ORDINANCE NO. 207.

AN ORDINANCE for the regulation of plumbing work; for the appointment of a plumbing inspector and for the licensing of plumbers in the City of Alexandria, Virginia.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF ALEXANDRIA, VIRGINIA:

PART I. INSPECTOR

Appointment. A Plumbing Inspector shall be appointed by the City Manager of Alexandria, and his compensation shall be fixed from time to time by the Council.

Duties. It shall be the duty of the Plumbing Inspector, to inspect all plumbing in course of construction, alteration or repair, to make prescribed tests, and generally see that the Plumbing Regulations of Alexandria City are duly carried out and observed.

He shall keep suitable records of permits, inspections, tests, complaints and all matters coming under his jurisdiction as provided in the said Plumbing Regulations, and shall make reports as directed.

Authority. He shall have full authority, to do any and all things necessary to carry into effect all provisions of the said Plumbing Regulations, and may condemn plumbing work not executed in accordance therewith, or plumbing fixtures, fittings, appliances and materials not complying with the requirements thereof.

He shall have the right of entry to any premises during reasonable hours to inspect plumbing when in course of construction, alteration or repair; or to inspect plumbing in place which may be complained of by any interested citizen in writing.

He or any officer of the law shall stop any work of excavation for plumbing purposes or any plumbing work under way for which no permit has been issued or which is not proceeding in accordance with the terms of a permit issued therefor.

PART 1A EXAMINATION—LICENSE—PENALTY

Section 1.—After the approval of this ordinance it shall be unlawful for any person, firm, or corporation to do any plumbing work, or to engage in the work of plumbing or gas fitting in Alexandria City unless he is or they are licensed as a master plumber as provided hereafter; or is employed and paid by a master plumber so licensed and works according to direction, and under the personal supervision of the licensed master plumber.

Section 2. After the approval of this ordinance, it shall be unlawful for any owner, lessee, or agent, or any person having any authority or duty in connection with any building or premises, to employ any person, firm or corporation to do any plumbing or gas fitting work in any such building or premises unless such persons, firm or corporation is licensed as master plumber.

Section 3. Licenses as master plumbers shall be granted by the Plumbing Board after written examinations to determine the fitness of such applicants for such license.

Section 4. The Plumbing Board shall consist of the City Manager, City Engineer, Building Inspector, the Health Officer, and the Plumbing Inspector, by virtue of their offices and two citizens who shall be appointed by the Council. One citizen shall be a master plumber and one a representative of the public, but who shall have a comprehensive knowledge of the theory and practice of plumbing. The term of the citizen members shall be two years, or until a successor is appointed. The Board shall select its own chairman. Four members present at a meeting shall be a quorum. Meetings shall be held monthly or at the call of the Chairman. The Plumbing Board members shall serve without pay, but properly authorized expenses of the Board shall be paid.

Section 5. Applicants for license shall be 21 years of age, and shall be examined as to their knowledge of the practice of the trade of plumbing, their knowledge of the requirements of regulations governing the installation of plumbing in Alexandria City, their ability to lay out and plan plumbing work, their knowledge of physics and mechanics in so far as they apply to plumbing design and construction, and they shall generally demonstrate to the Board their fitness to properly and intelligently carry on the business of a master or employing or directing plumber in Alexandria City.

Section 6. In case of failure of an applicant, he shall be eligible for re-examination one month after such failure, but if he fails at such re-examination, then he will be ineligible for examination until a further lapse of six months.

Section 7. The fee for first examination shall be $5.00 to accompany the application, but no fee shall be required for subsequent re-examinations.

Section 8. The license period shall be the City fiscal year. The first license shall date from the first day of the month during which an applicant for license shall satisfactorily pass the prescribed examination and shall end, December 31, following. The fee for first license shall be six ($6.00) dollars for any part of the first license period and shall be paid at the time of issuance. Renewals shall be for the full City fiscal year, and the fee therefor shall be five ($5.00) dollars. Application for renewal shall be accompanied by the license fee, and shall be made in person before expiration of prior license. Any license allowed to lapse shall not be renewed, but a new license shall be applied for and obtained only after passing an examination as above.

Section 9. On receiving a license ,and before engaging in business, every master plumber shall give bond with an approved surety company in the sum of $1,000.00 payable to the City of Alexandria conditioned upon the faithful performance of and compliance

with all of the provisions of this ordinance. The bond shall be approved by the City Attorney and filed with the City Auditor.

In lieu of individual bonds for each master plumber, a joint bond from any association of master plumbers, bonding each and every member as above may be accepted at the discretion of the Plumbing Board, not less in aggregate amount than $10,000.00.

Section 10. Every licensed master plumber, during his or their licensed period shall have a shop or office located in Alexandria City, shall register the address thereof in the City Health Department, and shall display a sign bearing the name of the licensee and the words "Licensed Plumber" so located and of such form as to be plainly visible and readable from the street, according to the provisions of zoning ordinance.

In case of removal of shop or office from registered location, the licensee shall re-register as of the new location within 5 days of such removal.

It shall be unlawful for any person, firm or corporation to display a sign stating or implying that he or they are carrying on the business of plumbing work, or to advertise by means of business cards, stationery or any publication, claim orally to a prospective customer, or otherwise indicate that they are in the business of plumbing or are offering to do plumbing, unless they are licensed as Master Plumbers as provided.

Section 11. A firm or corporation may receive a license as master plumber provided a bona fide member of the firm or the owner of 20% of the stock of the corporation is licensed as above provided; but all of the plumbing work done by the firm or corporation must be executed by or under the immediate personal supervision of the licensed member.

Section 12. A Master Plumber's license shall not be loaned or extended to cover plumbing work done or contracted for by any person other than the licensee.

Any license so prostituted shall be subject to suspension or revocation as provided hereafter.

No licensee shall work as a journeyman for another licensee and carry on a business of plumbing in his own name.

Section 13. It shall be unlawful for any owner, agent or tenant of any building, lot or premises to knowingly employ any person, firm or corporation to do any plumbing work other than minor repairs, unless the said person, firm or corporation so employed is licensed as for licensed master plumber.

Section 14. The Plumbing Board shall have authority to suspend temporarily any master plumber's license for failure to correct faulty work, doing plumbing work without permit or for other good and sufficient cause; or may revoke or annul any license or permit issued for repeated failure to comply with instructions of the Inspector of Plumbing, repeatedly undertaking plumbing work without permit, or other sufficient reasons, provided that no such license shall be revoked until after a public hearing by the Board (at which the licensee may be represented by counsel) and by a two-thirds vote of the Board.

Section 15. The Plumbing Board, subject to the approval of the Council shall have authority to make, modify and enforce all necessary regulations for the conduct of the business of plumbing and gas fitting in Alexandria City, and to prescribe the quality of all materials and workmanship used in the construction, extension, alteration or repair of plumbing or gas fitting, and the manner of installation thereof.

Section 16. It shall be unlawful for any master plumber to do any plumbing or gas fitting except minor repair work not involving the installation, removal or nenewal of pipe or fixtures until he shall have applied for and received a permit from the Inspector of Plumbing.

The fees for permits shall be as follows:

Plumbing in new buildings (plus $0.50 for every plumbing fixture or floor drain). (This fee applies also to putting complete new plumbing in existing unplumbed buildings.)	$5.00
Plumbing in additions, or remodeling or changes in existing plumbing systems (plus $0.50 for every plumbing fixture or floor drain)	2.00
Adding plumbing fixtures to an existing system without changes thereto (plus $0.50 for every plumbing fixture or floor drain)	1.00
Setting and connecting gas ranges, gas water heaters or gas heating appliances	.50
Additional inspections made necessary by undue delays in work, the use of improper materials, failure to be ready for inspection when ordered, or failure to have system tight, each	1.00

Section 17. Before permits will be issued for any plumbing work involving a connection to a public sewer, a complete plumbing system in a new or existing building, the addition of fixtures to an existing system, or remodeling or replacements involving 3 or more fixtures, the plumber shall file detailed plans of the work he proposes to do, and the permit shall not issue until the plan has been approved by the Inspector of Plumbing.

Section 18. Any person violating any of the provisions of this ordinance, or any of the regulations authorized herein, shall be subject to prosecution in the Civil and Police Court of Alexandria City, and a fine of not more than $100.00 or confinement in the City jail for not more than ninety days or both.

PART II. PLUMBING REQUIRED

All structures for human occupancy in Alexandria City, located on ground abutting a street, alley or space in which there is a public sewer, shall be provided with a house sewer, house drain and plumbing fixtures as required in this section and these regulations.

Each single family dwelling shall be provideded with at least one water closet, one bath tub or shower bath, and a sink or other suitable fixtures for domesteic service.

Each multiple family dwelling shall be provided with at least one water closet, one bath-tub or shower bath, and a sink or other suitable fixture for domestic service for each portion of the structure arranged for or rented for separate family occupation.

Each space rented as a store room or separate commercial entity shall have a water closet and a sink.

Churches, clubs, industrial establishments and places of public assembly shall have a suitable and adequate number of water closets as determined by the Inspector of Plumbing.

PART III. DEFINITION OF PLUMBING

Section 1. Plumbing. Plumbing shall be deemed to mean the profession, art, or trade of, and all work done and all materials used in and for: (a) introducing, maintaining and extending a supply of water through a pipe or pipes, or any appurtenance thereof, in a building, lot, premises, or establishment; (b) installing, connecting, or repairing any system of drainage whereby soil, foul waste, surplus water, gas, odor, vapor or fluid is discharged or proposed to be discharged through a pipe or pipes from any building, lot, premises or establishment into any main public or private sewer, drain, pit, box, filter bed. leaching well, septic tank or other receptacle, or into any natural or artificial body of water, or water-course or open ditch, on public or private property; (c) ventilating any building sewer or fixtures, or appurtenances connected therewith; (d) connecting any building, lot premises, or establishment, with any public or private water main or service pipe, or with any public or private sewer or other underground structure; (e) and in performing all class of work generally done by plumbers.

The installation and connection of gas ranges, gas water heaters, and gas heating appliances and the running of gas pipes therefor shall also be done by licensed Master Plumbers.

Section 2. Fixtures. The fixtures shall include water closets, bathtubs, sitz tubs, catch basins, slop sinks, floor or shower drains, kitchen or pantry sinks, urinals, wash-trays, wash-basins, lavatories, drinking fountain, dental cuspidors, special surgical and hospital fixtures, swimming pools, baptistries, ornamental fountains, hydrants, and generally all appliances arranged as outlets for a domestic or sanitary water supply or as inlets to a sewer or soil or surplus waste disposal system. Gas fueled cooking or heating apparatus shall be considered within the scope of these regulations.

PART IV. GENERAL

Section 1. Grades of Piping. All horizontal drain piping shall be run in practical alignment and at a uniform grade of not less than one-quarter inch per foot if available, and shall be supported or anchored at intervals not to exceed 10 feet. Virtical stacks shall be supported at their bases, and all pipes shall be rigidly secured.

Section 2. Change in Direction. All changes in direction shall be made by the appropriate use of 45° wyes, long or medium sweep quarter bends, sixth, eighth or sixteenth bends. Tee-wyes must be of the long sweep pattern, or combined wye and eighth bends. Tees and crosses may be used in vent and water supply pipes.

Section 3. Prohibited Fittings. No double hub, single or double tee, or single or double sanitary tee branch shall be used on soil or waste lines. The drilling and tapping of house drains, soil, waste, or vent pipes, and the use of saddle hubs and bands are prohibited. The use of unions, flanges or slip joints on soil, waste or vent lines is prohibited. Slip joints shall not be used on gas piping and not on concealed water piping.

Section 4. Protection of Materials. All pipes passing under or through walls shall be protected from breakage. All pipes, passing through or under cinder concrete or other corrosive material shall be protected against external corrosion.

Section 5. Workmanship. Workmanship shall be of such character as fully to secure the results sought to be obtained in all of the sections of this code.

Section 6. Grounds. No water or gas pipe shall be run within 6 inches of a wire or other electric current carrying material unless effectively insulated therefrom, and no water supply pipe, gas pipe, soil, waste or vent pipe, or other plumbing appurtenances shall be used for attachment of neutrals or grounds, but ground may be attached to a water service pipe at the cellar wall.

PART V. QUALITY AND WEIGHT OF MATERIALS

Section 1. Quality of Materials. All materials used in any drainage or plumbing system, or gas fitting system, or part thereof, shall be free from defects.

Section 2. Label, Cast or Stamped. Each length of pipe, fitting, trap, fixture, and device used in a plumbing or drainage system shall be stamped or indelibly marked with the weight or quality thereof and the maker's mark or name.

Section 3. Vitrified Clay Pipe. All vitrified clay pipe shall be standard make, hub and spigot, properly burned and fully glazed terra cotta pipe, sound, without cracks, objec-

tionable warp or other defects.

Concrete Pipe. Approved concrete pipe may be used wherever Vitrified Clay Pipe is permitted in lieu thereof and shall be laid in the same manner and with the same joining material. Concrete pipe must be submitted for approval and test by the Inspector of Plumbing and only pipe in accordance with such approval may be used.

Section 4. Cast-Iron Pipe. Cast-iron pipe shall be of standard make, of the grade and weight known as extra heavy and shall be uncoated until tested in place. Each length shall be sound and free from defects.

Section 5. Wrought-iron or Steel Pipe. All wrought-iron or steel pipe for soil, waste, vent and water supply shall be standard weight and gauge, fully galvanized inside and out. Wrought pipe used for gas supply to gas fueled appliances need not be galvanized.

Section 6. Brass and Copper Pipe. Brass and copper pipe shall be of standard iron pipe gauge and wall thickness. Brass pipe shall have a copper content of not less than 80 per cent.

Section 7. Copper Tubing. Copper tubing for use above ground shall be seamless cold drawn commercially pure copper tubing of standard U. S. Government types K, L or M. Copper tubing used for underground water supply or service shall be K type only and shall be fully annealed.

Section 8. Lead Pipe, Diameter, Weights. All lead pipe shall be of best quality of drawn pipe, of not less weight per linear foot than shown below.

(a) Lead soil, waste, vent, or flush pipes, including bends and traps (extra light):

Internal diameter Inches	Wghts. per ft. Lbs.	Ozs.	Internal Diameter Inches	Wghts. per ft. Lbs.	Ozs.
1	2	0	2	4	0
1¼	2	8	3	4	12
1½	3	8	4	6	0

(b) Lead Water Supply Pipe (extra strong):

Internal diameter Inches	Wghts. per ft. Lbs.	Ozs.	Internal Diameter Inches	Wghts. per ft. Lbs.	Ozs.
½	2	8	1¼	6	0
¾	3	8	1½	7	8
1	4	12	2	9	0

Section 9. Threaded Fitting. (a) Plain screwed fittings shall be of cast iron, (steam pattern) or malleable iron, of stanadard weight and dimensions. (b) Brass fittings shall be of red brass, (cast iron steam pattern). (c) Drainage fittings shall be of standard cast iron or brass, recessed with smooth interior waterway, with threads tapped out of solid metal. (d) All cast iron fittings used for gas supply or water supply distribution shall be galvanized. (e) All malleable iron fittings shall be galvanized.

Section 10. Sleeve Type Fittings. Fittings for copper tubing connections shall be of approved make and pattern and may be either cast red brass or formed copper tubing. They shall be without defects and so formed and dimensioned as to provide when used with standard tubing a contact capable of a perfect sweated capillary joint.

Section 11. Calking Ferrules. Brass calking ferrules shall be of the best quality red cast brass, with weights and dimensions in accordance with the following table:

Pipe size (Inches	Actual Inside Diameter, Ins.	Length Inches	Weight Lbs.	& Ozs.
2	2¼	4½	1	0
3	3¼	4½	1	12
4	4¼	4½	2	8

Section 12. Soldering Nipples and Bushings, (a) Soldering nipples shall be of brass pipe, iron pipe size, or of heavy cast red brass not less than the following weights:

Diameters Inches	Weights Ozs.	Diameters Inches	Weights Lbs.	& Ozs.
1¼	6	2½	1	6
1½	8	3	2	0
2	14	4	3	8

(b) Soldering bushings shall be of brass pipe, iron pipe size, or of heavy, cast red brass.

Section 13. Reducing Bushings. Bushings inserted for the purpose of reducing size on a piping run or for reducing sizes in fittings shall be of red brass.

Section 14. Floor Flanges for Water-Closets. Floor flanges for water closets shall be not less than one-quarter of an inch thick, and of cast brass or cast iron.

PART VI. JOINTS AND CONNECTIONS

Section 1. Water and Air Tight Joints. All joints and connections shall be made permanently gas and water tight.

Section 2. Vitrified Pipe Joints. All joints in vitrified clay pipe, or between vitrified clay pipe and metals shall be poured joints, with a firm packing of oakum or hemp and the

hub filled with at least 1½ inches of an approved pipe joint compound with an oil free bituminous base poured hot.

Section 3. Lead Calked Joints. All lead calked joints shall be firmly packed with oakum or hemp, and shall be secured only with pure lead, not less than 1 inch deep, well calked, and no paint, varnish, or putty will be permitted until after the joint is tested. The use of lead substitutes will not be accepted. Lead calked joints shall be used to connect cast iron to cast iron, brass or wrought iron, or steel.

Section 4. Screwed Joints. All screwed joints shall be American Standard screwed joints, and all burrs or cuttings shall be removed. Joints between wrought iron or steel pipe, and for brass pipe shall be full screwed joints, made up tight with suitable pipe joint compound of white lead applied sparingly to the male thread.

Section 5. Solder Joints. (a) Joints in lead pipe or between lead pipe and brass or copper pipes, ferrules, soldering nipples, bushings, or traps, in all cases on the sewer side of the trap and in concealed joints on the inlet side of the trap, shall be full-wiped joints, plumbers round joints with an exposed surface of the solder to each side of the joint of not less than three-quarters of an inch and a minimum thickness at the thickest part of the joint of not less than three-eights of an inch. (b) Copper tubing joints shall be made by cleaning tubing and fitting sleeve, applying a suitable flux, bringing to a heat that will cause a full and complete capillary sweated joint on the application of a proper grade of solder.

Section 6. Lead or Copper Tubing to Cast Iron, Steel, or Wrought Iron. The joints shall be made by means of a red brass calking ferrule, soldering nipple, or bushing, wiped to the lead pipe and calked or screwed to the iron.

Section 7. Slip Joints. Slip joints will be permitted only in trap seals or on the inlet side of trap and on exposed water supplies to fixture.

Section 8. Roof Joints. The joint at the roof shall be made water tight by use of copper, lead or iron plates or flashings.

Section 9. Closet, Pedestal Urinal and Trap Standard Slop Sink, Floor Connections. A brass floor connection shall be wiped or soldered to lead pipe; an iron floor connection shall be calked or screwed to wrought iron pipe, and the floor connection bolted to an earthenware trap flange. A metal to earthenware, a metal to metal union, or a lead or asbestos gasket or washer shall be used to make a tight joint.

Section 10. Increasers and reducers. Where different sizes of pipe or pipes and fitting are to be connected, proper size increasers or reducers, pitched at an angle of 45 degrees between the two sizes, shall be used.

Bushings in fittings may be either cast bushed or red brass reducing bushing may be used. Iron bushings will not be permitted.

Section 11. Expansion Bolts. Connections of wall hangers, pipe supports, or fixture settings with masonry, stone or concrete backing shall be made with expansion bolts (metal plug type.)

Section 12. Prohibited Joints and Connections. Any fitting or connection which has an enlargement, chamber, or recess with a ledge, shoulder or reduction of the pipe area in the direction of the flow is prohibited.

The use of saddles, bands or sleeves for the making of either connections or repairs will not be permitted.

PART VII. TRAPS

Section 1. Material and Design. Every trap shall be self cleaning. Traps for bathtubs, lavatories, sinks and other similar fixtures shall be of lead, copper, brass, cast iron or malleable iron galvanized or of uncoated cast iron. Malleable or cast iron or cast brass traps shall be extra heavy and shall have a full-bore smooth interior waterway, with threads tapped out of solid metal.

The minimum diameter specified elsewhere for traps refer to actual inside diameters in the clear and not to outside diameters of brass tubing except that a tolerance of 1-8 inch may be allowed.

Section 2. Traps Prohibited. No form of metal trap which depends for its seal upon the action of movable parts or concealed interior or cast partitions shall be used in or for fixtures.

Section 3. Where Required. Each fixture shall be separately trapped by a water-sealed trap placed as near to the fixture as possible, directly under the waste outlet if practicable, except that a set of not more than two laundry trays may connect with a single trap. In no case shall the waste from the bathtub or other fixture discharge into a water closet trap. No fixture shall be double trapped.

Section 4. Water Seal. Each fixture trap shall have a water seal of not less than 2 inches.

Section 5. Trap Clean Outs. Each trap, except those in combination with fixtures in which the trap seal is plainly visible and accessible, shall be provided with an accessible brass trap screw of ample size, protected by the water seal.

Section 6. Trap Levels and Protection. All traps shall be set true with respect to their water seals and protected from frost and evaporation.

Section 7. Clean Out Plugs. The trap clean out cap or plug in trap seals shall be

of heavy red brass not less than one-eighth inch thick and be provided with raised nut or recessed socket for removal.

The installation or arrangement of plugs, caps or handholes for cleanout purposes is prohibited on any sewer, soil, waste or vent pipe, or on any part of the plumbing system, except in or protected by a trap water seal.

Section 8. Grease Interceptor. Every dishwasher, dish sink or potsink in a hotel, club, boarding house, restaurant or lunch room kitchen or pantry, shall be connected with sewer through an approved grease interceptor, which shall be vented.

Grease interceptors shall be of an approved model, of such form and design as to remove 95 per cent of the grease in the waste discharged through them and at the same time evacuate the solids efficiently when the maximum discharge of waste is flowing.

The trapped connection of a grease interceptor shall be vented.

By reason of the fact that greases and oils act as an inhibitor in the satisfactory operation of sewage treatment plants and that it is expected that ultimately the sewage from all sewer connected premises will pass through such plants, it is required for their protection and to prevent excessive costs for attendance and maintenance at such plants that all existing dishwashing sinks or machine, pot sinks, scullery sinks, packing houses wastes, etc., shall be passed through an approved grease trap in accordance with this section before being permitted to discharge into the public sewer system of Alexandria City, or within 90 days after notice from the Council or its authorized agent.

Section 9. Garage and Industrial Interception. The sewer from any floor drain, pit drain or surface drain, or of any sink, in any garage for the storage, servicing or repair of auto vehicles, or any open service station, shall not be connected with any house sewer except through an approved garage intercepting basin.

Garage intercepting basin shall be trapped and shall not be located within any building. They shall be so maintained that grease or oil cannot collect to an extent which shall cause them to flow through interceptor into sewer. The size and design of garage intercepting basins shall be directed by the Inspector of Plumbing.

It is required that all cleaning and dyeing establishments in which gasoline, benzine or other cleaning fluids are used and all garages, automobile repair shops and service stations for which a sewer connected drain exists, shall have the waste line from any sinks or floor drains connected through an approved garage interceptor to the public sewer of Alexandria City within 90 days after notice from the Council or its authorized agent.

The sewer from any commercial or industrial establishment must be constructed so that all wastes from commercial or industrial processes shall be neutralized; and the owners or operators shall provide and maintain such interceptors, treatment apparatus and the like as shall accomplish the purpose of this ordinance to the satisfaction of the Council or its authorized Agent.

Section 10. Basement Floor Drains. Floor drains shall connect into a trap so constructed that it can be readily cleaned and of a size to serve efficiently the purpose for which it is intended. The drain inlet shall be so located that it is at all times in full view. When subject to back flow or back pressure, such drains may be required to be equipped with an approved back-water valve.

Every floor drain shall have the trap seal protected against loss of seal by evaporation or stagnation of seal, by means of an automatic priming device connected in the supply line to a commonly used fixture. Every floor drain trap shall be vented.

Section 11. Back-Water Valves. Back-water valves may be used at owner's discretion and shall have all bearing parts of non-corrodible metal and so constructed as to insure a positive mechanical seal and remain closed except when discharging wastes. Lip of gate shall be protected against obstruction by a ¾-inch drop in grade.

PART VIII. WATER SUPPLY AND DISTRIBUTION

Section 1. Quality of Water. The quality of the domestic water supply shall meet accepted standards of purity.

Section 2. Distribution. The domestic water supply shall be distributed through a piping system entirely independent of any piping system conveying any other water supply.

Section 3. Water Service. The water service pipe of any building shall be of sufficient size to permit a continuous, ample flow of water on all floors at a given time. Every building shall have a separate water service pipe.

Section 4. Water Supply to Fixtures. (a) All Plumbing fixtures shall be provided with a sufficient supply of water for flushing to keep them in a sanitary condition. Every water closet or pedestal urinal shall be flushed by means of an approved tank or flush valve of at least four (4) gallons flushing capacity for water-closets and at least two (2) gallons for urinals, and shall be adjusted to prevent the waste of water. The flush pipe for water-closet flush tanks shall be not less than 1¼ inches in diameter, and the water from flush tanks shall be used for no other purpose.

(b) No water-closet or urinal bowl shall be supplied directly from a domestic water supply system through a flush valve unless such a valve is set above the water-closet or urinal in a manner such as to prevent any possibility of polluting the water supply, and the valve is protected as provided herein.

(c) No plumbing fixture, device, or construction shall be installed which will provide a cross connection between a distributing system of water for drinking and domestiec purposes

and a drainage system of soil, or waste pipe so as to permit or make possible the back flow of sewage or waste into the water-supply system.

(d) A portable water supply distributing system shall not be connected to or with any water closet tank, flush valve, combination or other faucet or any other plumbing fixture or other receptacle for waste or surplus water which is connected directly or indirectly with any sewer, soil or waste of a plumbing system except (1) discharging over and not less than ¼-inch above the level at which the fixture would overflow on the floor (this means ¾-inch if the rim or head of the sink or lavatory is not over ½-inch) unles the supply pipe thereto be provided with a complete air break of the full area of the supply pipe and located at least 6 inches above the highest water containing part of the fixture. (2) Provided that in lieu of a full area air inlet there may be combination of check and air inlet so disposed and arranged in location and size that the air inlet shall be sufficient to supply full relief for any leakage that might occur past a defectively sealed check should the gasket or other means of sealing be completely destroyed.

Section 5. Water Service Pipes. The water service pipe from the curb or meter location shall be laid by a licensed plumber, at a depth below grade of not less than 4 feet to prevent freezing.

Water service or other water supply pipe laid underground shall be of lead, brass or copper; shall be of a size which will provide an ample supply of water as herein required and not less than ¾-inch in any case, or 1-inch if flush valves are used for flushing fixtures.

Section 6. Water Supply Pipes. Water supply pipes above ground shall be of lead, brass, copper, or galvanized iron or steel. The supply runs to individual fixtures and the limit in length shall be as follows:

Kind of Fixture Supplied	Galvanized Iron or Steel Pipe Size, (Inches)	Limit Ft.	Brass or Copper Pipe or Copper Tubing Size, (Inches)	Limit Ft.
Sill cocks	½	20	½	50
Hot water tanks	¾	50	½	50
Laundry trays (pair)	¾	50	½	20
Sinks	½	20	½	50
Lavatories	½	20	½	50
Bathtubs	½	20	½	50
Shower baths	¾	50	½	20
Water closet tanks	½	20	½	50
Water closet flush Valves	1	50	¾	20

A ½-inch galvanized iron or steel pipe is limited to the supply of one fixture of the ½-inch class, or a ½-inch lead, brass or copper pipe or tube to the supply of two fixtures of the ½-inch class. For additional fixtures to be added on a single supply or for longer runs than indicated in above table use larger size.

Section 7. Water Supply Control. A main shut-off on the water supply line shall be provided near the curb. Accessible shut-offs shall be provided on the main supply line just inside the foundation wall and for each flat or apartment of a building for each lawn sprinkler, for supply to each hot water tank, and for each water closet.

Section 8. Water Supply, Protection. All concealed water pipes, storage tanks, flushing cisterns, and all exposed pipes or tanks located so as to be subject to freezing temperatures shall be efficiently protected against freezing.

Section 9. Relief Valves. (a) Wherever a check valve is installed on the cold water supply pipe between the street main and the hot water storage tank there shall be installed on the hot-water distributing system a suitable pressure relief valve.

(b) Every hot water storage tank shall be provided with an approved type of reseating temperature relief valve arranged to prevent storage of hot water at a temperature in excess of 212 degrees Fahrenheit.

When the water is heated solely by means of a gas-fired heater, and approved automatic gas shut-off will be acceptable in lieu of a reseating temperature relief valve. Such gas shut-off shall be in addition to an operating thermostat.

(c) These requirements for pressure relief and temperature relief valves shall be complied with in all cases where either or both a new hot water storage tank or a hot water heating element are provided, whether in a new installation or as a replacement or repair.

Section 10. Pumps and Hydrants. All pumps and hydrants shall be protected from surface water and contamination.

PART IX. PLUMBING FIXTURES.

Section 1. Design. All plumbing fixtures shall be approved pattern, free from any element tending toward cross-connection between water supply and soil or waste.

Section 2. Materials. All receptacles used as water closets, urinals, or otherwise for the disposal of human excreta or for bathing or domistic purposes, shall be vitrified earthenware, hard natural stone, or enameled cast iron.

Section 3. How Installed. All plumbing fixtures shall be installed free and open in a manner to afford access for cleaning, and so as not to encroach on other fixtures or fittings, walls, ceilings, etc., in order to provide ample room for comfortable usage. No fixture shall

set within or over another fixture. Where practical all pipes from fixtures shall be run to the wall, and no lead trap or pipe shall extend nearer to the floor than 12 inches unless protected by a casing.

Section 4. Water-Closet Bowls. Water-Closet bowls and traps shall be made in one piece and of such form as to hold sufficient quantity of water, when filled to the trap overflow, to prevent fouling of surfaces, and shall be provided with integral flushing rims constructed so as to flush the entire interior of the bowl.

Section 5. Frost-Proof Closets. (a) Frost-Proof closets may be installed only in compartments which have no direct connection with a building used for human habitation or occupancy. The soil pipe between the hopper and the trap shall be 3 or 4 inches in diameter and shall be of brass or cast-iron and the closet bowl shall be calked to it.

(b) Frost-Proof closet bowls shall be flush rim, oval straight hoppers, flushed from a tank. Valve shall be self-draining to a point below frost. Supply shall be protected against water hammer by an approved shock absorber and against siphonage by an approved vacuum valve.

(c) Only approved frost closets shall be installed.

(d) The drain waste from valve shall be led to a dry well containing at least 1 cubic yard of broken stone or gravel and located 10 feet from the wall of any building.

Section 6. Fixtures Prohibited. Fixed wooden wash trays or sinks shall not be installed in any building designed or used for human habitation, nor used in connection with the preparation of food. Long hopper closets or similar appliances shall not hereafter be installed within an inhabited building. No dry closet or chemical closet shall be installed in a dwelling. Cement urinals are prohibited.

Section 7. Floor Drains and shower Drains. A floor drain or a shower drain shall be considered a fixture and provided with a strainer, vented, and if not under water supplied in regular use, the traps under such drains shall be kept fresh and clear by means of an approved primer from the supply to a regularly used fixture, such primer to be protected against cross-connection.

Section 8. Fixture Strainers. All fixtures other than water closets and pedestal urinals shall be provided with fixed strong metallic strainers with cutlet areas not less than that of the interior of the trap or waste pipe.

Section 9. Fixture Overflow. The overflow pipe from a fixture shall be connected on the house or inlet side of the trap and be so arranged that it may be readily and effectively cleaned. Overflows cast into fixtures shall have the minimum area for fouling allowing necessary capacity.

PART X. VENTILATION OF ROOMS.

Section 1. Locations of Fixtures. (a) No trapped plumbing fixture shall be located in any room or apartment which does not contain a window placed in an external wall or is not otherwise provided with proper ventilation.

(b) Every room containing a water closet or urinal shall have a window opening directly onto a space, not on other property, that is open from ground to sky. Such window shall be openable and for 1 water closet or urinal shall have a minimum of 4 square feet with 1 square foot added for each such fixture over 1.

Section 2. Ventilating Pipe. How Connected. Local ventilation pipes from fixtures and toilet rooms shall be separate and distinct and have no connection whatever with any other ventilating ducts or pipes in the building.

PART XI. SOIL, WASTE AND VENT PIPES.

Section 1. Material. All main or branch soil, waste, and vent pipes within the building shall be of cast iron, galvanized steel or wrought iron, lead, brass, or copper, except that no galvanized steel or wrought iron pipe shall be used for underground pipes.

Section 2. Fixture Units. The following table shall be employed to determine the minimum diameters of fixture traps, the minimum diameters of waste pipes from single fixtures, and the fixture unit valves to be assigned to fixtures.

In the classification of plumbing installation, class 1 (private) shall apply to fixtures in residences and apartments and to fixtures in private bathrooms of hotels and similar installations where the fixtures are intended for the use of a family or an individual.

Class 2 (semi-public) shall apply to fixtures in office buildings, factories, dormitories, and similar installations where the fixtures are intended for the use of the occupants of the building.

Class 3 (public) shall apply to fixtures in general toilet rooms of schools, gymnasiums, hotels, railroad stations, public comfort stations, and other installations (whether pay or free) where a number of fixtures are installed so that their use is similarly unrestricted.

Fixture unit ratings for all fixtures given a single rating shall apply to those fixtures in all classes of installations.

Minimum trap diameters, Minimum drain sizes and fixtures unit values

Fixtures and class of installation	Minimum nominal trap diameter	Minimum nominal drain diameters	Inches Fixture units
1 lavatory or washbasin, class 1	1	1	1
1 lavatory or washbasin, class 2 or 3	1	1	2
1 water-closet, class 1	3	3	3
1 water-closet, class 2	3	3	5
1 water-closet, class 3	3	3	6
1 bathtub, class 1	1½	1½	3
1 bathtub, class 2 or 3	2	2	4
1 shower stall, shower head only, class 1	1½	1½	2
1 shower stall, multiple spray, class 1	2	2	4
1 shower stall, shower head only, class 2 or 3	2	2	3
Gang shower, for each shower head			5
1 shower stall, multiple spray, class 2 or 3	3	3	6
1 urinal	1½	1½	2
1 urinal, stall or wall hung, with tank or flush valve supply	2	2	4
1 urinal, pedestal or blow out	3	3	5
1 bathroom group, consisting of 1 lavatory, 1 water closet, and 1 bathtub, with or without overhead shower head, or consisting of 1 lavatory 1 water closet, and 1 shower stall, class 1			6
1 bathroom group consisting of 1 lavatory, 1 water closet, 1 bathtub and 1 shower stall in same bathroom, class 1			7
1 sink, residence or apartment kitchen sink, dishwasher, butler's or pantry sink, class 1	1½	1½	3
1 sink, hotel or restaurant pot sink	2	2	6
1 sink, hotel or restaurant vegetable sink	2	2	6
1 sink, hotel or restaurant glass sink	1½	1½	3
1 sink, hotel or restaurant silver sink	2	2	6
1 sink, lunch counter bar sink	2	2	6
1 sink, soda fountain bar sink	1½	1½	2
1 sink, slop or mop	3	3	6
1 sink, bedpan sink or bedpan washer	3	3	6
1 sink laboratory, surgeon's or medical sink	1½	1½	1½
1 sterilizer, instrument, utensil or water	1½	1½	1½
1 sterilizer, bedpan	3	3	6
1 laundry tray	1½	1½	3
1 combination fixture	1½	1½	3
1 foot bath or sitz bath	1½	1½	2
1 infant's or baby's slab bath	1½	1½	½
1 bidet	1½	1½	3
1 drinking fountain	1¼	1¼	½
1 cuspidor, fountain or dental	1¼	1¼	½
1 floor drain, ordinary	2	2	1
1 floor drain, flush rim	2	2	3
1 floor drain, receiving over flow from tanks or discharges from unrated shall be rated on the estimated maximum flow, for each gallon per minute			2
1 sewage ejector, for each 25 gallons per minute discharge capacity			50

A floor drain receiving regular or intermittent discharges from fixtures shall be rated by the total of the fixtures drained into it.

Special permission must be obtained from the Plumbing Inspector before installing a bidet fixture.

Section 3. Soil and Waste Stacks. Every building in which plumbing fixtures are installed shall have a soil or waste stack, or stacks, extending full size through the roof. Soil and waste stacks shall be as direct as possible and free from sharp bends and turn. The required size of a soil or waste stack shall be determined from the distribution and total of all fixture units connected to the stack in accordance with the following table, except that no water closets shall discharge into a stack of less than 3 inches in diameter:

MAXIMUM FIXTURE UNITS ON ONE STACK

Diameter of Pipe Inches	In one branch Interval*	On any one Stack	Maximum height including extension as vent Feet
1½	4	12	50
2	15	36	100
3	45	72	200
4	240	384	Unlimited
5	540	1020	Unlimited
6	1122	2070	Unlimited
8	3480	5400	Unlimited

*The term "branch interval" shall be interpreted to mean a vertical length of stack, not less than 8 feet, within which a branch or branches are connected, and the total fixture units on all branches connected to a stack within any 8-foot length shall not exceed the maximum permitted by the table in one "branch interval."

BRANCH CONNECTIONS TO SOIL OR WASTE STACKS

Graded as below

Diameter of Pipe Inches	Maximum number of Fixture units	
	¼ inch fall per foot	⅛ inch fall per foot
*1¼	0	1
1½	2	3
2	5	7
2½	12	16
3	24	34
4	84	115
5	180	250
6	330	460
8	870	1215

*Branch for drinking fountains and dental cuspidors.

No water-closets on 2 or 2½-inch stacks or branches; 2 water closets on a 3-inch branch; 4 water-closets on a 3-inch stack. Stack branches are to be increased as fixtures are added but vertical lines are to be the same size throughout; except that a bathroom group in basement may be vented with a 2-inch vent; a 3-inch or 4-inch stack to a bathroom group on the first floor may be reduced to 2½ inches; on the second floor or above, or where there are fixtures on 2 or more floors, the stack may not be reduced. Any stack may, above the highest waste or vent connection, be either extended through the roof separately or may be connected to an adjoining vent stack of equal or larger size.

A horizontal graded 1¼-inch waste shall be limited to 5 feet in length and a similar 1½-inch waste to 20 feet in length.

A sink shall not discharge into the waste of any other type of small fixture nor shall such a fixture waste discharge into a sink waste.

Section 4. Fixtures Connections on Stacks. All soil and waste stacks and branches shall be provided with correctly faced inlets for fixture connections.

Section 5. Changing Soil and Vent Pipes. In existing buildings where the soil or waste vent pipe is not extended and undiminished through or above the roof and the fixture is changed in style or location, or is replaced, a soil or waste vent pipe of the size and material prescribed for new work shall be installed.

Section 6. Prohibited Connection. No other fixture connection shall be made to a lead bend or branch water pipe of a water-closet or similar fixture. No soil or waste vent, circuit or loop vent above the highest installed fixture on the branch or main shall be used as a soil or waste pipe.

Section 7. Soil and Waste Pipe Protected. No soil or waste stacks shall be installed or permitted outside a new building. In existing buildings, if it is found impractical to install inside an outside soil stack may be installed by specal permission, but it shall be located in a protected place and all waste and vent branches to it must be run inside the building. Outside stacks shall be one size larger than that permitted for inside work.

Section 8. Roof Extensions. All roof extensions of soil and waste stacks shall be run full size at least 1-foot above the roof, and when the roof is used for other purposes than weather protection such extension shall be not less than 5 feet above the roof.

All vent stacks less than 2 inches in diameter shall be increased to 2 inches cast iron, brass or copper from a point below the roof.

If soil or waste stacks are of wrought iron the extended vent must be cast iron or brass from a point below the roof.

Section 9. Vent Terminals. The roof terminal of any stack or vent, if within 12 feet of any door, window, scuttle, or air shaft, shall extend at least 3 feet above the same. This applies whether the windows are in the same building as the stack or any other building.

Section 10. Vent Terminals Adjoining Higher Buildings. No soil, waste or vent pipe extension of any new or existing building shall be run or placed on the outside of a wall, but shall be carried up in the inside to the roof.

In the event that a new building is built higher than an existing building, the owner

of the new building shall not locate windows within 12 feet of any existing vent stack on the lower building unless the owner of such new building shall defray the expenses or shall himself make such alteration to conform with the preceding section.

It shall be the duty of the owner of the lower or existing building to make such alterations therein upon the receipt in advance of money or security therefor, sufficient for the purpose, from the owner of the new or higher building or to permit, at the election of the owner of the new or higher building, the making of such alteration by the owner of said new or higher building.

Section 11. Traps Protected by Vents. Every fixture trap shall be protected against siphonage and back pressure, and air circulation assured by means of a soil or waste stack vent, a continuous waste or soil vent, or a loop or circuit vent. No crown vent shall be installed.

Section 12. Distance of Vent From Trap Seal. No fixture trap shall be placed more than 4 feet in horizontal developed length from its vent, but 3-inch floor drain traps may be 6 feet and 4-inch floor drain traps 8 feet. The distance shall be measured along the central line of the waste or soil pipe from the vertical inlet of the trap to the vent opening. The vent opening from the soil or waste pipe, except for water-closets and similar fixtures depending for their operation on the principal of the siphon, shall not be below the dip of the trap.

Section 13. Main Vents to Connect at Base. All main vents or vent stacks shall bleed full size at their base into the main soil or waste pipe at or below the lowest fixture branch at an angle of 45 degrees and shall extend undiminished in size above the roof or shall be reconnected with the main soil or waste vent at least 3 feet above the highest fixture branch.

No vertical vent line 15 feet long shall be run without such a bleed.

No vent line should be offset at a greater angle than 45 degrees, but if the vertical vent above the offset is not more than 15 feet, a flat offset may be permitted by the Inspector if the vent line is increased one size from a point below the offset.

If the vertical vent above the offset is more than 15 feet the Inspector may grant permission for a flat offset provided the vent line is made of brass pipe from a point below the offset to the end above the roof.

Section 14. Vents, Required Sizes. The required size of main vents or vent stacks shall be determined from the size of the soil or waste stack vented, the total number of fixture units vented and the developed length of the vent in accordance with the following table:

VENT STACKS AND BRANCHES

Diameter of Pipe (Inches)	Number of fixture units vented	Allowed dev. length in ft.	Horizontal run limited to (feet)
*1½	6	25	12
2	40	50	25
2½	72	75	40
3	120	100	50
4	250	200	50
5	500	300	50
6	1250	unlimited	50
8	2500	unlimited	50

*A 1¼-inch waste for a drinking fountain or dental cuspidor requires a 1½inch vent. A 1½-inch vent shall not be used to vent a water closet connection.

Section 15. Branch and Individual Vents. No vent shall be less than 1½ inches in diameter. For 1¼ or 1½-inch wastes the vent shall be 1½-inch. In no case shall a branch or main vent have a diameter less than one-half that of the soil or waste pipe served.

Section 16. Vent Pipe, Grades and Connections.

All vent pipes shall be free from drops or sags and be so graded and connected as to drip back to the soil or waste pipe by gravity. Where vent pipes connect to a horizontal soil or waste pipe, the vent branch shall be taken off above the center line of the pipe, and the vent pipe must rise vertically or at an angle of 45 degrees to the vertical to a point 6 inches above the fixture it is venting before off-setting horizontally. Horizontal off-sets under floor adjacent to a fixture shall be limited to 24 inches.

One vent pipe shall not be connected with another vent pipe lower than 36 inches from the floor line, and branch vents shall be connected to main vents above floor line of floor on which highest fixture sets.

Section 17. Circuit, Loop and Wet Vents. (a) A circuit or loop vent will be permitted as follows: A branch soil or waste pipe to which two and not more than eight waterclosets, pedestal urinals, trap standard slop sinks, or shower stalls are connected in the series may be vented by a circuit or loop vent, which shall be taken off in front of the last fixture connection or beyond the last fixture connection if there is a lavatory or drinking fountain to act as a washout for the end. Where fixtures discharge above such branch, each branch shall be preceded with a relief one-half the diameter of the soil or waste stack, taken off in front of the first fixture connection. The diameter of the circuit or loop vent may be the size of the fixture branch or one size smaller, except that it shall not be less than 4 inches. Vent from 2 or more floors shall not be less than 4 inches. Small fixture wastes shall not be connected into circuited soil or waste lines.

(b) A modified circuit vent may be used for a 2, 3, or 4 fixture private bathroom arranged for the exclusive use of a single person; provided,

The combination waste and vent for the small fixtures (wet vent) be one size larger than the largest waste connection;

The small fixture waste enter the closet bend and the last fixture on the line be the lavatory to wash out the foot of the vent;

That in no case must a fixture waste in an adjoining room be connected into a wet vented waste;

That in no case shall a wet vent be used for a cellar toilet room nor connected into a sewer instead of a stack.

PART XII. HOUSE DRAINS AND SEWERS

Section 1. Independent System. The drainage and plumbing system of each new building and of new work installed in an existing building shall be separate from and independent of that of any other building, except as provided below, and every building shall have an independent connection with a public or private sewer when available.

Exception: Where one building stands in the rear of another building on an interior lot and no public or private sewer is available or can be constructed to the rear building through adjoining alley, court, yard, or driveway, the house drain from the front building may be extended to the rear building and the whole will be considered as one house drain.

Section 2. Old House Sewers and Drains. Old house sewers and drains may be used in connection with new buildings or new plumbing only when they are found, on examination and test, to conform in all respects to the requirements governing new sewers or drains, as prescribed in this ordinance. If the old work is found defective, the Plumbing Inspector shall notify the owner to make the necessary changes to conform with this ordinance and no connection shall be made to it or from it until the defect is remedied.

Section 3. Connections with Septic Tanks. When a sewer is not available, drain pipes from buildings shall be connected with approved private sewage disposal work, constructed according to plans filed with and approved by the Health Officer.

Section 4. Excavations. Each system of piping shall be laid in a separate trench, provided that drainage trenches may be benched not less than 18 inches for lighter piping. Where a double system of drainage is installed, the sanitary and surface water house sewers or drains may be laid side by side in one trench.

Tunneling for distances not greater than 6 feet is permissible in yards, courts, or driveways of any building site. When pipes are driven, the drive pipe shall be at least one size larger than pipe to be laid.

All excavation required to be made for the installation of a house drainage system, or any part thereof, within the walls of a building, shall be open trench work. All such trenches and tunnels shall be kept open until the piping has been inspected, tested and approved.

Section 6. Material. (a) The house sewer beginning 20 feet outside of the inner face of the building wall shall be of cast iron, vitrified clay or concrete pipe; except that vitrified clay or concrete pipe sewers may not be laid within 20 feet of any building nor within 100 feet of any wall; (b) the house drain within the building and 20 feet exterior thereto, when underground shall be of lead, brass, copper or cast iron ;(c) The house drain when above ground shall be of cast iron, galvanized wrought iron, or steel, lead, copper or brass.

Section 7. Depth of Drains and Sewers. No house sewer or underground house drain shall be laid parallel to or within 3 feet of any bearing wall or foundation. The house sewer or drains shall be laid at sufficient depth to protect them from frost.

Section 8. Size of House Sewers and House Drains. The required size of a house sewer, house drain, or branch of the house drain not receiving the discharge from fixtures on the same floor or level as the branch, shall be determined in accordance with the following table:

HOUSE SEWERS AND HOUSE DRAINS (sanitary only)

	Maximum number of fixture units for		
	⅛-inch fall per foot Diameter of pipe inches	¼-inch fall per foot Diameter of pipe inches	½-inch fall per foot Diameter of pipe inches
1¼	1	1	1
1½	2	2½	3½
2	7	9	12
2½	17	21	27
3 (No water-closets)	33	45	72
4	114	150	210
5	270	370	540
6	510	720	1050
8	1290	1860	2640
10	2520	3600	5250
12	4390	6300	9300

No water closet shall discharge into a drain less than 3 inches in diameter, and no main house drain or house sewer receiving discharges from water closets shall be less than 4 inches in diameter.

Section 9. House Sewer in Made Ground. The house sewer when laid in made-in or

filled-in ground shall be of cast iron, and shall be laid on bed of approved grillage or concrete when required by Inspector.

Section 10. Blow-Offs and Drips. Exhaust, blow-off, sediment and drip pipes from steam lines, or any other discharge exceeding 140 degrees Fahrenheit in temperature shall not be connected to any part of a plumbing or drainage system.

Section 11. Sumps and Receiving Tanks. All subhouse drains shall discharge into an airtight sump or receiving tank so located as to receive the sewage by gravity, from which sump or receiving tank the sewage shall be lifted and discharged into the house sewer by pressure operated ejectors; such sumps shall be automatically discharged.

Section 12. Ejectors, Vented. The soil or vent pipe leading to an ejector or other appliance for raising sewage or other waste matter into the street sewer shall, where a water-closet or closets are installed, be provided with a vent pipe to the roof not less than 4 inches in diameter, and where fixtures other than water-closets are installed the waste vent pipe shall be the same diameter as the waste pipe.

Section 13. Motors, Compressors, Etc. All motors, air compressors, and air tanks shall be located where they are open for inspection and repair at all times. The air tanks shall be so proportioned as to be of equal cubical capacity to the ejectors connected therewith, in which there shall be maintained an air pressure of not less than 2 pounds for each foot of height the sewage is to be raised.

Section 14. Ejectors for Subsoil Drainage. When subsoil catch basins are installed below the sewer level, electric automatic ejectors provided with a ball float shall be used. Such ejectors or any device raising subsoil water shall discharge over a properly trapped, vented and water supplied fixture or into a stormwater drain.

Section 15. Drainage of Yards, Areas and Roofs. Drained roofs and paved areas, yards, courts, and courtyards may be drained into a stormwater sewer system but not into sewers intended for sewage only.

Section 16. Subsoil, Foundation, Clear Water, and Absorption Tile Drains. Where subsoil drains are placed under the cellar floor or used to encircle the outer walls of a building, the same shall be made of open-jointed drain tile or earthenware pipe, not less than 4 inches in diameter, and shall be properly trapped and protected against back pressure by an automatic back pressure valve, accessibly located in a manhole without the building before entering the house sewer or drain. They may discharge through a vented cellar drain.

Section 17. Subsoil Drains Below Sewer Level. Subsoil drains below the main sewer level shall discharge into a sump or receiving tank, the contents of which shall be automatically lifted and discharged into the drainage system above the cellar over some properly trapped, vented and water supplied fixture.

PART XIII. REFRIGERATOR, SAFE AND SPECIAL WASTES

Section 1. Fixtures Permitted to Connect. No waste pipe from a refrigerator or ice box floor drain, or any other receptacle where food is stored shall connect directly with any house drain, soil or waste pipe. Such waste pipes shall in all cases empty over an open sink that is properly supplied with water, connected, trapped and vented the same as other fixtures, or they may discharge into a vented cellar floor drain protected by a primer. Such waste connections shall not be located in inaccessible or unventilated cellars.

Section 2. Refrigerator Wastes. Refrigerator waste pipes shall be not less than 1¼ inches for 1 opening, 1½ inches for 3 openings, and for 4 to 12 openings must be not less than 2 inches, and shall have at each opening a refrigerator trap. Such waste pipe shall be continued not less than full size through the roof, except where such fixtures are located in the basement or first floor.

Section 3. Overflow Pipes. (a) Pipes from a water supply tank or exhaust from a water lift or waste from a condenser shall not be directly connected with any house drain, soil, or waste pipe. Such pipe shall discharge upon the roof or be discharged over an open fixture or discharge as for refrigerator wastes.

(b) Overflow pipes from cisterns, expansion tanks, drip pans, and similar emergency wastes shall discharge as in paragraph (a).

PART XIV. MAINTENANCE

Section 1. Defective Fixtures. All installed fixtures found defective or in an insanitary condition shall be repaired, renovated, replaced, or removed within 30 days upon written notice from the Inspector of Plumbing.

Section 2. Temporary Toilet Facilities. Suitable toilet facilities shall be provided for the use of workmen during the construction of any building on which 10 or more workmen are employed or the prosecution of any grading, paving or general construction work employing 25 or more men. These toilet facilities shall be maintained in a sanitary condition.

PART XV. REPAIRS

Section 1. Repairs to any part of a plumbing system shall conform as nearly as may be practicable to the requirements of these regulations for new work of like character, or as directed by the Inspector of Plumbing.

Section 2. Repairs and extensions, where practicable, shall be tested as provided herein for new work, except that exposed vents, water supply pipes and gas pipe extensions not exceeding 20 feet need not be tested if visual inspection is satisfactory. The Inspector of Plumbing may exempt underground extensions of 20 linear feet or 10 calked points or less.

PART XVI. INSPECTIONS AND TESTS

Section 1. Inspections. All piping, traps, and fixtures of a plumbing system including repairs shall be inspected by the Inspector of Plumbing to insure compliances with all requirements of this ordinance and the installation and construction of the system in accordance with the approved plans and permits.

Section 2. Notifications. (a) It shall be the duty of the plumber to notify the Inspector of Plumbing orally, by telephone, or in writing between the hours of 9 a. m. and 4 p. m. not less than 8 working hours before the work is to be inspected or tested.

(b) It shall be the duty of the plumber to make sure that the work will stand the test prescribed before giving the above notifications.

(c) If the Inspector finds that the work will not stand the test, the plumber shall be required to renotify as above and to pay the sum of one dollar ($1.00) for each notification made necessary by failure of work to stand required test.

Section 3. Material and Labor for Tests. The equipment, material, power and labor necessary for the inspection and test shall be furnished by the plumber.

Section 4. System Tests. All the piping of a plumbing system shall be tested with water or air when in the rough. After the plumbing fixtures have been set and their traps filled with water the entire drainage system shall be submitted to a final peppermint test.

Section 5. Methods of Testing. (a) Water test. The water test may be applied to the drainage system in its entirety or in sections. If applied to the entire system all openings in the piping shall be tightly closed, except the highest opening above the roof and the system filled with water to the point of overflow above the roof. If the system is tested in sections, each opening shall be tightly plugged, except that highest opening of the section under test, and each section shall be filled with water; but no section shall be tested with less than a 10-foot head of water or a 5-pound pressure of air. In testing successive sections at least the upper 10 feet of the next preceding section shall be retested, so that no joint or pipe in the building shall have been submitted to a test of less than a 10-foot head of water or a 5-pound pressure of air. Under a water test the pressure shall remain constant for not less than 10 minutes without any further addition of water.

(b) Air Test. The air test shall be made by attaching the air compressor or test apparatus to any suitable opening and closing all other inlets and outlets to the system, then forcing air into the system until there is a uniform pressure sufficient to balance a column of mercury 10 inches in height; or of 5 pounds per square inch on the entire system. This pressure shall be maintained for 5 minutes.

(c) Final Peppermint Test. After fixtures are set, all doors, windows and ventilators shall be closed, all traps sealed with water, and 1½ ounces of pure oil of peppermint shall be inserted in each soil stack not over 50 feet in height. The peppermint shall be volatized by washing down with 2 gallons of hot water and as the fumes appear at each roof opening that pipe shall be closed off. After vapor has had opportunity to permeate system and no leaks show then vent openings at roof shall be opened. If leaks develop, they shall be repaired and test repeated until the system is tight.

If stacks are over 50 feet in height 3 ounces of peppermint per stack will be used.

Pure oil of peppermint will be furnished by the Health Department at prices to be fixed from time to time.

Section 6. Order of Tests. The test may be made separately, as follows:

(a) The house sewer and all its branches from the public or private sewer connection or septic tank to the house drain.

(b) The house drain and branches and the stacks and branches, including all piping to the height of 10 feet above the highest point on the house drain, except exposed connections to fixtures.

(c) The soil, waste, vent and drainage pipes which would be covered up before the building is enclosed or ready for completion. The tests required for (b) and (c) may be combined.

(d) The final peppermint test of the whole system.

(e) After all of the above tests have been made and proved acceptable the Inspector of Plumbing shall issue a written approval.

Section 7. Covering of Work. No drainage of plumbing system or part thereof shall be covered until it has been inspected, tested and approved as herein prescribed.

Section 8. Uncovering of Work. If any house drainage of plumbing system or part thereof is covered before being regularly inspected, tested, and approved, as herein prescribed, it shall be uncovered at the direction of the Health Officer or Inspector of Plumbing.

Section 9. Defective Work. If inspection or test shows defects, such defective work or material shall be replaced within 3 days and inspection and test repeated.

Section 10. Tests on Extensions. All underground repairs or extensions, and all alterations, repairs, or extensions, to any part of the plumbing or gas fitting systems which shall include more than 10 feet, shall be inspected and tested. The water test shall have not less than a 10-foot head of water and the air test not less than a 5-pound pressure.

Section 11. Test of Water Distribution System. Upon the completion of the entire water-distribution system it shall be tested and proved tight under a water-pressure not less than the maximum working pressure under which it is to be used.

Section 12. Test of Gas Piping. Gas piping shall be tested under 5 pounds of air pressure.

Section 13. Certificate of Approval. Upon a satisfactory completion and final test of the plumbing system a certificate of approval shall be issued by the Inspector of Plumbing to the plumber to be delivered to the owner.

Section 14. Test of Defective Plumbing. The peppermint test shall be used in testing the sanitary condition of the drainage or plumbing system of all buildings where there is reason to believe that it has become defective. In buildings condemned by the Health Officer because of insanitary conditions of the plumbing system, the alterations in such systems shall not be considered as repairs, but as new plumbing.

Section 15. Inspections and Tests not Required. No tests or inspections shall be required where a plumbing system or part thereof is set up for exhibition purposes and is not used for domestic or toilet purposes and not directly connected to sewage system; nor after the repairing or replacing of an old fixture,faucet, or valve by a new one (to be used for the same purpose); nor after forcing out stoppage and repairing leaks.

PART XVII—EFFECTIVE DATES OF ORDINANCES

This ordinance shall be in full force and effect as to Parts 1 and 1A (except Sections 1, 2, 13 and 18 of part 1A) immediately upon its adoption and approval, and as to Sections 1, 2, 13 and 18 of Part 1A and all other provisions of this ordinance 45 days following its passage.

Approved this 30th day of March, 1936.

E. C. DAVISON,
Mayor.