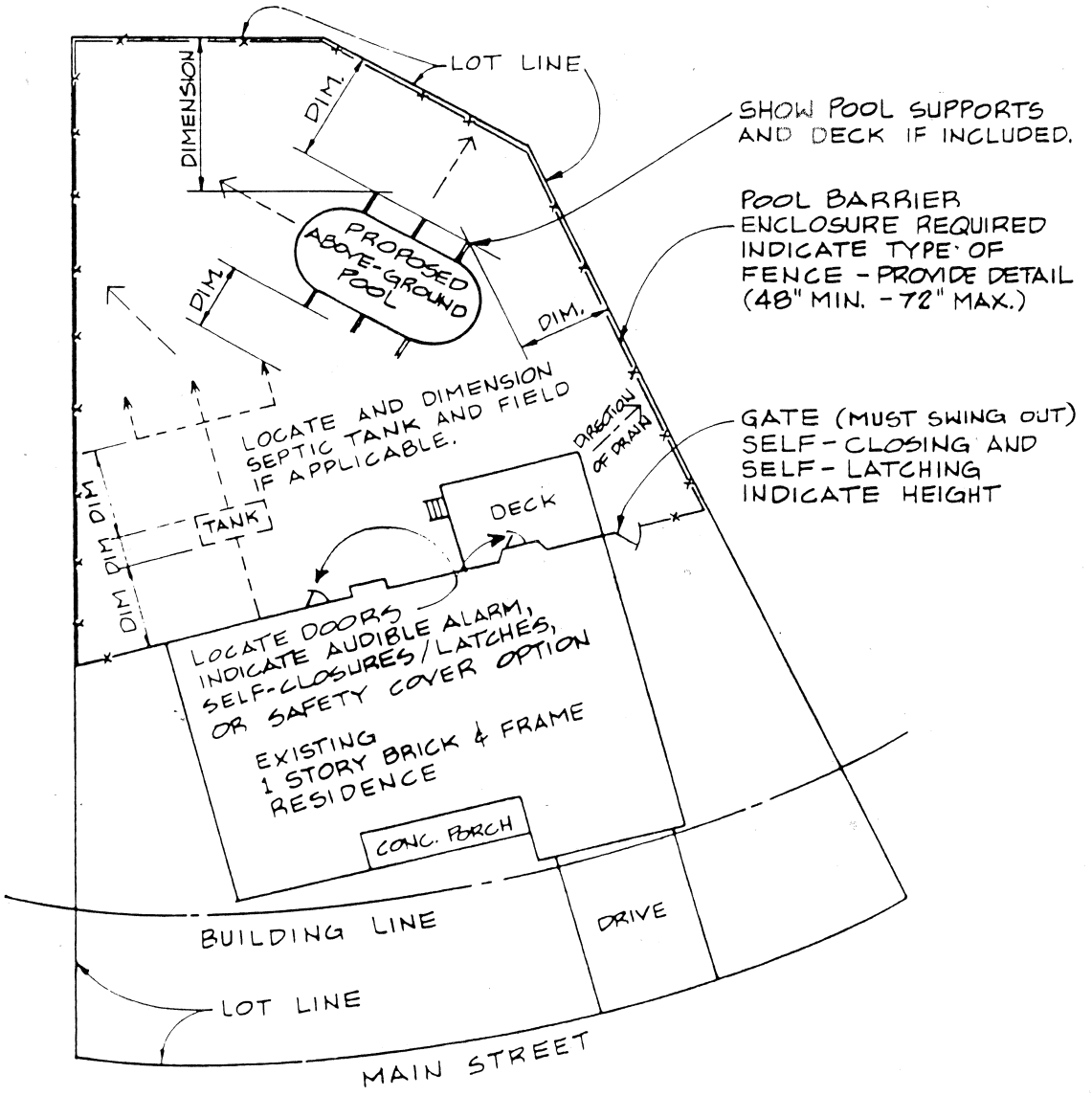
9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable as long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

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 ladder or steps, then the ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9.
11. There shall be a clear zone of at least 4 feet (1219 mm) between the barrier for or on a pool, spa, or hot tub and any permanent structures or pool equipment that can be used to climb the barrier.

OWNER _____

ADDRESS _____

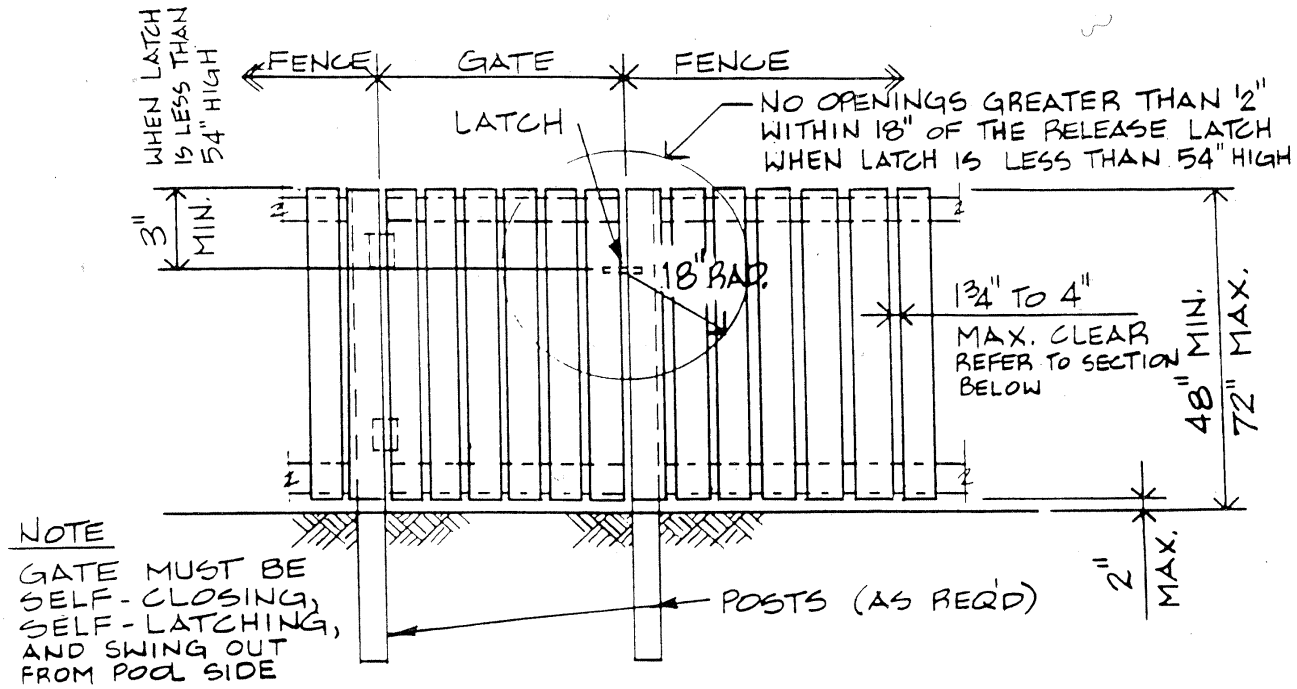
SUBDIVISION _____ LOT NO. _____



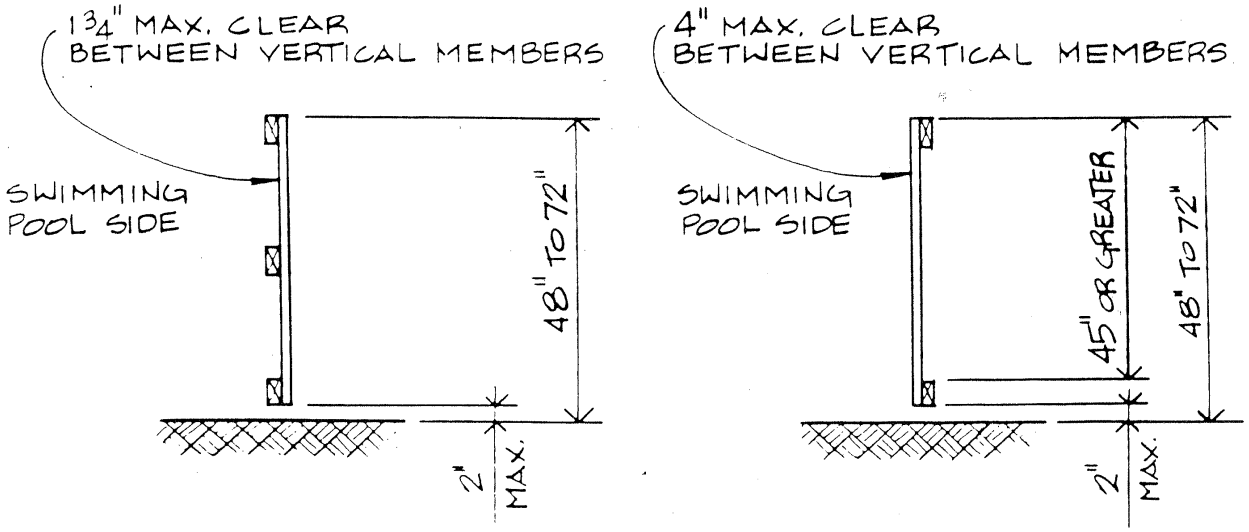
NORTH

TYPICAL PLOT PLAN FOR ABOVE-GROUND POOL

SCALE: 1" = 20'



POOL GATE AND BARRIER ELEVATION



HORIZONTAL MEMBERS SPACED LESS THAN 45"

HORIZONTAL MEMBERS SPACED 45" OR GREATER.

POOL BARRIER SECTIONS

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) with a latch 54" above the threshold 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

   _____ There is an existing single, locking and grounding type outlet protected by a G.F.C.I. located between 6' to 10' from the edge of the pool to serve the pool pump. No extension cords are permitted. There is also one general purpose G.F.C.I. protected receptacle located a minimum of 6' but not more than 20' from the pool edge.

7. 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.