

Township of Pequannock

Construction Department

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Pool Installation Guide

1. This handout is based on the 2015 New Jersey version of the International Residential Code and the 2014 National Electric Code for single family dwellings. This is only a guide and cannot cover every situation that you may encounter.
2. Permit applications are required for **all** in-ground and aboveground pools more than 24" in depth and all hot tubs and spas, including all temporary "seasonal" swimming pools.
3. Drawings (2) are required for in ground pools. Drawings must be prepared by an architect or engineer licensed in the state of New Jersey and must be signed and sealed.
4. Two copies of a sealed current survey of your property will be required, indicating the location of the pool, all structures, all septic tanks, disposal systems, UST, along with measurements from each of the pool.
5. Two copies of a grading plan will be required if the pool is: not set at the existing grade, is located in the flood hazard area, or if the excavated soil is to be kept onsite.
6. A completed Application for Private Swimming Pool Construction.
7. Required permits:
 - **Building** for the pool, fence and deck (if planned)
 - **Electric** for pump motor, lights (if any) and pool bond
 - **Plumbing** for gas piping to heater (if any)
8. Required Inspections:
 - **Building-** In ground: Concrete lock around pool walls and final.
Above ground: Footing (for deck if planned) and final
 - **Electric-** Rough (before any trenched wires are backfilled or any bond .
wires are covered) and final.
 - **Plumbing-Rough** (for gas piping with pressure test) and final.

Pool Enclosure Requirements

A barrier, such as a fence or wall, must surround private swimming pools. The barrier must meet the following requirements:

1. The top of the barrier shall be at least **48 inches** 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 bottom of the barrier shall be 2 inches 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 diameter sphere.
2. Openings in the barrier shall not allow passage of a **4-inch** 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, 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 in width. Decorative cutouts shall not exceed 1 3/4 inches in width. (figure 1)

Fences with horizontal rails less than 45" apart

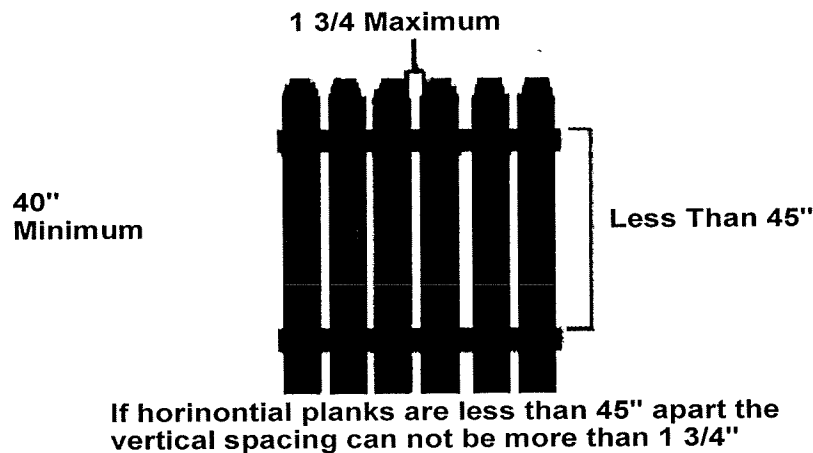


Figure 1

5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Decorative cutouts shall not exceed 1 3/4 inches in width. (Figure 2)

Fences with horizontal rails more than 45" apart

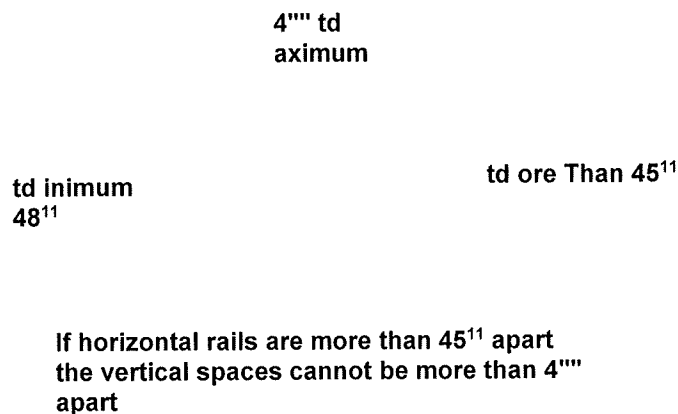
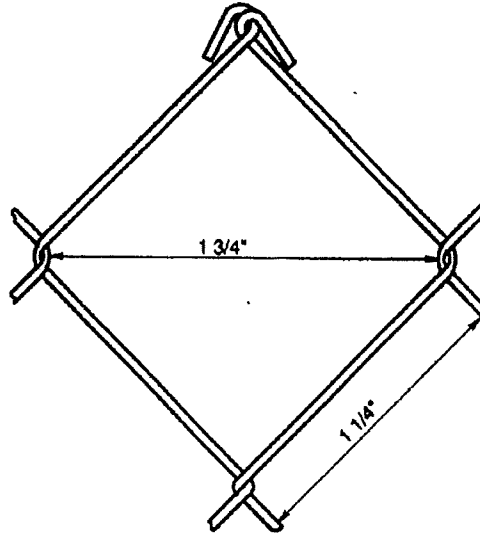


Figure 2

6. Maximum mesh size for chain link fences shall be a 14-inch square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than 1 1/2-inches. (Figure 3)

Chain link Fence Mesh Size Limit

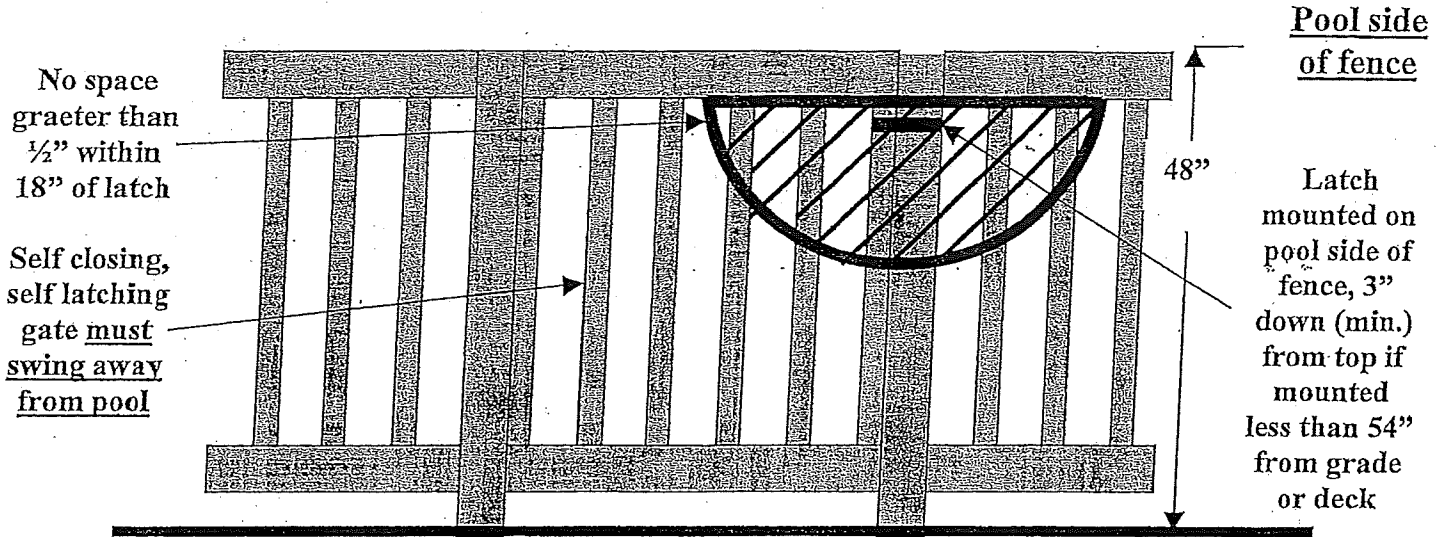


Important: The required mesh size for a pool fence are smaller than the standard chain link mesh

Figure 3

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall be not more than 1 1/2 inches.
8. Access gates shall comply with the requirements of items 1 through 7, 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 from the bottom of the gate: (a) the release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate; and (b) the gate and barrier shall not have an opening greater than 1/2 inch within 18 inches of the release mechanism. (Figure4 and 5)

Latch mounting position if mounted less than 54" high



If latch is mounted less than 54" from grade, it must be mounted on the pool side of the gate, a minimum of 3" down from the top of the gate and have no space greater than 1/2" within 18" of the latch

Figure 4

Requirements for gates leading to pool

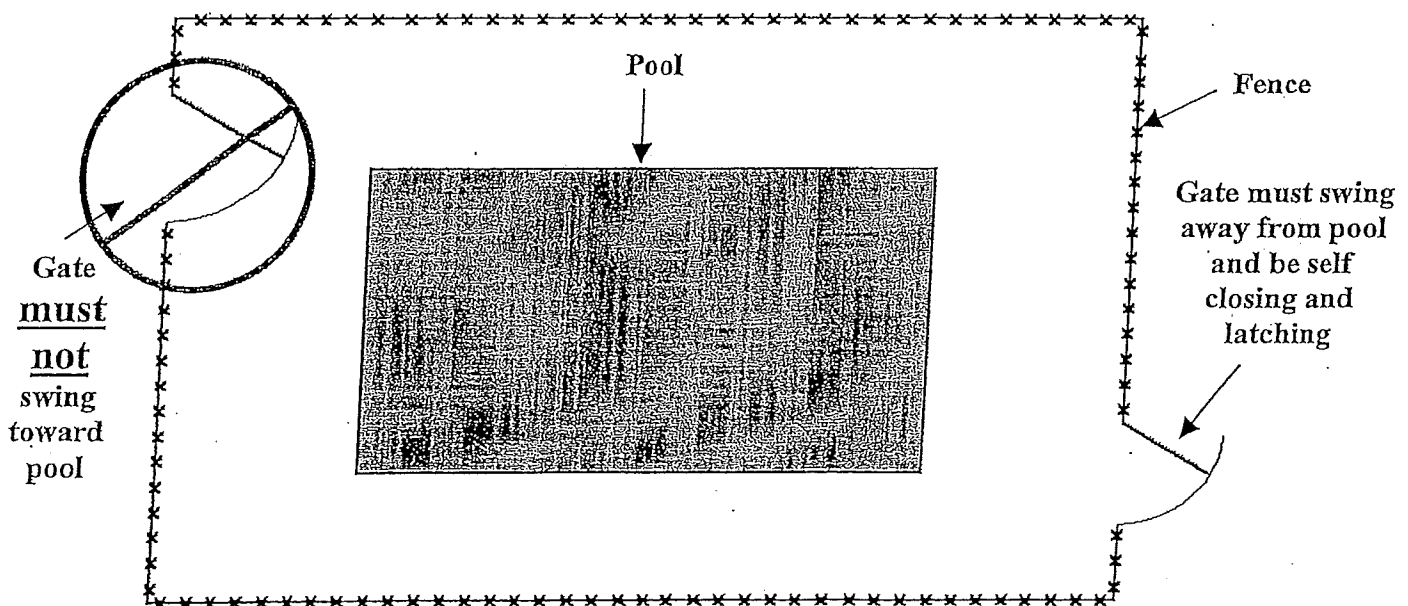


Figure 5

9. 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 8. A removable ladder shall not constitute an acceptable alternative to enclosure requirements. (Figure 7, 8 and 9)

Ladder Enclosure

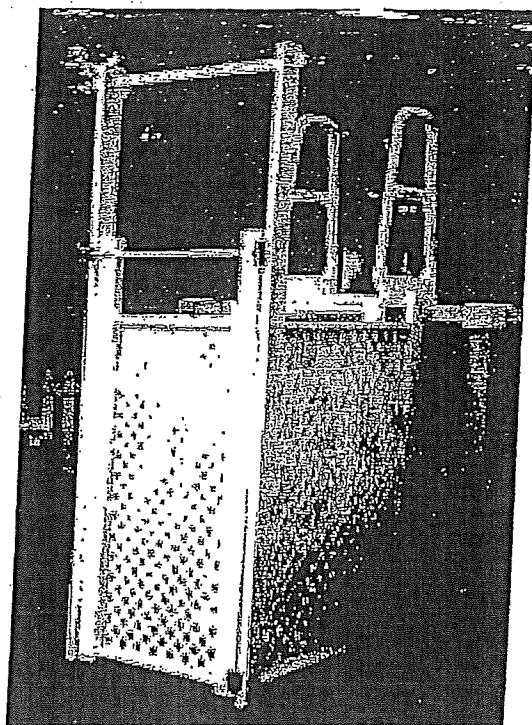


Figure 7

Maximum Space Between Top Mounted Barrier and Pool Wall

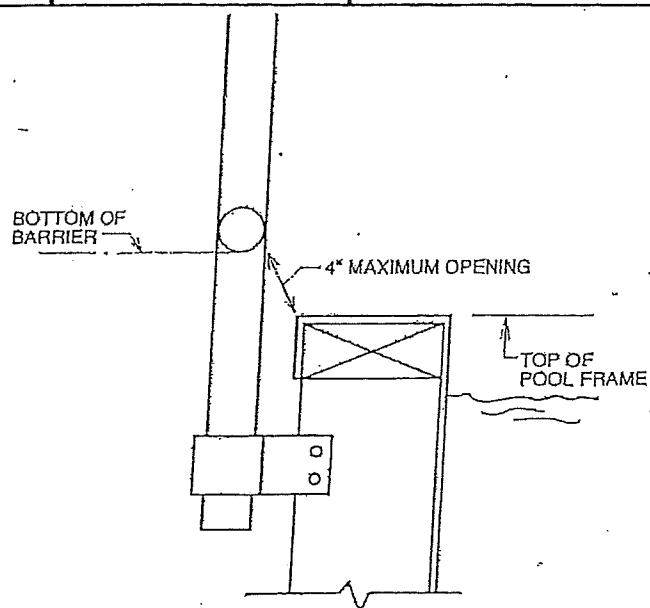


Figure 8

Pool with top mounted barrier and stair gate

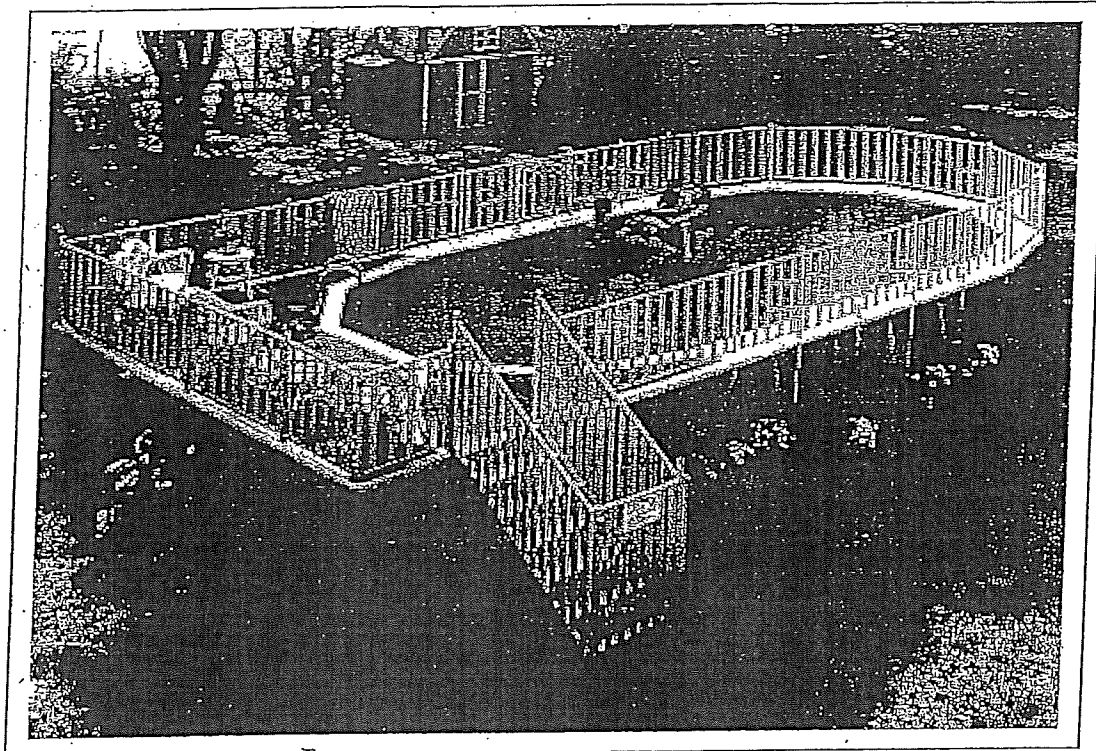


Figure 9

10. Where an above-ground pool on a sloped site that will make a portion of the top of the pool structure to be less than 48" to grade, a minimum of 3-foot level surface around the portion of the pool structure that is less than 48" to grade should be provided. The level surface should be measured away from the pool wall to the excavation edge and should be tapered away from the pool at a minimum of 45-degree angle for a distance of one half the level surface. (Figure 10)

Pool wall acting as barrier on a sloped site

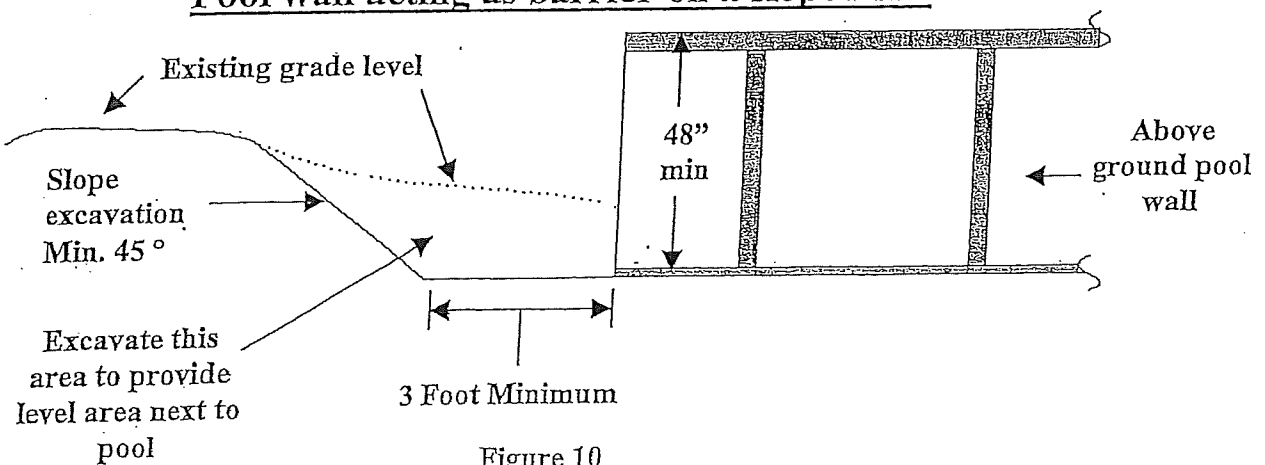


Figure 10

11. For above ground pools, the pool wall may act as the barrier as long as the walls are at least 48" high on the outside of the pool and there is no backfill placed against the pool that would reduce the height of the wall to less than 48".

Decks for Above Ground Pools

If a deck is to be constructed around an above ground pool and there is not a other barrier that meets the requirements of items 1 thorough 11 above, the following must be meet:

1. The pool wall must be 48" above grade.
2. Stairs to deck are to have barriers on both sides.
3. There is a gate at the bottom of the stairs that meets the requirements of a barrier above. (Figure 11)

Barriers around Stairs

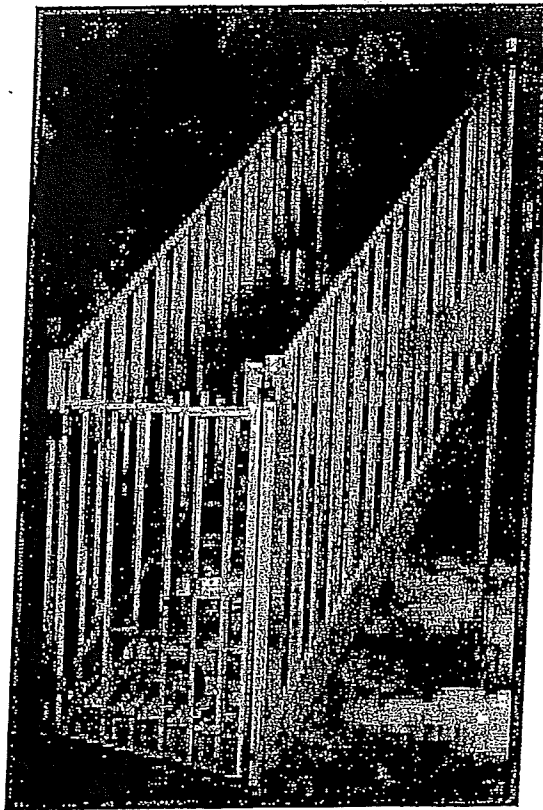


Figure 11

The following applies to all decks around pools weather they are being used as a barrier or not:

4. Footings are required for decks, minimum 36 deep.
5. Stairs must be 36" wide, steps are to have a maximum rise of 8 1/4" and a minimum run of 9". (Figure12)

Stair Dimensions Requirements

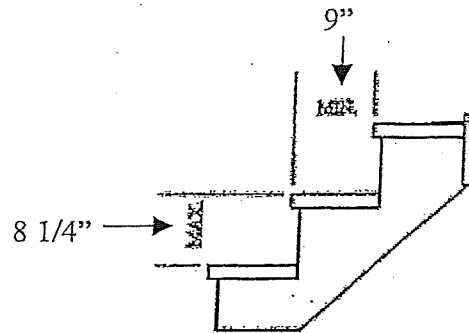
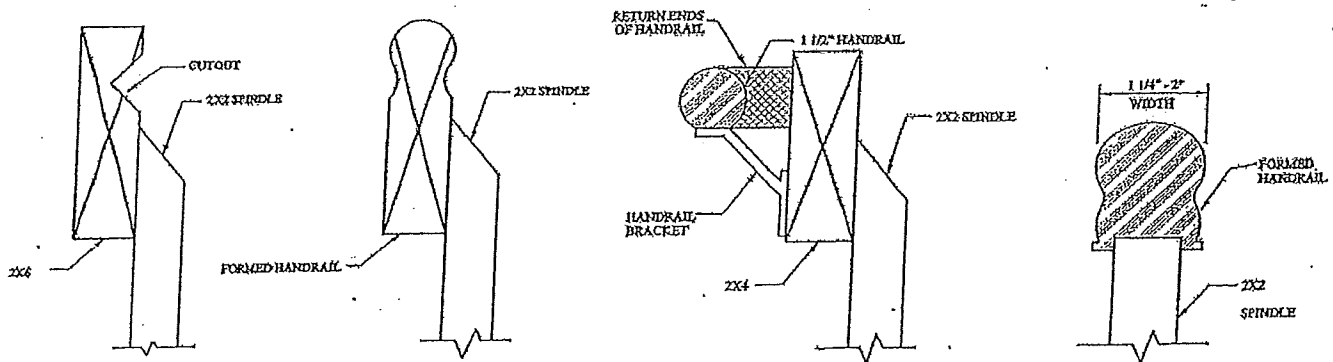


Figure 12

7. Stairs must be equal in rise and tread depth to within $3/16$ ".
8. A graspable handrail must be provided on all stairs. The handrail must be mounted 34" to 38" above the stair nosing. (Figure 13)

Example of Graspable Handrails



Handrails on stairs must be easy graspable. Note: A 2x4 or 2x6 mounted on top of the guard is not considered graspable

Figure 13

9. A railing is required around any deck more than 30" above grade. The railing must be 36" high, have balusters no more than 4" apart. (Figure 14)

Deck Railing Requirements

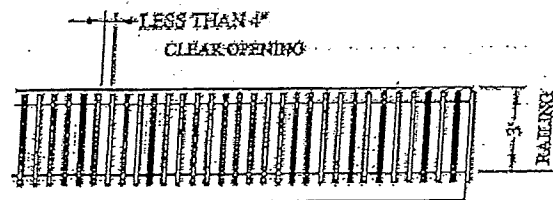


Figure 14

A permit is required for decks around pools this may be included on the same permit as your pool..A. drawing showing the following will be needed:

- Footing size and depth.
- Post size and Girder size.
- Floor joist size and span.
- Decking material.
- Railings and gates, including gate swing direction.

Required inspections for decks around pools:

- **Footing-** *(after holes are dug but before concrete is placed)*
- **Final-** after all work has been completed

Enerev Code Reaquirements

1. A Time Clock (timer) shall be installed so that pump can be set to run at off-peak electric demand period and can be set for minimum time necessary to maintain the water in a clear and sanitary condition. (CABO MEC 604.1.2.3)
2. Pools equipped with a heater shall be equipped with a pool cover to minimize heat loss during time of non-use. (CABO MEC 604.1.2.3)

Electric Code Reaquirements*

1. **Motors** - Pool-associated motors (for above ground and inground pools) shall be connected to an equipment grounding conductor sized in accordance with Table 250-95 but not smaller than No. 12. It shall be an insulated copper conductor and shall be installed with the circuit conductors in rigid metal conduit, intermediate metal conduit or rigid nonmetal conduit. Receptacles - that provide power for water pump motor for a permanently installed pool shall be permitted between 5' to 10' from the inside walls of the pool and where so located shall be single ground type and shall be protected by a ground-fault circuit interrupter. MEC 680-6.

Pool Location Restrictions

1. The following location restrictions can be found in the Code of the Township of Pequannock, Chapters 166 Swimming Pools and 189 Zoning.
2. No pool shall be constructed or installed:
 - a. Nearer to the street line on which the premises front than a line ten (10) feet to the rear of the building line established by ordinance. (back yard 10 feet from the house)
 - b. Nearer than ten (10) feet to the rear property line.
 - c. Nearer than ten (10) feet to any side property line.
 - d. On a property served by an individual sewage disposal system without first obtaining approval from the Health Officer, or his designee. Said pool shall not be constructed in a manner that will impair the proper operation or structural integrity of either the disposal system or pool. In no instance shall any pool be constructed over a disposal system component nor shall any above ground pool be closer than five feet or any pool closer than 25 feet if constructed below the depth of the system.
(The above distances shall be measured from the inside wall of the pool.)
3. No private swimming, portable, or wading pool shall be constructed or installed on any lot which is not part of a residential plat containing a residential building.
4. All pool equipment shall be located in the rear or side yard and shall be no closer than ten (10) feet to any property line.