



# The Township of Hamilton

*Jeffrey S. Martin*  
Mayor

## **REQUIREMENTS FOR INGROUND SWIMMING POOLS & ABOVE GROUND POOLS**

### **ENGINEERING**

- 1) Copy of property survey must be approved by Engineering for location of the pool, filter and heater (if applies) before submitting to Construction Office
- 2) Final as-built survey from a Certified NJ Licensed Engineer must be submitted and approved before Certificate of Occupancy will be issued

### **BUILDING**

- 1) Building sub code technical filled out
- 2) Plans submitted to comply with 2021 International Swimming Pool and Spa Code
- 3) Requirements for pool barriers to comply with Section 305 (see attached)

### **INSPECTIONS**

- 1) **Pre-Collar-**For location of the pool and pool structure
- 2) **Backfill-**After concrete is poured **AND** Electric inspection passes for bonding
- 3) **Final-** Includes liner, coping and pool barrier

### **ELECTRIC**

- 1) Electric sub code technical filled out
- 2) NFPA 70/2020 National electrical code being used



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## **CONTINUED**

3) Reference Energy Code (Ashrae 90.1-2019) Article R403.10.1 – R403.10.4

4) Reference Article 680 for Swimming Pools, fountains and similar installations for circulation, bonding, lighting and convenience receptacles

5) Two copies of a diagram required for power, branch circuits, wire sizes, conduit sizes, breaker sizes and bonding locations

**\*\*SEE EXAMPLE ATTACHED\*\***

## **INSPECTIONS**

1) **Trench**-Pipe must be in the ground with the wires through the conduit

2) **Bonding**-Inspection must be completed before concrete is poured and backfill inspections is completed

3) **Bonding Grid**-Inspection must be done before concrete is poured

4) **Final**-All work must be completed

## **PLUMBING**

1) Plumbing sub code technical filled out

2) Comply with 2021 International Swimming Pool and Spa code-Section 311.9

3) Two copies of a diagram required for gas piping and bottom drains



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**CONTINUED**

## **INSPECTIONS**

- 1) **Hydrostatic Testing**-Before backfill inspection
  - 2) **2021 ANSI/APSP/ICC-7**-All required before backfill inspection
  - 3) **Gas Piping**- Before back fill inspection is complete
  - 4) **Final**- All work must be completed
- \*\*IF POOL HAS A FUEL-FIRED HEATER- VAPOR RETARDANT COVER IS REQUIRED FOR FINAL INSPECTION\*\***



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## **ABOVE GROUND POOLS**

### **ENGINEERING**

1) Copy of property survey must be approved by Engineering for location of the pool, filter and heater (if applies) before submitting to Construction Office

### **BUILDING**

- 1) Building sub code technical filled out
- 2) Provide Specifications on the pool
- 3) Requirements for pool barriers to comply with Section 305 (see attached)
- 4) **Final inspection needed once pool is set and barrier is completed**

### **ELECTRIC**

- 1) Electric sub code technical filled out
- 2) NFPA 70/2020 National electrical code being used
- 3) Two copies of a diagram required for power, branch circuits, wire sizes, conduit sizes, breaker sizes and bonding locations  
**\*\*SEE EXAMPLE ATTACHED\*\***
- 4) **Trench inspection needed-Pipe must be in the ground with the wires through the conduit**
- 5) **Final inspection when all work is complete- Inspector will have to check main panel box**

## GENERAL COMPLIANCE

**303.1.2 Time switches.** Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

### Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- or waste-heat recovery pool heating systems.

**303.1.3 Covers.** Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover or other *approved* vapor-retardant means in accordance with Section 104.12.

**Exception:** Where more than 70 percent of the energy for heating, computed over an operating season, is from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

**303.2 Portable spas.** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP 14.

**303.3 Residential pools and permanent residential spas.** The energy consumption of *residential* swimming pools and permanent *residential* spas shall be controlled in accordance with the requirements of APSP 15.

## SECTION 304 FLOOD HAZARD AREAS

**304.1 General.** The provisions of Section 304 shall control the design and construction of pools and spas installed in *flood hazard areas*.

**[BS] 304.2 Determination of impacts based on location.** Pools and spas located in *flood hazard areas* indicated within the *International Building Code* or the *International Residential Code* shall comply with Section 304.2.1 or 304.2.2.

**Exception:** Pools and spas located in *riverine flood hazard areas* that are outside of designated floodways and pools and spas located in *flood hazard areas* where the source of flooding is tides, storm surges or coastal storms.

**[BS] 304.2.1 Pools and spas located in designated floodways.** Where pools and spas are located in designated floodways, documentation shall be submitted to the *code official* that demonstrates that the construction of the pools and spas will not increase the design flood elevation at any point within the jurisdiction.

**[BS] 304.2.2 Pools and spas located where floodways have not been designated.** Where pools and spas are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool or spa and any associated grading and fill-

ing, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

**[BS] 304.3 Pools and spas in coastal high-hazard areas.** Pools and spas installed in coastal high-hazard areas shall be designed and constructed in accordance with ASCE 24.

**[BS] 304.4 Protection of equipment.** Equipment shall be elevated to or above the design flood elevation or be anchored to prevent flotation and protected to prevent water from entering or accumulating within the components during conditions of flooding.

**304.5 GFCI protection.** Electrical equipment installed below the design flood elevation shall be supplied by branch circuits that have ground-fault circuit interrupter protection for personnel.

## SECTION 305 BARRIER REQUIREMENTS

**305.1 General.** The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable *safety cover* complying with ASTM F1346 and swimming pools are equipped with a powered *safety cover* that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 305.2 through 305.7.

**305.1.1 Construction fencing required.** The construction sites for in-ground swimming pools and spas shall be provided with construction fencing to surround the site from the time that any excavation occurs up to the time that the permanent barrier is completed. The fencing shall be not less than 4 feet (1219 mm) in height.

**305.2 Outdoor swimming pools and spas.** Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7.

**305.2.1 Barrier height and clearances.** Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.

4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

**305.2.2 Openings.** Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

**305.2.3 Solid barrier surfaces.** Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

**305.2.4 Mesh fence as a barrier.** Mesh fences, other than chain link fences in accordance with Section 305.2.7, shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall be not greater than 4 inches (102 mm) from grade or decking.
4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices include, but are not limited to, devices that provide the security equal to or greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.
5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground *residential* pools.

**305.2.4.1 Setback for mesh fences.** The inside of a mesh fence shall be not closer than 20 inches (508 mm) to the nearest edge of the water of a pool or spa.

**305.2.5 Closely spaced horizontal members.** 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 pool or spa side of the fence. Spacing between vertical members shall not exceed  $1\frac{3}{4}$  inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed  $1\frac{3}{4}$  inches (44 mm) in width.

**305.2.6 Widely spaced horizontal members.** 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, the interior width of the cutouts shall not exceed  $1\frac{3}{4}$  inches (44 mm).

**305.2.7 Chain link dimensions.** The maximum opening formed by a chain link fence shall be not more than  $1\frac{3}{4}$  inches (44 mm). Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than  $1\frac{3}{4}$  inches (44 mm).

**305.2.8 Diagonal members.** Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not greater than  $1\frac{3}{4}$  inches (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

**305.2.9 Clear zone.** Where equipment, including pool equipment such as pumps, filters and heaters, is on the same lot as a pool or spa and such equipment is located outside of the barrier protecting the pool or spa, such equipment shall be located not less than 36 inches (914 mm) from the outside of the barrier.

**305.3 Doors and gates.** Doors and gates in barriers shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access doors and gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

**305.3.1 Utility or service doors and gates.** Doors and gates not intended for pedestrian use, such as utility or service doors and gates, shall remain locked when not in use.

**305.3.2 Double or multiple doors and gates.** Double doors and gates or multiple doors and gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device.

**305.3.3 Latch release.** For doors and gates in barriers, the door and gate latch release mechanisms shall be in accordance with the following:

1. Where door and gate latch release mechanisms are accessed from the outside of the barrier and are not of the self-locking type, such mechanism shall be located above the finished floor or ground surface in accordance with the following:
  - 1.1. At public pools and spas, not less than 52 inches (1219 mm) and not greater than 54 inches (1372 mm).
  - 1.2. At residential pools and spas, not less than 54 inches (1372 mm).
2. Where door and gate latch release mechanisms are of the self-locking type such as where the lock is operated by means of a key, an electronic opener or the entry of a combination into an integral combination lock, the lock operation control and

the latch release mechanism shall be located above the finished floor or ground surface in accordance with the following:

- 2.1. At public pools and spas, not less than 34 inches and not greater than 48 inches (1219 mm).
- 2.2. At residential pools and spas, at not greater than 54 inches (1372 mm).
3. At private pools, where the only latch release mechanism of a self-latching device for a gate is located on the pool and spa side of the barrier, the release mechanism shall be located at a point that is at least 3 inches (76 mm) below the top of the gate.

#### 305.3.4 Barriers adjacent to latch release mechanisms.

Where a latch release mechanism is located on the inside of a barrier, openings in the door, gate and barrier within 18 inches (457 mm) of the latch shall not be greater than  $\frac{1}{2}$  inch (12.7 mm) in any dimension.

**305.4 Structure wall as a barrier.** Where a wall of a dwelling or structure serves as part of the barrier and where doors, gates or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor, doors and gates shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be *listed* and labeled as a water hazard entrance alarm in accordance with UL 2017.
2. In dwellings not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located at not less than 54 inches (1372 mm) above the finished floor.
3. In dwellings that are required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
4. In structures other than dwellings, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1220 mm) above the finished floor.
5. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F1346 is installed for the pools and spas.
6. An *approved* means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

#### 305.5 Onground residential pool structure as a barrier.

An onground *residential* pool wall structure or a barrier mounted on top of an onground *residential* pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is

not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.

2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102 mm) diameter sphere.
5. Barriers that are mounted on top of onground *residential* pool walls are installed in accordance with the pool manufacturer's instructions.

**305.6 Natural barriers.** In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches (457 mm), a barrier is not required between the natural body of water shoreline and the pool or spa.

**305.7 Natural topography.** Natural topography that prevents direct access to the pool or spa area shall include but not be limited to mountains and natural rock formations. A natural barrier *approved* by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by the requirements of Sections 305.2 through 305.5.

**305.8 Means of egress.** Outdoor public pools provided with barriers shall have means of egress as required by Chapter 10 of the *International Building Code*.

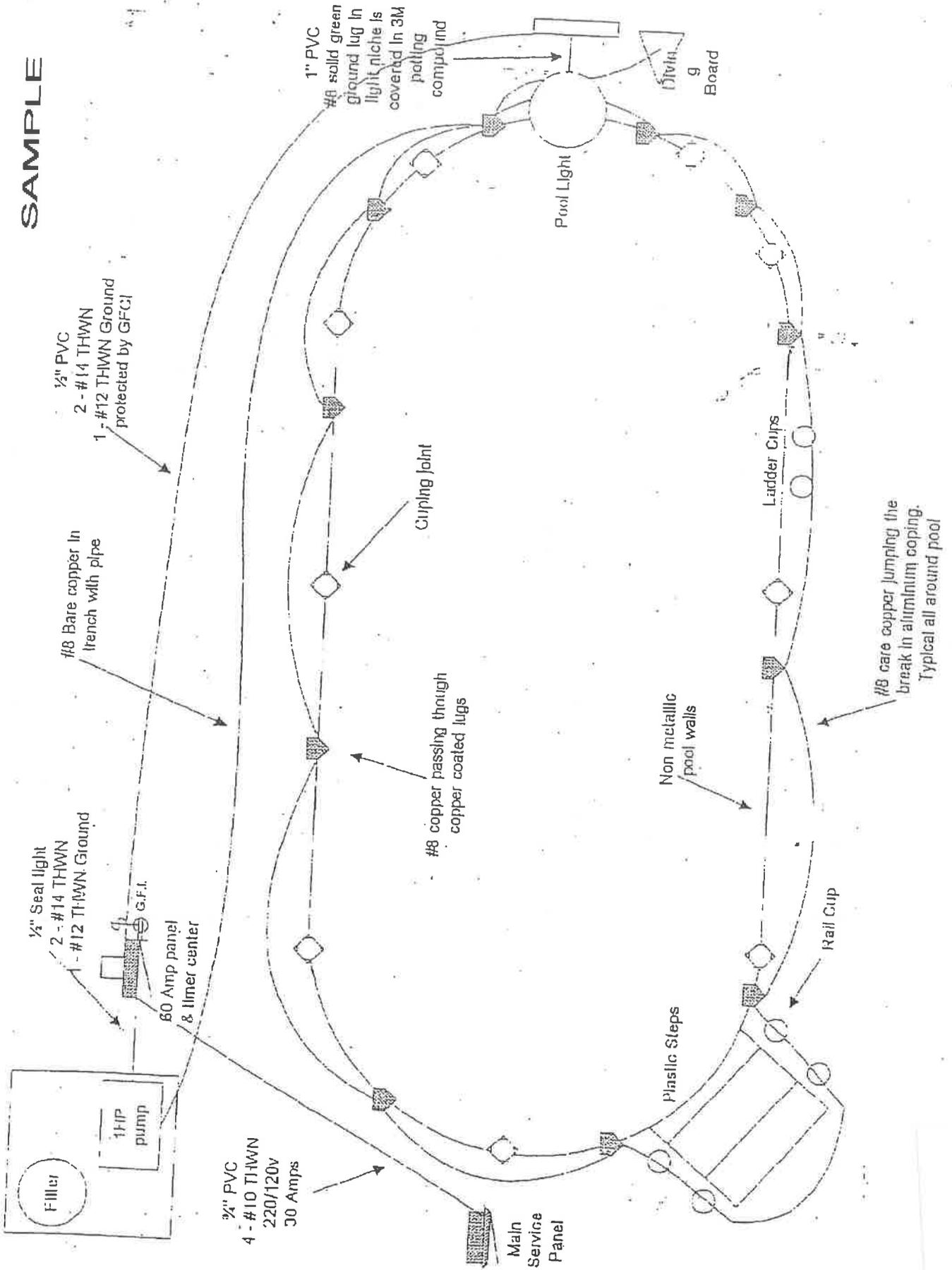
## SECTION 306 DECKS

**306.1 General.** The structural design and installation of decks around pools and spas shall be in accordance with the *International Residential Code* or the *International Building Code*, as applicable in accordance with Section 102.7 and this section.

**306.2 Slip resistant.** Decks, ramps, coping, and similar step surfaces shall be slip resistant and cleanable. Special features in or on decks such as markers, brand insignias, and similar materials shall be slip resistant.

**306.3 Step risers and treads.** Step risers for decks of public pools and spas shall be uniform and have a height not less than  $3\frac{3}{4}$  inches (95 mm) and not greater than  $7\frac{1}{2}$  inches (191 mm). The tread distance from front to back shall be not less than 11 inches (279 mm). Step risers for decks of *residential* pools and spas shall be uniform and shall have a height not exceeding  $7\frac{1}{2}$  inches (191 mm). The tread

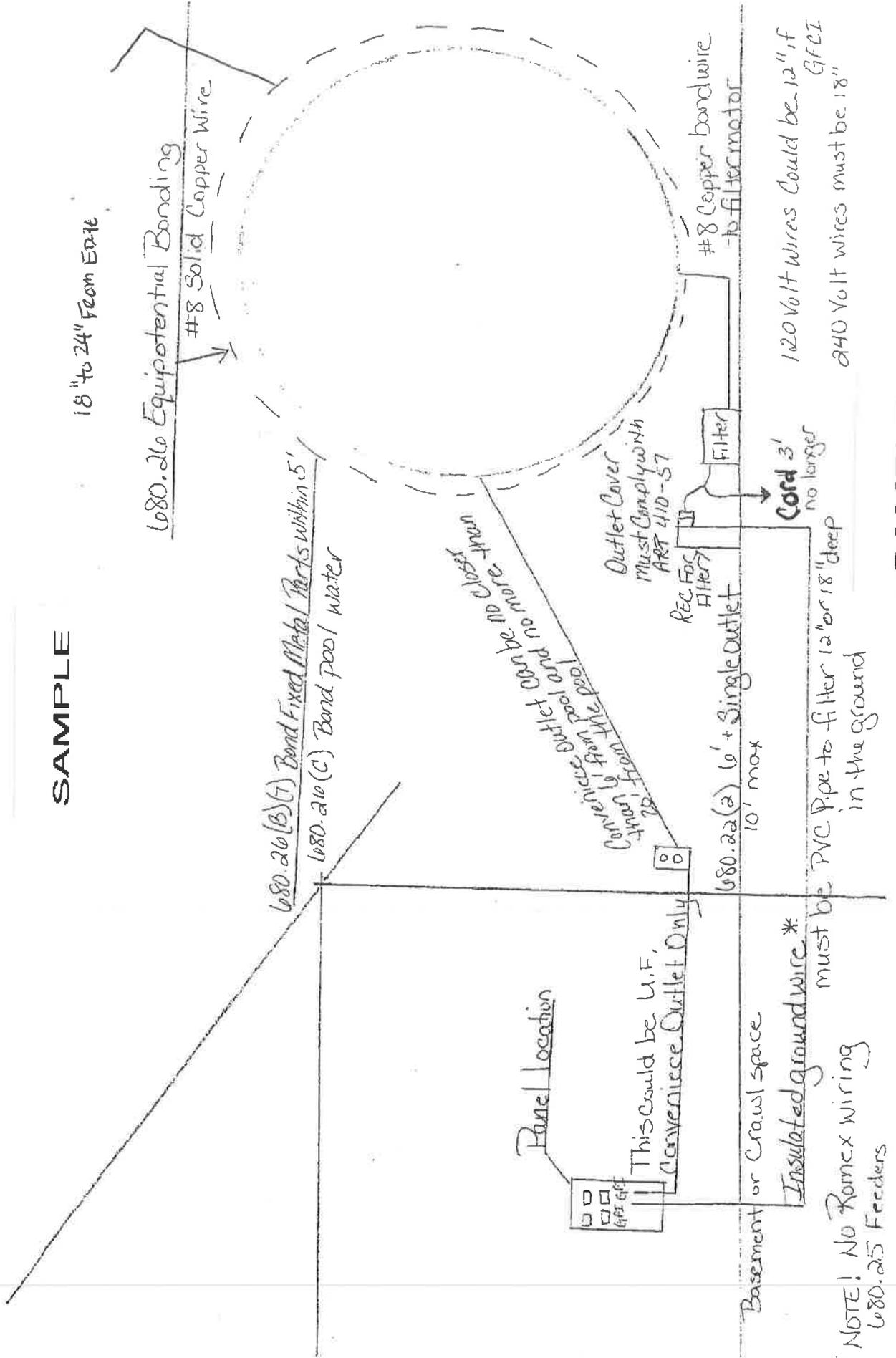
**SAMPLE**



**SAMPLE**

# ABOVE GROUND POOL

SAMPLE



SAMPLE