

Chapter 10

SWIMMING POOLS

4-10-1: COMPLIANCE REQUIRED:

It shall be unlawful to construct, maintain, install or enlarge any swimming pool in the City except in compliance with the provisions of this Chapter. (M.C. 1962, sec. 27.1001)

4-10-2: PRIVATE POOL:

The term "swimming pool" is hereby defined as a receptacle for water, or an artificial pool of water having a depth at any point of more than two feet (2'), intended for the purpose of immersion or partial immersion intended for the purpose of human beings, and including all appurtenant equipment. (M.C. 1962, sec. 27.1002)

4-10-3: LOCATION:

No portion of a swimming pool outside a building shall be located at a distance less than eight feet (8') from any side or rear property line or building line. Pumps, filters and pool water disinfection equipment installations shall be located at a distance not less than eight feet (8') from any side property line. (M.C. 1962, sec. 27.1003)

4-10-4: PERMIT REQUIRED:

It shall be unlawful to proceed with the construction, installation, enlargement or alteration of any private residential swimming pool and appurtenances within the City unless permits therefor shall have first been obtained from the Building Inspector. (M.C. 1962, sec. 27.1004)

4-10-5: DRAWINGS, PLANS AND PERMITS:

- (A) All drawings and plans for the construction, installation, enlargement or alteration of any swimming pool and appurtenances shall first be presented to the Building Inspector for examination and approval as to proper location and construction.
- (B) All plans and drawings shall be drawn to scale of not less than one-eighth inch ($\frac{1}{8}$ ") to one foot (1') on paper or cloth, in ink, or by some process that will not fade or obliterate. All distances and dimensions shall be accurately figured and drawings made explicit and complete, showing the lot line, and including information pertaining to the pool, walk, and fence construction, water supply system, drainage and water disposal systems, and all appurtenances pertaining to the swimming pool. Detail plans and vertical elevations shall also be provided in accordance with the Building Code.
- (C) All private residential swimming pools, appurtenances, water supply and drainage systems shall be constructed in conformity with the approved plans. (M.C. 1962, sec. 27.1005)

4-10-6: RECIRCULATION POOLS:

All swimming pools shall be of the recirculation type in which circulation of the water is maintained through the pool by pumps; the water drawn from the pool being clarified and disinfected before being returned to the pool. (M.C. 1962, sec. 27.1006)

4-10-7: MATERIALS:

Swimming pool walls and floors shall be constructed of any impervious material which will provide a tight tank with white or light colored finish and easily cleaned surfaces. The floor or bottom surface of the pool shall have a nonslip finish as smooth as possible. The side and end walls of a pool shall present a smooth finish and shall be vertical to a depth of at least six feet (6') or shall have a slope or curvature meeting one of the following conditions:

- (A) The pool wall may be vertical for thirty inches (30") from the water level, below which the wall may be curved to the bottom with a radius at any point equal to the difference between the depth at that point, and thirty inches (30").
- (B) To a depth of six feet (6'), except as in subsection (A) of this Section, the wall's slope shall not be less than one foot (1') horizontal in six feet (6') vertical. (M.C. 1962, sec. 27.1007)

4-10-8: STRUCTURAL DESIGN:

Swimming pools shall be designed to withstand the water pressure from within and to resist the pressure of the earth when the pool is empty, to a pressure of two thousand two hundred (2,200) pounds per square foot. The slope of the bottom of any part of a pool in which the water is less than five feet (5') in depth shall not be more than one foot (1') in each ten feet (10'). The maximum slope where water is five feet (5') or more in depth shall not exceed one foot (1') in two feet (2'). (M.C. 1962, sec. 27.1008)

4-10-9: WALK AREAS:

Unobstructed walk areas not less than thirty six inches (36") wide shall be provided to extend entirely around the pool. The walk area shall be constructed of impervious material, and the surfaces shall be of such as to be smooth and easily cleaned and of nonslip construction. The slope of the walks shall have a pitch of at least one-fourth inch ($\frac{1}{4}$ ") to the foot (1'), designed so as to prevent back drainage from entering the pool. (M.C. 1962, sec. 27.1009)

4-10-10: FENCES:

All outdoor swimming pools shall be completely enclosed by a fence. All fence openings or points of entry into pool area enclosure shall be equipped with gates. The fence and gates shall be five feet (5') in height above the grade level and shall be constructed of a minimum number of gauge woven wire mesh corrosion-resistant material, or similar material. All gates shall be equipped with self-closing and self-latching devices placed at the top of the gate. Fence posts shall be decay or corrosion-resistant and shall be set in concrete bases. (M.C. 1962, sec. 27.1010)

4-10-11: STEPS OR LADDERS:

Two (2) or more means of egress in the form of steps or ladders shall be provided for all swimming pools. At least one such means of egress shall be located on a side of the pool at both the deep end and shallow end of the pool. Treads of steps and ladders shall be constructed of nonslip material and at least three inches (3") wide for their full length. Steps and ladders shall have a handrail on both sides. (M.C. 1962, sec. 27.1011)

4-10-12: SKIMMERS:

In every swimming pool, at least one skimming device shall be provided for each eight hundred (800) square feet of surface area or fraction thereof. Skimmers shall be located at least thirty feet (30') apart. Handholds shall be provided and consist of a bull-nosed coping not over two and one-half inches (2½") thick for the two inches (2") or an equivalent approved handhold. The handhold must be no more than nine inches (9") above the normal water line. Skimming devices shall be built into the pool wall, shall adequately remove floated oils and waste and shall meet the following general specifications:

- (A) Each skimmer shall be designed for a flow-through rate of at least thirty (30) gallons per minute and a total capacity of all skimmers on any pool shall be at least fifty percent (50%) of the required flow of the recirculation system.
- (B) They shall be automatically adjustable to variations in water level over a range of at least three inches (3").
- (C) An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.
- (D) The skimmer shall be provided with a device to prevent airlock in the suction line. If an equalizer pipe is used, it shall provide an adequate amount of make-up water for pump suction should the water of the pool drop below the air level. This pipe shall be at least two inches (2") in diameter and shall be located at least one foot (1') below the lowest overflow level of the skimmer.
- (E) An equalizer line shall be provided with a valve that will remain tightly closed under normal operating conditions, but will automatically open at a differential of not more than four inches (4") between the pool level and the level of the overflow tank.
- (F) The overflow weir shall be of sufficient length to maintain a rate of flow of at least twenty (20) gallons per minute for lineal foot of weir lip. (M.C. 1962, sec. 27.1012)

4-10-13: WATER SUPPLY:

No source of water other than that secured from the City water works distribution system shall be used in swimming pools. (M.C. 1962, sec. 27.1013)

4-10-14: INLETS:

- (A) Swimming pool water recirculation system inlet shall be located so as to produce so far as possible uniform circulation of water throughout the pool without the existence of dead spots and to carry pool bottom deposits to the outlets, and shall discharge at a minimum depth of ten inches (10") below the pool overflow level. Minimum of one recirculation system inlet shall be provided for every six hundred fifteen (615) square feet of surface area of the pool.
- (B) Pools shall be equipped with suitable facilities for adding make-up water as needed. There shall be no physical connection between the water supply line and the pool system. If the make-up water is added directly to the pool, the outlet shall be at least six inches (6") above the upper rim of the pool. If the make-up water line discharges to a surge or balancing tank, the point of discharge shall be at least six inches (6") above the rim of the tank. If a hose connection from a sill

cock or other plumbing fixture is to be used for supplying make-up water, then an approved vacuum breaker shall be installed between the sill cock or control valve at the fixture and the hose connection. The vacuum breaker shall be installed at a height not less than seven feet six inches (7'6") above the floor, platform or ground upon which a person would stand when operating the sill cock or control valve. Maximum size of the fill pipe shall be two inches (2").

- (C) The systems supplying recirculated water and make-up water to the pool shall be constructed in conformance with the ordinances relating to plumbing. (M.C. 1962, sec. 27.1014)

4-10-15: OUTLETS:

- (A) In swimming pools, thirty feet (30') in width or less, water circulation system outlets shall be located so as to provide at least one outlet at the deepest point in the pool. If the pool width is more than thirty feet (30'), multiple outlets shall be provided and spaced not more than thirty feet (30') apart, nor closer than four feet (4') to any wall. All pool drain outlets shall be equipped with gratings having an area of openings not less than four (4) times the cross-sectional area of the outlet pipe. The gratings shall be of such design so they cannot be readily removable by bathers and will not injure bathers' fingers. One outlet shall be provided for each eight hundred (800) square feet of surface area.
- (B) Pools shall be equipped with facilities for completely emptying the pool and the discharge of the pool water to the sewer shall be at a rate not exceeding two hundred (200) gallons per minute. No direct connection shall be made to the sewer.
- (C) Water drained from the pool shall not be discharged to the sewer system during periods of rain or storms. At no time shall the rate of drain water discharge exceed a flow of two hundred (200) gallons per minute. (M.C. 1962, sec. 27.1015)

4-10-16: RECIRCULATION SYSTEM AND APPURTENANCES:

- (A) The swimming pools' recirculation systems shall consist of plumbing equipment, hair and lint catcher, filters, together with the necessary pipe connections to the pool inlets and outlets, facilities and pipe connections necessary for backwashing filters, and facilities and equipment for disinfecting the pool water.
- (B) Every swimming pool shall have a recirculating system with an hourly capacity equal to the pool volume divided by eight (8).
- (C) The recirculation system pump shall have sufficient capacity to discharge the volume of water required for an eight (8) hour turnover of the pool against the maximum head in the recirculating system.
- (D) The pump used for backwashing filters shall have sufficient capacity to provide a filter backwash rate of at least twelve (12) gallons per minute per square foot of filter area.
- (E) A hair and lint catcher or strainer shall be installed on the suction side of the circulation pump to prevent hair, lint and other extraneous matter from reaching the pump and filters. Hair and lint catchers shall be so designed that they can be easily dismantled for the cleaning and inspection and shall be so located as to be easily accessible for cleaning. The design features shall be as follows: water passed through the strainer from the outside; the strainer is made of noncorrosive material; the width or diameter of strainer openings shall be not more than one-eighth inch ($\frac{1}{8}$ ");

the area of the strainer openings shall be at least five (5) times the cross-sectional area of the inlet pipe to the strainer.

- (F) Recirculating systems shall contain rapid pressure filters. Sufficient filter area shall be provided to filter the entire contents of the pool in eighteen (18) hours at the rate of not more than three (3) gallons per square foot of filter area per minute. The filter backwashing facilities shall be sufficient to backwash at a rate of twelve (12) gallons per minute per square foot of filter area. All backwash water and effluents shall be discharged to the sewer through an indirect connection. Pressure filters shall be equipped with readily accessible air relief valves, loss of head or pressure gauges on the inlet and outlet pipes, and an access head or hold large enough to permit inspection, maintenance and repair work. Sight glasses that can be easily removed for cleaning shall be provided in the effluent line from the filter units.
- (G) Equipment shall be provided for the disinfection of all pool water. Any disinfection method using materials other than chlorine compounds shall be subject to the approval of the Building Inspector. Disinfection equipment installed for the use of chlorine compounds shall have sufficient capacity to maintain a minimum free chlorine residual of five-tenths (0.5) parts per million. The disinfectant shall be introduced into the recirculation system ahead of the filters.
- (H) Gaseous chlorination systems shall not be made use of as a disinfection method for pool water. (M.C. 1962, sec. 27.1016)

4-10-17: ELECTRICAL REQUIREMENTS:

- (A) All electrical installations provided for, installed, and used in conjunction with private residential swimming pools, shall be in conformance with the ordinances regulating electrical installations.
- (B) No current carrying electrical conductors shall cross private residential swimming pools, either overhead or underground or within fifteen feet (15') of such pools.
- (C) All metal fences, enclosures or railings near or adjacent to swimming pools, which might become electrically alive as a result of contact with broken overhead conductors from any other cause, shall be effectively grounded. (M.C. 1962, sec. 27.1017)

4-10-18: SAFETY PRECAUTIONS:

Every swimming pool shall be equipped with one or more throwing ring buoys not more than fifteen inches (15") in diameter and having sixty feet (60') of three-sixteenth inch ($\frac{3}{16}$ ") manila line attached, and one or more light but strong poles with blunted ends and not less than twelve feet (12') in length, for making reach assists or rescues. (M.C. 1962, sec. 27.1018)

4-10-19: INSPECTION:

The Building Inspector periodically shall inspect all swimming pools to determine whether or not the provisions of the ordinances regarding health, sanitation and safety applicable thereto are being complied with. (M.C. 1962, sec. 27.1019)