

SECTION 1. Section 18-29-102.8 is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-102.8 Referenced codes and standards.

The codes and standards referenced in this chapter shall be those that are listed in the index Article 13 and considered part of the requirements of this chapter to the prescribed extent of each such reference. Where the requirements of reference standards or manufacturer's installation instructions do not conform to minimum provisions of this chapter, the provisions of this chapter shall apply.

SECTION 2. Section 18-29-106 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-106 Permits.

18-29-106.1 General.

Permits for plumbing work shall be obtained in accordance with Chapter 14A-4 of the Municipal Code. Plumbing work shall require a license in accordance with Chapters 4-28, 4-332 and 4-336 of the Municipal Code.

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SECTION 3. Section 18-29-107 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-29-107

Violations.

18-29-107.1

General.

It shall be unlawful for any person to erect, construct, alter, repair, remove or utilize a plumbing system in conflict with or in violation of any of the provisions of this chapter. Enforcement of this chapter and penalties for violations of this chapter shall be as set forth in Chapter 14A-3 of the Municipal Code.

**ARTICLE II.
AMENDMENTS TO CHAPTER 18-29, ARTICLE 2**

SECTION 1. Section 18-29-201.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-201.3 Terms defined in other articles provisions.

Where terms are not defined in this article and are defined in Title 14A, 14B, 14C, 14E, 14F, 14M, 14N, 14R or 14X, or other chapters of ~~Titles 13 and Title 18~~, such terms shall have the meanings ascribed to them in those ~~chapters~~ provisions unless the context clearly requires otherwise.

SECTION 2. Section 18-29-202 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-202 General definitions.

(omitted text is not affected by this ordinance)

ACCESSIBLE. A site, building, facility or portion thereof that complies with Chapter 11 of the Chicago Building Code.

(omitted text is not affected by this ordinance)

AIR BREAK (DRAINAGE SYSTEM). A piping arrangement in which a drain from a fixture, appliance or device discharges indirectly into another fixture, receptacle or interceptor at a point above and below the flood level rim and above the trap seal.

(omitted text is not affected by this ordinance)

ANTIMICROBIAL. An additive or surface coating that inhibits the growth of bacteria or

(omitted text is not affected by this ordinance)

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APPROVED. The sanction and endorsement by of the commissioner of buildings Building Commissioner under the provisions of the Code or the rules adopted thereunder this chapter.

APPROVED AGENCY. As defined in Chapter 14A-2. For purposes of this chapter, the Chicago Department of Water Management's testing lab shall also be an approved agency.

(omitted text is not affected by this ordinance)

BUILDING. Any structure occupied or intended for supporting or sheltering any occupancy. As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance) BUILDING

HEIGHT. As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance) CHICAGO BUILDING CODE. Title

14B of the Municipal Code of Chicago. CHICAGO CONSTRUCTION CODES. As defined in Chapter 14A-2.

CHICAGO ELECTRICAL CODE. Title 14E of the Municipal Code of Chicago. CHICAGO ENERGY

CONSERVATION CODE. Title 14N of the Municipal Code of Chicago. CHICAGO FUEL GAS CODE. Title 14G

of the Municipal Code of Chicago. CHICAGO MECHANICAL CODE. Title 14M of the Municipal Code of

Chicago. CHICAGO ZONING ORDINANCE. Title 17 of the Municipal Code of Chicago.

(omitted text is not affected by this ordinance)

CIRCULATING HOT WATER SYSTEM. A specifically designed water distribution system where one or more pumps are operated in the service hot water piping to circulate heated water from the water-heating equipment to fixture supply and back to the water-heating equipment.

(omitted text is not affected by this ordinance)

COPPER ALLOY. A metal alloy where the principal component is copper.

(omitted text is not affected by this ordinance)

DEMAND RECIRCULATION HOT WATER SYSTEM. A water distribution system where one or more pumps prime the service hot water piping with heated water upon a demand for hot water.

DEPTH OF WATER TRAP SEAL. The depth of water liquid that would have to be removed from a full trap before air could pass through the trap.

(omitted text is not affected by this ordinance)

DRINKING FOUNTAIN. A plumbing fixture that is connected to the potable water distribution system and the drainage system. The fixture allows the user to obtain a drink directly from a stream of flowing water without the use of any accessories.

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DUAL FLUSH DEVICE. A feature that allows the user to flush a water closet with either a reduced or full volume of water, depending on bowl contents.

(omitted text is not affected by this ordinance)

EMERGENCY FLOOR DRAIN. A floor drain that does not receive the discharge of any drain or indirect waste pipe, and that protects against damage from accidental spills, fixture overflows and leakage.

(omitted text is not affected by this ordinance)

FILL VALVE. A water supply valve, opened or closed by means of a float or similar device, utilized to supply water to a tank. An antisiphon fill valve contains an antisiphon device in the form of an approved air gap or vacuum breaker that is an integral part of the fill valve unit and that is positioned on the discharge side of the water supply control valve.

(omitted text is not affected by this ordinance)

FIXTURE FITTING. A fitting that is attached to or accessible from a fixture and controls the volume and/or directional flow of water to, or conveys water from, that fixture.

Supply fitting. A fitting that controls the volume, direction of flow or both of water, and is either attached to or accessed from a fixture or is used with an open or atmospheric discharge.

Waste fitting. A combination of components that conveys the sanitary waste from the outlet of a fixture to the connection to the sanitary drainage system.

(omitted text is not affected by this ordinance)

FLOW CONTROL (Vented). A device installed upstream from the interceptor having an orifice that controls the rate of flow through the interceptor and an air intake (vent) downstream from the orifice that allows air to be drawn into the flow stream.

(omitted text is not affected by this ordinance)

FULL-OPEN VALVE. A water control or shutoff component in the water supply system piping that, where adjusted for maximum flow, the flow path through the component's closure member is not a restriction in the component's through-flow area.

(omitted text is not affected by this ordinance)

~~GREASE INTERCEPTOR. A receptacle designed to cause separation and retention of oil or grease from liquid wastes.~~

Fats, oils and greases (FOG) disposal system. A plumbing appurtenance that reduces nonpetroleum fats, oils and greases in effluent by separation or mass and volume reduction.

Gravity. Plumbing appurtenances of not less than 500 gallons (1893 L) capacity that are installed in the sanitary drainage system to intercept free-floating fats, oils and greases from wastewater discharge. Separation is accomplished by gravity during a retention time of not less than 30 minutes.

Hydromechanical. Plumbing appurtenances that are installed in the sanitary drainage system to intercept free floating fats, oils and greases from wastewater discharge.

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Continuous separation is accomplished by air entrainment, buoyancy and interior baffling.

GREASE-LADEN WASTE. Effluent discharge that is produced from food processing, food preparation or other sources where greases, fats and oils enter automatic dishwasher prerinse stations, sinks or other appurtenances.

GREASE REMOVAL DEVICE, AUTOMATIC (GRD). A plumbing appurtenance that is installed in the sanitary drainage system to intercept free-floating fats, oils and greases from wastewater discharge. Such a device operates on a time- or event-controlled basis and has the ability to remove free-floating fats, oils and greases automatically without intervention from the user except for maintenance.

~~GREASE TRAP. An interceptor located inside the building.~~

(omitted text is not affected by this ordinance)

GROUP WASH FIXTURE. A type of lavatory that allows more than one person to utilize the fixture at the same time. The fixture has one or more drains and one or more faucets.

(omitted text is not affected by this ordinance) ~~LABELED. Equipment, devices, fixtures or mate~~

~~rials bearing the label of an approved agency. LEAD FREE PIPE AND FITTINGS. Containing not more than 8.0 percent lead.~~

(omitted text is not affected by this ordinance)

~~LICENSED DESIGN PROFESSIONAL. An architect licensed to practice architecture, as provided by the Illinois Architecture Practice Act of 1989, or a structural engineer licensed to practice structural engineering, as provided by the Structural Engineering Practice Act of 1989, or a registered professional engineer licensed to practice professional engineering as provided by The Professional Engineering Practice Act of 1989, within the limitations of the particular act under which the individual is licensed to practice.~~

(omitted text is not affected by this ordinance)

~~PLUMBING SYSTEM. Includes A system that includes the water supply and distribution pipes; plumbing fixtures and traps; water-treating or water-using equipment; soil, waste and vent pipes; and sanitary and storm sewers and building drains, drains; in addition to their respective connections, devices and appurtenances within a structure or premises; and the water service, building sewer and building storm sewer serving such structure or premises.~~

(omitted text is not affected by this ordinance)

PREMISES. The word "premises" wherever used in this chapter, shall be held to include a lot, or part of a lot, a building,

or part of a building or any parcel or tract of land whatever. As defined in Chapter 14X-2.

(omitted text is not affected by this ordinance) PRIVATE. In the classification of plumbing fixtures, "private" applies to fixtures in residences,

family or an individual that are not public.

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(omitted text is not affected by this ordinance)

PUBLIC or PUBLIC UTILIZATION. In the classification of plumbing fixtures, "public" applies to fixtures in general toilet rooms of schools, gymnasiums, hotels, airports, bus and railroad stations, public buildings, bars, public comfort stations, office buildings, stadiums, storosr restaurants, and other installations where a number of fixtures are installed so that their utilization is similarly unrestricted. Where access to fixtures in an office or other occupancy is festricted to employees or otherwise controlled these fixtures shall net be considered public with unrestricted exposure to walk-in traffic and in toilet rooms intended for use by customers, patrons and visitors of food service establishments, mercantile occupancies, and assembly occupancies.

(omitted text is not affected by this ordinance)

REGISTERED DESIGN PROFESSIONAL. As defined in Chapter 14A-2.

(omitted text is not affected by this ordinance)

RESIDENTIAL OCCUPANCY. A building or portion of a building classified as a Group 1-1 or R occupancy in accordance with the Chicago Building Code together with areas of the same building providing amenities primarily for residents and their quests.

(omitted text is not affected by this ordinance)

SINGLE-USER TOILET ROOM. A fully enclosed room, with a locking mechanism controlled by the occupant, containing a single water closet, a single lavatory, and no more than one urinal.

(omitted text is not affected by this ordinance)

THIRD-PARTY CERTIFICATION AGENCY. An approved agency operating a product or material certification system that incorporates initial product testing, assessment and surveillance of a manufacturer's quality control system.

THIRD-PARTY CERTIFIED. Certification obtained by the manufacturer indicating that the function and performance characteristics of a product or material have been determined by testing and ongoing surveillance by an approved third-party certification agency. Assertion of certification is in the form of identification in accordance with the requirements of the third-party certification agency.

TOILET FACILITY. A room or space that contains not less than one water closet and one lavatory.

(omitted text is not affected by this ordinance)

VENT SYSTEM. A pipe or pipes installed to provide a flow of air to or from a drainage system, or to provide a circulation of air within such system to protect trap seals from siphonage and backpressure.

(omitted text is not affected by this ordinance)

WASTE RECEPTOR. A floor sink, standpipe, hub drain or floor drain that receives the discharge of one or more indirect waste pipes.

WATER COOLER. A drinking fountain that incorporates a means of reducing the temperature of the water supplied to it from the potable water distribution system.

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WATER DISPENSER. A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises.

(omitted text is not affected by this ordinance)

WATER HEATER. An appliance for supplying hot water for domestic commercial purposes Any heating appliance or equipment that heats potable water and supplies such water to the potable hot water distribution system.

(omitted text is not affected by this ordinance)

WATER PIPE.

Riser. A water supply pipe that extends one full story or more to convey water branches or to a group of fixtures.

from the water service pipe, or from the meter when the meter is at the structure, to the points of utilization.

Branch distributing pipe. A branch distributing pipe is one which is connected to a distributing pipe or riser pipe and conveys the water therefrom to a plumbing fixture.

Branch supply pipe. A branch supply pipe is one which is connected to a principal supply pipe and conveys the water therefrom to a riser pipe or distributing pipe.

Distributing pipe. A distributing pipe is one which is connected to a riser pipe or branch supply pipe and conveys the water therefrom to a branch distributing pipe.

Main supply pipe. A main supply pipe is one which is connected to the service pipe of any building, structure or premises and conveys the water to the principal supply pipe.

Principal supply pipe. Such pipes are the water supply arteries in buildings and structures. They are connected to the main water supply pipe and convey the water therefrom to pumps, tanks, filters, heaters and other equipment together with all their appurtenances and to the branch supply pipes.

Riser pipe. A riser pipe is one which is installed perpendicular to the horizontal through the floors, stories and other open spaces of buildings and structures and conveys the water from the main or branch supply pipes to the distributing pipes or branch distributing pipes.

Waterservice Service pipe. The pipe from the water main or other source of potable water supply, or from the meter when the meter is at the public right of way, to the water distribution system of the building served. The service pipe is the pipe which conveys the water from the water mains of the Chicago Waterworks System to the building, structure or premises served.

(omitted text is not affected by this ordinance)

WATER SUPPLY SYSTEM. The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply from any source except the intended source.

(omitted text is not affected by this ordinance)

ARTICLE III. AMENDMENTS TO CHAPTER 18-29, ARTICLE 3

SECTION 1. Section 18-29-301.1 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-301.1 Scope.

The provisions of this article shall govern the general regulations regarding the installation of plumbing not specific to other articles.

SECTION 2. Section 18-29-301.6 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-301.6 Prohibited locations.

Plumbing systems shall not be located in an exit stair shaft, an elevator shaft or in an elevator equipment room and other locations indicated in Titles 13 through 15. Plumbing systems shall not penetrate an exit enclosure, except as expressly allowed by Chapter 10 of the Chicago Building Code.

Exception: Floor drains, sumps and sump pumps shall be permitted at the base of the shaft provided they are indirectly connected to the plumbing system. Refer to Title 14E for additional prohibited electrical locations-Plumbing systems shall not be located in electrical rooms except as expressly allowed by the Chicago Electrical Code.

SECTION 3. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-301.7, as follows:

18-29-301.7 Conflicts.

In instances where conflicts occur between this chapter and the manufacturer's installation instructions, the more restrictive provisions shall apply.

SECTION 4. Section 18-29-303 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-303 Materials.

18-29-303.1 Identification.

Each length of pipe and each pipe fitting, trap, fixture, material and device utilized in a plumbing system shall bear the identification of the manufacturer and any markings required by applicable referenced standards.

18-29-303.2 Installation of materials.

Materials used shall be installed in strict accordance with the standards under which the materials are accepted and approved. In the absence of such installation procedures, the manufacturer's instructions shall be followed. Where the requirements of referenced standards or manufacturer's instructions do not conform to minimum provisions of this chapter, the provisions of this chapter shall apply.

18-29-303.3 Plastic pipe fittings and components.

Plastic pipe, fittings and components shall be third-party certified as conforming to NSF 14. 18-29-303.4 Third-party certification.

Plumbing products and materials required by this chapter to be in compliance with a referenced standard shall be listed by a third-party certification agency as complying with the referenced standard. Products and materials shall be identified in accordance with Section 18-29-303.1.

18-29-303.5 Cast-iron soil pipe, fittings and components.

Cast-iron soil pipes and fittings, and the couplings used to join these products together, shall be third-party listed and labeled. Third-party certifiers and third-party inspectors shall comply with the minimum inspection requirements of Annex A or Annex A1 of the ASTM and CISPI product standards indicated in this chapter for such products.

SECTION 5. Section 18-29-304.4 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-29-304.4 Openings for pipes.

Where openings have been made in walls, floors or ceilings for the passage of pipes, the annular space between the pipe and the sides of the opening shall be sealed with caulking materials or closed with gasketing systems compatible with the plumbing materials and locations.

SECTION 6. Section 18-29-305.1 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-29-305.1 Protection against contact.

Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to prevent direct contact, the sheathing shall have a thickness of not less than 0.008 inch (8 mil) (0.203 mm) and the sheathing shall be made of plastic. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.

SECTION 7. Section 18-29-305.2 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 8. Section 18-29-305.4 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 9. Section 18-29-306.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-306.2 Trenching and bedding.

Where trenches are excavated such that the bottom of the trench forms the bed for the pipe, solid and continuous loadbearing support shall be provided between joints. Bell holes, hub holes and coupling holes shall be provided at points where the pipe is joined. Such pipe shall not be supported on blocks to grade. In instances where the material manufacturer's installation instructions are more restrictive than those prescribed by the code this chapter, the material shall be installed in accordance with the more restrictive requirement. ~~All such trenches and tunnels shall be kept open until the piping has been inspected, tested, and approved.~~

SECTION 10. Section 18-29-306.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-306.3 Backfilling.

Backfill shall be free from discarded construction material and debris. Loose earth, free from rocks, broken concrete, frozen chunks and other rubble, shall be placed in the trench in 6-inch (150 mm) layers and tamped in place until the crown of the pipe is covered by 12 inches (305 mm) of tamped earth. The backfill under and beside the pipe shall be compacted for pipe support. Backfill shall be brought up evenly on both sides of the pipe so that the pipe remains aligned. ~~Where~~ In instances where the manufacturer's installation instructions are more restrictive than those prescribed by the code this chapter, the material shall be installed in accordance with the more restrictive requirement.

SECTION 11. Section 18-29-306.5 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 12. Section 18-29-307.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-307.3 Penetrations of floor-ceiling floor/ceiling assemblies and fire-resistance-rated assemblies.

Penetrations of floor-ceiling floor/ceiling assemblies and assemblies required to have a fire-resistance rating shall be protected in accordance with ~~Chapter 15-8 or 14B-7, as applicable~~ the Chicago Building Code.

SECTION 13. Section 18-29-307.4 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-307.4 Trench location Protection of footings.

~~Trenches~~ Trenching installed parallel to footings shall not extend into the bearing plane of a footing or wall. The upper boundary of the bearing plane is a line that extends downward, at an angle of 45 degrees (0.79 rad) from horizontal, from the outside bottom edge ~~below the 45-degree (0.79 rad) bearing plane~~ of the footing or

wall.

SECTION 14. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-307.5, as follows:

18-29-307.5 Alterations to trusses.

Truss members and components shall not be cut, drilled, notched, spliced or otherwise altered in any way without written approval of a registered design professional. Alterations resulting in the addition of loads to any member (such as HVAC equipment and water heaters) shall not be made without verification by a registered design professional that the truss is capable of supporting such additional loading.

SECTION 15. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-307.6, as follows:

18-29-307.6 Piping material exposed within plenums.

Piping materials exposed within plenums shall comply with the provisions of the Chicago Mechanical Code.

SECTION 16. Section 18-29-308.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-308.2 ~~Deliberately omitted~~ Piping seismic supports.

Where earthquake loads are applicable in accordance with the Chicago Building Code, plumbing piping supports, anchorage and bracing shall be designed and installed for seismic forces in accordance with Chapter 14B-16.

[remainder of this page intentionally blank]

SECTION 17. Table 18-29-308.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Spacing (feet)	1	Table Spacing	18-29-308.5	Hangar
			<u>Maximum Horizontal</u> ¹	<u>Maximum Vertical</u>

Spacing (feet)

AQ

45 15

(omitted text is not affected by this ordinance)

PVG Polyvinyl chloride (PVC) pipe

Stainless steel drainage systems

(omitted text is not affected by this ordinance)

For sizes 2 inches and smaller, a guide shall be installed midway between required vertical supports. Such guides shall prevent pipe movement in a direction perpendicular to the axis of the pipe.

SECTION 18. Section 18-29-308.10 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-308.10 Parallel water distribution systems.

Piping bundles for manifold systems shall be supported in accordance with Table 18-29-308.5. Support at changes in direction shall be in accordance with the manufacturer's installation instructions. ~~Hot and cold water piping shall not be grouped in the same bundle.~~ Where hot water piping is bundled with cold water piping, hot water piping shall be insulated in accordance with Section 18-29-607.5.

SECTION 19. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-308.11, as follows:

18-29-308.11 Thermal expansion tanks.

A thermal expansion tank shall be supported in accordance with the manufacturer's instructions.

SECTION 20. Section 18-29-309.1.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-309.1.1 Base floor elevation.

The base flood elevation shall be used to define areas prone to flooding and shall be established in accordance with zoning/planning code Chapter 16-6.

SECTION 21. Section 18-29-310 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-310 Washroom and Toilet Room Requirements.

18-29-310.1 Light and ventilation.

Washrooms and toilet rooms shall be illuminated and ventilated in accordance with the Chicago Building Code and the Chicago Mechanical Code.

18-29-310.2 Location of fixtures and compartments.

The location of plumbing fixtures and the requirements for compartments and partitions shall be in accordance with Section 18-29-405.3.

18-29-310.3 Interior finish.

Interior finish surfaces of toilet rooms shall comply with the Chicago Building Code.

SECTION 22. Section 18-29-311.1 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-29-311.1 General.

Toilet facilities shall be provided for construction workers in quantities and at locations specified in regulations of the Occupational Safety and Health Administration (OSHA). Such facilities shall be maintained in a sanitary condition. Construction worker toilet facilities of the nonsewer type shall conform to PSAI Z4.3. Where placed outdoors at ground level, toilet facilities of the nonsewer type shall be located at least 5 feet (1524 mm) from abutting property lines.

SECTION 23. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-313, as follows:

18-29-313 Equipment Efficiencies.

18-29-313.1 General.

Equipment efficiencies shall be in accordance with the Chicago Energy Conservation Code.

SECTION 24. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-314, as follows:

18-29-314 Condensate Disposal.

18-29-314.1 Fuel-burning appliances.

Liquid combustion byproducts of fuel-burning condensing appliances shall be collected and discharged to a plumbing fixture or disposal area in accordance with the manufacturer's instructions and Section 18-29-803. Condensate piping shall be of corrosion-resistant material and shall not be smaller than the drain connection on the appliance. Such piping shall maintain a horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

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18-29-314.2 Evaporators and cooling coils.

Condensate drain systems shall be provided for equipment and appliances containing evaporators or cooling coils. Condensate drain systems shall be designed, constructed and installed in accordance with Sections 18-29-314.2.1 through 18-29-314.2.5.

18-29-314.2.1 Condensate disposal.

Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an appropriate place of disposal. Such piping shall maintain a horizontal slope in the direction of discharge

of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope). Condensate shall not discharge into a street, alley or other area so as to cause a nuisance.

18-29-314.2.2 Drain pipe materials and sizes.

Components of the condensate disposal system shall be cast iron, galvanized steel, copper and copper alloy, cross-linked polyethylene, polyethylene, CPVC, PVC or polypropylene pipe or tubing. Components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch (19.1 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 18-29-314.2.2.

Table 314.2.2 Condensate Drain Sizing

EQUIPMENT CAPACITY	MINIMUM CONDENSATE PIPE DIAMETER
Up to 20 tons of refrigeration	3/4 inch
Over 20 tons to 40 tons of refrigeration	1 inch
Over 40 tons to 90 tons of refrigeration	1 1/4 inch
Over 90 tons to 125 tons of refrigeration	1 1/2 inch
Over 125 tons to 250 tons of refrigeration	2 inch

For SI. 1 inch = 25.4 mm, 1 ton of capacity = 3.517 kW.

18-29-314.2.3 Auxiliary and secondary drain systems.

In addition to the requirements of Section 18-29-314.2.1, where damage to any building components could occur as a result of overflow from the equipment primary condensate removal system, one of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired appliance that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a depth of not less than 1 1/2 inches (38 mm), shall be not less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet metal pans shall have a thickness of not less than 0.0236-inch

(0.6010 mm) (No. 24 gage) galvanized sheet metal. Nonmetallic pans shall have a thickness of not less than 0.0625 inch (1.6 mm).

2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.
3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water-level detection device conforming to UL 508 that will shut off the equipment served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.

4. A water-level detection device conforming to UL 508 shall be provided that will shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line or in the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan.

Exception: Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

18-29-314.2.3.1 Water-level monitoring devices.

On down-flow units and all other coils that do not have a secondary drain or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the equipment served in the event that the primary drain becomes restricted. Devices installed in the drain line shall not be permitted.

18-29-314.2.3.2 Appliance, equipment and insulation in pans.

Where appliances, equipment or insulation are subject to water damage when auxiliary drain pans fill, such portions of the appliances, equipment and insulation, shall be installed above the flood level rim of the pan. Supports located inside of the pan to support the appliance or equipment shall be water resistant.

18-29-314.2.4 Traps.

Condensate drains shall be trapped as required by the equipment or appliance manufacturer.

18-29-314.2.4.1 Ductless mini-split system traps.

Ductless mini-split equipment that produces condensation shall be provided with an in-line check valve located in the drain line or a trap.

18-29-314.2.5 Drain line maintenance.

Condensate drain lines shall be configured to permit the clearing of blockages and performance of maintenance without requiring the drain line to be cut.

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SECTION 25. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-315, as follows:

18-29-315 Penetrations.

18-29-315.1 Sealing of annular spaces.

The annular space between the outside of a pipe and the inside of a pipe sleeve or between the outside of a pipe and an opening in a building wall, floor or ceiling assembly penetrated by a pipe shall be sealed in an approved manner with caulking material, foam sealant or closed with a gasketing system. The caulking material, foam sealant or gasketing system shall be designed for the conditions at the penetration location and shall be compatible with the pipe, sleeve and building materials in contact with the sealing materials. Annular spaces created by pipes penetrating fire-resistance-rated assemblies or membranes of such assemblies shall be sealed or closed in accordance with Section 714 of the Chicago Building Code.

ARTICLE IV. AMENDMENTS TO CHAPTER 18-29, ARTICLE 4

SECTION 1. Section 18-29-401.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-401.1 Scope.

This article shall govern the materials, design and installation of plumbing fixtures, faucets and fixture fittings in accordance with the type of ~~occupancy~~, use and shall provide for the minimum number of fixtures for various categories of ~~occupancies and uses~~.

SECTION 2. Section 18-29-401.4 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 3. Section 18-29-401.5 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 4. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-401.6, as follows:

18-29-401.6 Conflicts.

To the extent any law or regulation of the State of Illinois regarding the erection, installation, alteration, repair, relocation, replacement, addition to, operation, use or maintenance of plumbing systems is inconsistent with or conflicts with any requirement of this article of Chapter 18-29, this article is an exercise of the home rule authority of the City of Chicago and preempts the inconsistent or conflicting provision of Illinois law to the maximum extent allowed by the Illinois Constitution.

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SECTION 5. Section 18-29-402.1.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-402.1.1 Used fixtures.

Where used fixtures are to be installed in any new or existing building, such fixtures shall be subject to the inspection and approval of the ~~plumbing inspector~~ Building Commissioner. No used plumbing fixture shall be installed in any building unless such fixture is structurally sound and free from cracks or other defects. No ~~sink, toilet, urinal, bathtub, laundry tray, slop sink, or wash bowl~~ plumbing fixture which has been used in any building or elsewhere shall be installed in any building ~~unless such fixture has, before installation~~[^] been thoroughly washed and disinfected in a solution approved by the ~~board of health~~ Department of Public Health. The ~~plumbing inspector~~ Building Commissioner shall ensure that ~~this provision is strictly enforced~~ and that no used plumbing fixture which may cause the spread of infection or disease is installed in any building ~~in this city~~. No used fixture, even if structurally sound and in sanitary condition, shall be installed in any building ~~in this city~~, unless such fixture is of the design required by the provisions of this article for a similar new fixture.

SECTION 6. Section 18-29-403.1 and Table 18-29-403.1 of the Municipal Code of Chicago are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-403.1 Minimum number of fixtures.

Plumbing For new buildings, additions and changes of occupancy, plumbing fixtures shall be provided for each occupancy and use in the minimum number shown in Table 18-29-403.1^ based on the intended use of the building or space. Occupancies and uses not shown in Table 18-29-403.1 shall be considered individually by the building commissioner Building Commissioner. Occupancies and uses and the number of persons (for various occupancies and uses) shall be as determined by Chapter 13-56 or Chapters 14B-3 and 14B-10, as applicable and Section 18-29-403.1.1.

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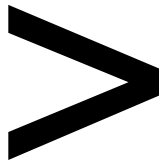
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18-29-403.1.1 Number of occupants.

The total number of occupants shall be the occupant load determined in accordance with Section 1004 of the Chicago Building Code provided that such number may be reduced based on nonsimultaneous occupancy or access controls. Where separate facilities for each sex are required by Section 18-29-403.2 or the number of occupants of each sex is required by Table 18-29-403.1, the number of male occupants and the number of female occupants shall be the total number of occupants divided in half. Where the calculated number of male occupants is not a whole number, it shall be rounded down to the next whole number, and the calculated number of female occupants shall be rounded up to the next whole number so that the sum of male occupants and female occupants is equal to the total number of occupants-Exceptions:

1. The total number of occupants shall not be required to be divided in half where approved statistical data indicate a distribution of the sexes of other than 50 percent of each sex. In such case, the total number of occupants shall be divided based on the approved statistical data.
2. Where a ratio is based on the number of care recipients, detainees or employees in a facility, the number shall be determined in accordance with Table 18-29-403.1, footnote c.
3. In mercantile occupancies with 7,500 square feet (697 m²) or more of gross floor area, the number of occupants shall be determined by dividing the net floor area used by the public or 25 percent of the gross floor area, whichever is smaller, by 100.

18-29-403.1.2 Minimum fixture calculations.

To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the number of occupants or the number of occupants of each sex in accordance with Table 18-29-403.1. Fractional numbers resulting from applying the fixture ratios of Table 18-29-403.1 shall be rounded up to the next whole number. For calculations involving multiple use classifications, the fractional numbers for each use shall first be summed and then rounded up to the next whole number-Exception: One single-user toilet room in accordance with Section 18-29-403.1.3 shall be acceptable for a building or tenant space with an occupant load of 30 or fewer.

18-29-403.1.3 Single-user toilet rooms and bathing rooms.

Plumbing fixtures located in single-user toilet rooms and single-user bathing rooms, including family or assisted-use toilet rooms and bathing rooms required by Section 1109.2.1 of the Chicago Building Code, that comply with Sections 18-29-403.1.3.1 through 18-29-403.1.3.3 shall be included when determining whether the required number of plumbing fixtures is provided for a building or tenant space. Where the required number of plumbing fixtures for a building or tenant space is provided through a combination of single-user and separate facilities, the number of fixtures required in separate facilities for each sex shall be reduced proportionally.

Exceptions: Single-user toilet rooms and bathing rooms shall not be required to comply with Sections 18-29-

403.1.3.1 through 18-29-403.1.3.4 where:

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1. Located within a dwelling unit or sleeping unit.
2. Located within a Group E-2 or I occupancy and intended for use by care recipients or detainees.

18-29-403.1.3.1 Signage.

Single-user toilet rooms and single-user bathing rooms shall be identified as being available for use by all persons, regardless of their sex or gender.

18-29-403.1.3.2 Lock.

The door to a single-user toilet room or single-user bathing room shall have a locking mechanism controlled by the occupant. When engaged, the locking mechanism shall visually indicate to those outside the room that the room is occupied.

18-29-403.1.3.3 Enclosure.

Single-user toilet rooms and single-user bathing rooms shall be enclosed on all sides by walls or partitions which extend from the floor to the ceiling. Adequate light and ventilation shall be provided within each enclosure. Windows or glazing shall be obscured to provide privacy to the occupant.

18-29-403.1.3.4 Waste receptacle.

Single-user toilet rooms shall contain a covered waste receptacle. 18-29-403.1.4

Lavatory distribution.

Where two or more toilet facilities are provided, the required number of lavatories shall be distributed proportionally to the required number of water closets, provided that the ratio of lavatories to water closets and urinals within a toilet facility shall not be less than 1:2.

SECTION 7. Sections 18-29-403.2 through 18-29-403.9 of the Municipal Code of Chicago and their subsections are hereby repealed in their entirety and replaced, as follows:

18-29-403.2 Separate facilities.

Where plumbing fixtures are required, separate facilities shall be provided for each sex or nonseparate facilities shall be provided in accordance with Section 18-29-403.2.1. Where the required number of plumbing fixtures for a building or tenant space is provided through a combination of separate and nonseparate facilities, the number of fixtures required in separate facilities for each sex shall be reduced proportionally.

Exceptions:

1. Separate facilities shall not be required for dwelling units or sleeping units.
2. Separate facilities shall not be required where single-user toilet rooms are provided in accordance with Section 18-29-403.1.3.
3. Separate facilities shall be provided for each sex in sports or entertainment arenas, stadiums, community or convention halls, special events centers and amusement facilities in quantities required by the Illinois Equitable Restroom Act.

18-29-403.2.1 Nonseparate facilities.

Where a toilet facility containing at least three water closets and two lavatories is intended to serve all persons, regardless of their sex or gender, it shall comply with the requirements of Sections 18-29-403.2.1.1 through 18-29-403.2.1.5.

18-29-403.2.1.1 Number of fixtures.

Fixtures in nonseparate toilet facilities shall count toward but not reduce the minimum number of water closets and lavatories required by Section 18-29-403.1.2.

18-29-403.2.1.2 Water closet compartments.

Each water closet shall be located in an individual compartment containing no other plumbing fixtures and complying with Sections 18-29-403.2.1.2.1 through 18-29-403.2.1.2.3.

18-29-403.2.1.2.1 Enclosure.

Each compartment shall be enclosed with solid walls or partitions. Each compartment shall have a single door. When the door is closed, there shall be no gaps in the enclosure between 4.5 inches (114 mm) and 7 feet (2134 mm) above the floor. Portions of the enclosure other than the door shall extend to at least 9 feet (2743 mm) above the floor or to 2 inches (51 mm) below the ceiling, whichever is less. Compartments may be fully enclosed.

18-29-403.2.1.2.2 Lock.

The door to each compartment shall have a locking mechanism controlled by the occupant. When engaged, the locking mechanism shall visually indicate to those outside the compartment that the compartment is occupied.

18-29-403.2.1.2.3 Waste receptacle.

Each compartment shall contain a covered waste receptacle.

18-29-403.2.1.3 Urinals.

Urinals, where provided, shall be located in clearly marked individual compartments with lockable doors or in an area of the toilet facility that is visually separated from other portions of the toilet facility. Urinal partitions shall begin at a height not greater than 12 inches (305 mm) from and extend to not less than 7 feet (2134 mm) above the finished floor surface.

18-29-403.2.1.4 Proximity to single-user toilet room.

A single-user toilet room shall be provided outside of, within 200 feet (70.0 m) of, and not more than one story above or below the entrance to nonseparate toilet facilities containing more than three water closets.

18-29-403.2.1.5 Entrance.

The main entrance to the toilet facility shall not have a door that is capable of being locked when areas served by the toilet facility are occupied.

18-29-403.3 Public and employee toilet facilities.

For buildings and tenant spaces intended for public utilization, customers, patrons and visitors shall be provided with public toilet facilities. Employees associated with buildings and tenant

spaces shall be provided with toilet facilities. The number of plumbing fixtures located within the required toilet facilities shall be provided in accordance with Section 403 for all users. Employee toilet facilities shall be either separate or

combined employee and public toilet facilities.

Exception: Public toilet facilities shall not be required for:

1. Parking garages and parking facilities.
2. Buildings and tenant spaces intended for quick transactions, including takeout, pickup and drop-off having a public access area less than or equal to 400 square feet (37 m²).
3. Mercantile occupancies (including both public and nonpublic areas) that are less than 7,500 square feet (697 m²) in gross floor area.

18-29-403.3.1 Access.

The route to public toilet facilities shall not pass through kitchens, storage rooms or closets. Access to required toilet facilities shall be from within the building. The public shall have access to the required toilet facilities at all times when the building or tenant space is occupied.

Exception: Toilet facilities for storage structures, unconditioned spaces, and kiosks may be located in adjacent buildings under the same ownership.

18-29-403.3.2 Prohibited location.

Toilet facilities shall not open directly into a room or space used for the preparation or storage of food or drink for service to the public.

18-29-403.3.3 Location.

Required public and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities and the path of travel to such facilities shall not exceed 500 feet (152 m).

Exception: The location and maximum distance of travel to required employee facilities in factory, industrial and storage occupancies shall be permitted to exceed that required by this section where the location and maximum distances are approved by the Building Commissioner.

18-29-403.3.4 [Reserved].

18-29-403.3.5 Pay facilities.

Where pay facilities are installed, such facilities shall be in excess of the required minimum facilities. Required facilities shall be free of charge.

18-29-403.3.6 Door locking.

Where a toilet facility contains more than one water closet, the main entrance to the toilet facility shall not be lockable from the inside of the room.

18-29-403.4 [Reserved].

18-29-403.5 Drinking fountain location.

Drinking fountains shall not be required to be located in individual tenant spaces provided that public drinking fountains are located within a path of travel of 500 feet (152 m) of the most

remote location in the tenant space and not more than one story above or below the tenant space.

18-29-403.6 Service sink location.

Service sinks shall not be required to be located within individual tenant spaces provided that a service sink is provided in

an area that can be accessed without passing through another tenant space.

18-29-403.7 Community toilet facilities.

Community toilet facilities and bathing facilities shall be provided on the same story as any sleeping unit that does not have direct access to a private bathroom or shared bathroom.

SECTION 8. Section 18-29-404 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-404 Accessible Plumbing Facilities.

18-29-404.1 Where required.

Accessible plumbing facilities and fixtures shall be in compliance with ~~the Illinois Accessibility Code~~ Chapter 11 of the Chicago Building Code.

18-29-404.2 Accessible fixture requirements-Accessible plumbing fixtures shall be installed in accordance with ICC A117.1 as modified by Chapter 11 of the Chicago Building Code.

SECTION 9. Section 18-29-405.2.1 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 10. Section 18-29-405.2.2 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 11. Section 18-29-405.3 of the Municipal Code of Chicago and its subsections are hereby amended by deleting Figure 18-29-405.3.1 and the language struck through and by inserting the language underscored, as follows:

18-29-405.3 Setting.

Fixtures shall be set level and in proper alignment with reference to adjacent walls. 18-29-405.3.1 Water

closets, lavatories and bidets.

A water closet, lavatory or bidet shall not be set closer than 15 inches (380 mm) from its center to any side wall, partition, vanity or other obstruction-^ Where partitions or other obstructions do not separate adjacent water closets, urinals or bidets, the fixtures shall not be set ef closer than 30 inches (760 mm) center-to-center between toilets or adjacent fixtures water closets, urinals or bidets. There shall be at least 18 inches (457 mm) not less than a 21-inch (533 mm) clearance in front of the a water closet, lavatory.

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ef bidet or urinal to any wall, fixture or door (in the closed position). Water closet compartments shall not be less than 30 inches (760 mm) wide and 60 inches (1525 mm) deep for floor-mounted water closets and not less than 30 inches (760 mm) wide and 56 inches (1422 mm) deep for wall-hung water closets. ~~There shall be at least 8 inches (457 mm) clearance in front of a lavatory to any wall, fixture or door (see Figure 18-29-405.3.1).~~

Exception: An accessible children's water closet shall be set not closer than 12 inches (305 mm) from its center to the required partition or to the wall on one side.

18-29-405.3.2 Urinals Access to lavatories.

A urinal shall not be set closer than 15 inches (381 mm) from the center of the urinal to any side wall, partition, vanity or other obstruction, or closer than 30 inches (760 mm) center to center between urinals (see Figure 18-29-405.3.1). In public and employee toilet facilities, there shall not be more than one door between a required water closet and the nearest lavatory.

18-29-405.3.3 Location of fixtures and piping-Piping, fixtures or equipment shall not be located in such a manner as to interfere with the normal operation of windows, doors or other means of egress openings.

18-29-405.3.4 Water closet compartment.

Each water closet utilized by the public or employees shall occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy-Windows or glazing shall be obscured to provide privacy to the occupant-Exceptions:

1. Water closet compartments shall not be required in a single-user toilet room.
2. Child-sized water closets in child day care facilities and educational occupancies intended for children under six years of age shall be permitted to be separated from each other and from other areas by partitions at least 4 feet (1220 mm) high and lavatories shall be permitted to be located in adjacent common areas.
3. This provision is not applicable to toilet areas located within Group I-3 housing areas.

18-29-405.3.5 Urinal partitions.

Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. The horizontal dimension between walls or partitions at each urinal shall be not less than 30 inches (762 mm). The walls or partitions shall begin at a height not greater than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) measured from the finished backwall surface or to a point not less than 6 inches (152 mm) beyond the outermost front lip of the urinal, whichever is greater.

SECTION 12. Section 18-29-406 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-406 Automatic Clothes Washers.

18-29-406.1 Water connection.

The water supply to an automatic clothes washer shall be protected against backflow by an air gap that is integral with the machine or a backflow preventer shall be installed in accordance with Section 18-29-608. Air gaps shall comply with ASME A112.1.2 or ASME A112.1.3.

18-29-406.2 Waste connection.

The waste from an automatic clothes washer shall discharge through an air break into a standpipe in accordance with Section 18-29-802. The trap and fixture drain for an automatic clothes washer shall be not less than 2 inches (51 mm) in diameter. The fixture drain for the standpipe serving an automatic clothes washer shall connect to a 3-inch (76 mm) or larger diameter fixture branch or stack. Automatic clothes washers that discharge by gravity shall be permitted to drain to an approved trench drain.

Exception: The waste from a domestic automatic clothes washer shall be allowed to discharge through an air break into a laundry sink.

SECTION 13. Section 18-29-409 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-409 Dishwashing Machines.

18-29-409.1 Approval.

Commercial dishwashing machines shall conform to ASSE 1004 and NSF 3. Residential dishwashers shall conform to NSF 184.

18-29-409.2 Water connection.

The water supply to a commercial dishwashing machine shall be protected against backflow by an air gap that is integral with the machine or a backflow preventer shall be installed in accordance with Section 18-29-608. Air gaps shall comply with ASME A112.1.2 or A112.1.3.

18-29-409.3 Waste connection.

The waste connection of a commercial dishwashing machine shall comply with Section 18-29-802.1.6.

18-29-409.4 Residential dishwasher waste connection.

The waste connection of a residential dishwasher shall connect directly to a wye branch fitting on the tailpiece of the kitchen sink, directly to the dishwasher connection of a food waste disposer, or through an air break to a standpipe. The waste line of a residential dishwasher shall rise and be securely fastened to the underside of the sink rim or countertop.

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SECTION 14. Section 18-29-410 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-410 Drinking fountains.

18-29-410.1 Approval.

Drinking fountains shall conform to ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1 or ASME A112.19.3/CSA B45.4, and water coolers shall conform to ASHRAE 18. Drinking fountains, water coolers and water dispensers shall conform to NSF 61, Section 9. Electrically operated, refrigerated drinking water coolers and water dispensers shall be listed and labeled in accordance with UL 399.

18-29-410.2 [Reserved].

18-29-410.3 Accessible drinking fountains.

Where drinking fountains are provided on an exterior site, on a floor, or within a secured area, they shall comply with Section 1109.5 of the Chicago Building Code.

18-29-410.4 Substitution.

In occupancies where food or drink is served to the public for on-site consumption and drinking water in a container is provided free of charge, drinking fountains shall not be required.

Where three or more drinking fountains are required by Table 18-29-403.1, water dispensers shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains.

Where one or more drinking fountain is required by Table 18-29-403.1, commercially sealed bottled drinking water or a water dispenser and disposable containers may be substituted for the required drinking fountains provided that drinking water in a container is available to employees and to the public free of charge.

18-29-410.5 Prohibited location.

Drinking fountains, water coolers and water dispensers shall not be installed in toilet facilities.

SECTION 15. Section 18-29-412 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-412 Floor and Trench Drains.

18-29-412.1 Approval.

Floor drains shall conform to ASME A112.3.1, ASME A113.6.3 or CSA B79. Trench drains shall comply with ASME A112.6.3.

18-29-412.2 Floor drains.

Floor drains shall have removable strainers. The floor drain shall be constructed so that the drain is capable of being cleaned. Access shall be provided to the drain inlet. Ready access shall be provided to floor drains.

Exception: Floor drains serving refrigerated display cases shall be provided with access.

18-29-412.3 Size of floor drains.

Floor drains shall have a drain outlet not less than 2 inches (51 mm) in diameter. 18-29-412.4

Where required.

The following rooms or spaces shall be provided with floor drains located to readily drain the entire floor area:

1. Public self-service laundries.
2. Shared laundry or bathing facilities in Group I or R occupancies.

3. Toilet facilities containing more than one water closet.
4. Single-user toilet rooms for public use.
5. Boiler rooms.

Commercial vehicle repair garages, gasoline stations with grease racks or pits, and oil change facilities shall be provided with floor drains or trench drains connected to a gas and oil interceptor in accordance with Section 18-29-1003.

Where floor drains are installed, one floor drain shall be provided for every 500 square feet (46.5 m²) of floor area.

18-29-412.5 Floor slope.

Where floor drains are provided, floors shall be sloped to the floor drains.

SECTION 16. Section 18-29-413 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-413 Food Waste Disposer Units.

18-29-413.1 Approval.

Domestic food waste disposers shall conform to ASSE 1008 and shall be listed and labeled in accordance with UL 430. Commercial food waste disposers shall be listed and labeled in accordance with UL 430. Food waste disposers shall not increase the drainage fixture unit load on the sanitary drainage system.

18-29-413.2 Domestic food waste disposer waste outlets.

Domestic food waste disposers shall be connected to a drain of not less than 1 1/2 inches (38 mm) in diameter.

18-29-413.3 Commercial food waste disposer waste outlets.

Commercial food waste disposers shall be connected to a drain not less than 1 1/2 inches (38 mm) in diameter. Commercial food waste disposers shall be connected and trapped separately from any other fixtures or sink compartments.

18-29-413.4 Water supply required.

Food waste disposers shall be provided with a supply of cold water. The water supply shall be protected against backflow by an air gap or backflow preventer in accordance with Section 18-29-608.

SECTION 17. Section 18-29-416 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-416 Lavatories.

18-29-416.1 Approval.

Lavatories shall conform to ANSI Z124.3, ASME A112.19.1, ASME A112.19.2, ASME A112.19.3, ASME A4-12.19A, ASME A112.19.9, CSA B45.1, CSA B45.2, CSA B45.3 or CSA B45.4 ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 OR CSA B45.5/IAPMO Z124. Group ~~wash-up equipment~~ wash fixtures shall conform to the requirements of Section 18-29-402. ~~Every~~ For determining the number of lavatories required by Table 18-29-403.1, every 20 inches (500 mm) of rim space of a group wash fixture shall be considered as one lavatory.

18-29-416.2 Cultured marble lavatories.

Cultured marble vanity tops with an integral lavatory shall conform to ~~ANSI Z124.3 or CSA B45r5~~ CSA B45.5/IAPMO Z124.

18-29-416.3 Lavatory waste outlets.

Lavatories and group wash fixtures shall have waste outlets not less than 1 1/4 inches (32 mm) in diameter. A strainer, pop-up stopper, crossbar or other device shall be provided to restrict the clear opening of the waste outlet.

18-29-416.4 Movable lavatory systems-Movable lavatory systems shall comply with ASME A112.19.12.

18-29-416.5 Tempered water for public handwashing facilities-Tempered water shall be delivered from lavatories and group wash fixtures located in public toilet facilities. Tempered water shall be delivered through a water-temperature limiting device that conforms to ASSE 1070/ASME A112.1070/CSA B125.70.

SECTION 18. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-418.3, as follows:

18-29-418.3 Movable sink systems.

Movable sink systems shall comply with ASME A112.19.12.

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SECTION 19. Section 18-29-419.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-419.2 Substitution for water closets.

In each ~~bathroom or toilet room~~ facility, urinals shall not be substituted for more than 67 percent of the required water closets in separate facilities in assembly and educational occupancies. Urinals shall not be substituted for more than 50 percent of the required water closets in separate facilities in all other occupancies. Urinals shall not be substituted for more than 20 percent of the required water closets in nonseparate facilities-Exception: Male urinals shall be provided in sports or entertainment arenas, stadiums, community or convention halls, special events centers and amusement facilities in quantities required by the Illinois Equitable Restroom Act.

SECTION 20. Section 18-29-420.3 of the Municipal Code of Chicago (including the exception) is hereby repealed in its entirety and replaced, as follows:

18-29-420.3 Water closet seats.

Water closets shall be equipped with seats of smooth, nonabsorbent material. Seats of water closets provided for public or employee toilet facilities shall be of the hinged open-front type. Integral water closet seats shall be of the same material as the fixture. Water closet seats shall be sized for the water closet bowl type.

SECTION 21. Section 18-29-420.7 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 22. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-423.3, as follows:

18-29-423.3 Footbaths and pedicure baths.

The water supplied to specialty plumbing fixtures, such as pedicure chairs having an integral foot bathtub and footbaths, shall be limited to not greater than 120°F (49°C) by a water-temperature-limiting device that conforms to ASSE 1070/ASME A112.1070/CSA B125.70 or by a water heater complying with ASSE 1082.

SECTION 23. Section 18-29-424 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-424 Faucets and Fixture Fittings.

18-29-424.1 Approval.

Faucets and fixture fittings shall conform to ASME A112.18.1/CSA B125.1. Faucets and fixture fittings that supply drinking water for human ingestion shall conform to the requirements of NSF

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61, Section 9. Flexible water connectors exposed to continuous pressure shall conform to the requirements of Section 18-29-605.10.

18-29-424.1.1 Faucets and supply fittings.

Faucets and supply fittings shall conform to the water consumption requirements of Section 18-29-604.4.

18-29-424.1.2 Waste fittings.

Waste fittings shall conform to ASME A112.18.2/CSA B125.2, ASTM F409 or to one of the standards listed in Table 18-29-702.4 for aboveground drainage and vent pipe and fittings.

18-29-424.2 Hand showers.

Hand-held showers shall conform to ASME A112.18.1/CSA B125.1. Hand-held showers shall provide backflow protection in accordance with ASME A112.18.1/CSA B125.1 or shall be protected against backflow by a device complying with ASME A112.18.3.

18-29-424.3 Individual shower valves.

Individual shower and tub-shower combination valves shall be balanced-pressure, thermostatic or combination balanced-pressure/thermostatic valves that conform to the requirements of ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1. Such valves shall be installed at the point of use. Shower control valves shall be rated for the flow rate of the installed shower head. Shower and tub-shower combination valves required by this section shall be

equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer's instructions to provide water at a temperature not to exceed 120°F (49°C). In-line thermostatic valves shall not be utilized for compliance with this section.

18-29-424.4 Multiple (gang) showers.

Multiple (gang) showers supplied with a single, tempered water supply pipe shall have the water supply for such showers controlled by an automatic temperature control mixing valve that conforms to ASSE 1069 or CSA B125.3, or each shower head shall be individually controlled by a balanced-pressure, thermostatic or combination balanced-pressure/thermostatic valve that conform to ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1 and that is installed at the point of use. Where a shower head is individually controlled, shower control valves shall be rated for the flow rate of the installed shower head. Such valves shall be equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer's instructions to provide water at a temperature not to exceed 120°F (49°C). Access shall be provided to an ASSE 1069 or CSA B125.3 valve.

18-29-424.5 Bathtub and whirlpool bathtub valves.

Bathtub and whirlpool bathtub valves shall have or be supplied by a water-temperature-limiting device that conforms to ASSE 1070/ASME A112.1070/CSA B125.70 or by a water heater complying with ASSE 1082 or ASSE 1084, except where such valves are combination tub/shower valves in accordance with Section 18-29-424.3. The water-temperature-limiting device required by this section shall be equipped with a means to limit the maximum setting of the device to 120°F (49°C), and, where adjustable, shall be field adjusted in accordance with the manufacturer's instructions to provide water at a temperature not to exceed 120°F (49°C). Access shall be provided to water-temperature-limiting devices that conform to ASSE 1070/ASME A112.1070/CSA B125.70.

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Exception: Access shall not be required for nonadjustable water-temperature-limiting devices that conform to ASSE 1070/ASME A112.1070/CSA B125.70 and are integral with a fixture fitting, provided that the fixture fitting itself can be accessed for replacement.

18-29-424.6 Hose-connected outlets.

Faucets and fixture fittings with hose-connected outlets shall conform to ASME A112.18.3 or ASME A112.18.1/CSA B125.1.

18-29-424.7 Temperature-actuated, flow-reduction devices for individual fixture fittings.

Temperature-actuated, flow-reduction devices, where installed for individual fixture fittings, shall conform to ASSE 1062. A temperature-actuated, flow-reduction device shall be an acceptable method for limiting the water temperature to not greater than 120°F (49°C) at the outlet of a faucet or fixture fitting. Such devices shall not be used alone as a substitute for the balanced-pressure, thermostatic or combination shower valves required in Section 18-29-424.3 or as a substitute for bathtub or whirlpool bathtub water-temperature-limiting valves required in Section 18-29-424.5.

18-29-424.8 Transfer valves.

Deck-mounted bath/shower transfer valves containing an integral atmospheric vacuum breaker shall conform to the requirements of ASME A112.4.2/CSA B125.1.

18-29-424.9 Water closet personal hygiene devices.

Personal hygiene devices integral to water closets or water closet seats shall conform to the requirements of ASME A112.4.2/CSA B45.16.

18-29-424.10 Head shampoo sink faucets.

Head shampoo sink faucets shall be supplied with hot water that is limited to not more than 120°F (49°C). Each faucet shall have integral check valves to prevent crossover flow between the hot and cold water supply connections. The means for regulating the maximum temperature shall be one of the following:

1. A limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70.
2. A water heater conforming to ASSE 1084.
3. **A temperature-actuated, flow-reduction device conforming to ASSE 1062. 18-29-424.11**

Prerinse spray valve.

Prerinse spray valves for commercial food service shall conform to ASME A112.18.1/CSA B125.1.

SECTION 24. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 426, as follows:

18-29-426 Floor Sinks.

18-29-426.1 Approval.

Sanitary floor sinks shall conform to the requirements of ASME A112.6.7.

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**ARTICLE V.
AMENDMENTS TO CHAPTER 18-29, ARTICLE 5**

SECTION 1. Section 18-29-501.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-501.5 Water heater labeling.

All water heaters shall ~~bear the label of an approved agency~~ be third-party certified. Listing by Underwriters Laboratories, American Gas Association (AGA), CSA International or the National Board of Boiler and Pressure Vessel Inspectors, ~~or the ASME Standard to which it was constructed~~ shall constitute evidence of conformance with these standards.

SECTION 2. Section 18-29-501.6 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-501.6 Tankless water heaters.

The temperature of water from tankless water heaters shall be a maximum of 140°F (60°C) when intended for domestic uses. This provision shall not supersede the requirement for protective shower valves in accordance with Section ~~18-29-424.3~~ 4.4 18-29-424.3.

SECTION 3. Section 18-29-502.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-502.1 General.

Water heaters shall be installed in accordance with the manufacturer's ~~installation~~ instructions. Gas and oil-fired water heaters shall conform to the requirements of this chapter and the ~~mechanical chapter~~ the Chicago Mechanical Code. ~~See mechanical chapters for venting requirements of gas or oil burning appliances.~~ Electric water heaters shall conform

to the requirements of this chapter and the provisions of NFPA 70 listed in Article 18-29-14 the Chicago Electrical Code.

SECTION 4. Section 18-29-504.8 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-504.8 Required pan.

Water Where a storage-tank type water heaters or a hot water storage tanks is installed in a locations where water leakage ef from the tanks or connections will cause damage, the tank shall be installed in a galvanized steel or other metal pan of equal corrosion resistance having a minimum thickness of 24 gauge, 0.0276 inch (0.70 mm). Any water heater installed in a cabinet

e provided with a drain pan. pan constructed of one of the following:

1. Galvanized steel or aluminum of not less than 0.0236 inch (0.6010 mm) in thickness.
2. Plastic not less than 0.036 inch (0.9 mm) in thickness. (A plastic pan shall not be installed beneath a gas-fired water heater.)

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18-29-504.8.1 Pan size and drain.

The pan shall not be less than 1 1/2 inches (40 38 mm) deep and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe having a minimum diameter of 4 3/4 inch (25 19 mm) or the outlet diameter of the required relief valve, whichever is larger.

18-29-504.8.2 Pan drain termination.

The pan drain shall extend full-size and terminate over a suitably located indirect waste receptor or floor drain. Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation.

SECTION 5. Section 18-29-505.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-505.1 Unfired vessel insulation.

Unfired hot water storage tanks shall be insulated so that heat loss is limited to a maximum of 15 British thermal units per hour (Btu/h) per square foot (47 W/m²) of external tank surface area. For purposes of determining this heat loss, the design ambient temperature shall not be higher than 65°F (18.3°C). Any ASME stamp or other required indication markings shall remain exceeded to R-12.5 (h * ft² * "FVBtu (R-2.2 m² * K/W).

ARTICLE VI. AMENDMENTS TO CHAPTER 18-29, ARTICLE 6

SECTION 1. Section 18-29-601 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-601 General.

18-29-601.1 Scope.

This article shall govern the materials, design and installation of water supply systems, both hot and cold, for utilization in connection with human occupancy and habitation and shall govern the installation of individual water supply systems. In any building or structure in the city of Chicago, any water pipe or pipes or systems of water piping which receives or is intended to receive, its service from the Chicago Waterworks System shall be administered and enforced by the commissioner of the department of water management. In all premises supplied with water from the Chicago Water Works System, the owner, agent, lessee, or occupant shall maintain in good condition all plumbing fixtures and appurtenances, service pipes including meter connections, and water supply piping from the curb valve to the furthermost remote water outlet.

18-29-601.2 Inspections and notices.

It shall be the duty of the commissioner of water management. Either the Commissioner of Water Management or the Commissioner of Buildings shall inspect the installation of, extension to, or any alterations in all water service, water supply or water distribution piping systems in all buildings, structures, and premises having service from the Chicago Water Works System.

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~~The officers and employees of the department of water management or anyone authorized to act for it, shall have free entry and access to any building, structure or premise or part thereof whether completed or in the process of erection, for the purpose of determining whether the building provisions of this code are complied with, and wherever it is found that such installation, extension, or alteration does not conform, it shall be the duty of the commissioner of water management to serve written notice on owner, occupant or person in possession of such building, structure or premise of non-compliance to make such alterations or repairs as are necessary to eliminate the cause or causes of nonconformity, and Enforcement of this chapter shall be in accordance with Chapter 14A-3, provided however that in case of failure to do so correct a violation within 10 days from the date of such a written notice of violation is sent, the commissioner of water management Commissioner of Water Management may cause the water supply from the Chicago Water Works System to be shut off until the requirements in the building provisions of this code of this chapter are complied with. Nothing herein contained shall be deemed to apply to any building, structure or premise existing on August 3, 1938, unless the plumbing or water distribution system in said existing buildings are changed in a degree exceeding "minor repairs" as defined in Section 18-29-202 of this Code or where conditions hazardous to health exist due to connections to the city water supply in violation of this code.~~

18-29-601.3 Access for inspections.

The department of water management and any person delegated or authorized by the commissioner of water management shall have free entry and access to every part of any building, structure or premises whenever such entry or access is deemed necessary or advisable. Wherever any person, in possession, charge or control of any such building structure, or premises, into which any officer or authorized person shall desire entry or access, shall refuse to permit such entry or access, the commissioner of water management may turn off the water service from said building, structure or premises, until the person in possession, charge or control of the applicable building, structure or premises gives notice to the commissioner in writing that entry or access will be permitted or provided and until such entry or access shall have been accomplished. Access for inspections shall be in accordance with Section 14A-1-104.13.

(omitted text is not affected by this ordinance)

SECTION 2. Section 18-29-602.1.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-602.1.1 Obligations of water consumers.

Every person who shall construct, enter, alter, or use any part of the Chicago Water Works System and every consumer of water and owner, occupant, or person in possession, charge or control of any building, structure, or premises having service therefrom, shall be governed by and subject to the provisions of this code governing the use of water and also such other rules and regulations governing the use of water as may from time to time be promulgated by the ~~commissioner of water-management~~. It is hereby made the duty of the ~~commissioner of water management to enforce the provisions of this code governing the use of water, and al so any rules-and-regulations that may be promulgated-as-aforsaid~~ Commissioner of Water Management.

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SECTION 3. Section 18-29-602.4 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-602.4 Reserve water supply.

Whenever a continuous supply of water is deemed indispensable by the ~~commissioner of water management or fire commissioner~~ Commissioner of Buildings, Fire Commissioner or Commissioner of Water Management, the owner or occupant shall provide a tank (or other receptacle of sufficient capacity) to supply the needs of such building, structure or premises, including any required for fire protection, during the period that the pipe section to which the service pipe is connected is shut off for repairs, connections, extensions or testing purposes.

SECTION 4. Section 18-29-603 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-603 Water Service.

18-29-603.1 Size of water service pipe and water meter.

The service pipe is the pipe which conveys the water from the mains of the Chicago Waterworks System to the building, structure, or premises served. Each service pipe shall be of sufficient size to permit the continuous and ample flow of water to supply adequately all floors at any given time. No service pipe of a nominal pipe size less than 1 inch (25 mm) shall be installed in any public way or other public place of the city, nor connected to the mains of the Chicago Waterworks System. The water service pipe and water meter shall be sized to supply water to the premises in the minimum quantities and at the minimum pressures required in this chapter. Water service pipe shall be sized in accordance with Section 18-29-604.10 for domestic uses plus any additional requirements for fire protection systems. New water service pipe shall not be less than 1 inch (25.4 mm) in diameter.

18-29-603.1.1 Size and motor Meter spreader connection.

~~Service pipes shall be sized according to the formula prescribed in Section 18-29-604.10.1, plus any additional requirements for fire protection purposes.~~ Each The water service pipe shall include a meter spreader connection of like size and of sufficient length to accommodate a full-size meter.

18-29-603.1.2 Sizing of connections. Water service for fire protection systems.

City connection shall be increased 2 inches where used to serve domestic and fire protection demands when the domestic exceeds 2 inches. The minimum size of water service pipe required for water-based fire protection systems shall be determined by the Fire Commissioner in accordance with the Chicago Building Code.

18-29-603.1.3 Permits to install water supply in buildings Permit required.

~~Application.~~ No person shall install in any building or structure in the city any pipe or pipes or systems of piping which receives its service from the Chicago Waterworks System, nor shall make any alterations in, or additions or

extensions to, any structure which was erected previous to August 3, 1938, until such person shall have made application to the department of water management Commissioner of Water Management for permission for such installation, alteration, addition, or extension^ provided, however, that wherever such installation or construction work is done,

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~~property, such application may be dispensed with. Permits for emergency repairs shall be in accordance with Section 14A-4-401.1.1.~~

~~structure, of water supply or water distribution pipes, or systems of piping, shall be in writing upon printed forms furnished by the department of water management.~~

~~Service Shut Off Until Permit Issued. The commissioner of water management Commissioner of Water Management may withhold or shut off service from any building, structure, or premises, or to any portion thereof, in which shall be found any plumbing work, fixture, or any apparatus which has not been installed in accordance with the provisions of this chapter, until such plumbing work, fixture, or apparatus has been disconnected or until a proper permit has been issued and the violation of this chapter has been corrected.~~

(omitted text is not affected by this ordinance) 18-29-603.2.1 Water supply

systems installed near a sewer structure.

(omitted text is not affected by this ordinance)

~~c) Both the The water supply system and the sewer structure shall be constructed of a type of cast-iron pipe-hub and spigot, ductile iron pipe, or copper or copper-alloy tubing, listed in Table 18-29-605.4, and the sewer structure shall be constructed of a type of cast-iron pipe, ductile iron pipe, copper or copper-alloy tubing or PVC pipe, listed in Table 18-29-702.3 when:~~

- ~~i) it is impossible technically and economically impractical to obtain proper lateral separation as described in subsection (b)(1) above; or~~
- ~~ii) it is impossible technically and economically impractical to obtain proper vertical separation as described in subsection (b)(2) above; or~~

(omitted text is not affected by this ordinance)

~~d) Special conditions. Alternate proposals shall be presented to the commissioner of water management Commissioner of Water Management when extreme topographical, geological or existing structural conditions make compliance with subsection (b) of this section technically and economically impossible impractical. The commissioner Commissioner may approve such a proposal if in his the Commissioner's determination it is watertight construction and structurally equivalent to an approved water main material.~~

(omitted text is not affected by this ordinance) 18-29-603.2.3 Backfill.

No ashes, cinders or refuse shall be used in backfilling any trench or excavation in which service pipes are installed. Each service pipe trench from the water main to the property line shall be filled with sand and compacted by flooding with water. When a service pipe is to be installed in soil which may have a destructive or deleterious effect it must be protected by methods approved by the department of water management Commissioner of Water Management.

18-29-603.3 Metered service.

No building, structure, or premises shall be allowed to have service from the Chicago Waterworks System until an application in writing has been made to the ~~commissioner of water~~ Commissioner of Water Management by the person desiring such service, and until ~~said commissioner~~ the Commissioner of Water Management has given permission[^] provided the Commissioner of Water Management may delegate such authority to the Commissioner of Buildings.

(omitted text is not affected by this ordinance) 18-29-

603.3.3 Licensed and bonded contractor.

Where this chapter or the rules or regulations of the ~~department of water~~ Commissioner of Water Management provide for the installation of a water meter on any service pipe supplying water from the Chicago Waterworks System to any building, structure, or premises, such meter shall be installed by a licensed and bonded plumbing contractor.

18-29-603.3.4 Location.

The location of such meter, either inside or outside of any building or structure, shall be determined in writing by the ~~water management commissioner~~ Commissioner of Water Management in accordance with this section. The installation of any water meter at any location other than that determined permitted by the ~~said commissioner~~ Commissioner is prohibited. Installation of any water meter shall be in accordance with the following

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1. No meter may be installed ~~in the living quarters of a building~~ within a dwelling unit in a building containing more than three dwelling units or where the meter serves more than three dwelling units.

(omitted text is not affected by this ordinance)

5. Service used in conjunction with trunk lines (private water mains) requiring private fire hydrants shall have compound meters installed in a meter vault in the public way. Private hydrants are to be painted federal safety green, ~~annually inspected and tested by the commissioner of fire. Results and inspection reports are to be filed with the department of water management within 30 days of inspection or test.~~

18-29-603.3.5 Construction of meter vaults.

Wherever a water meter is installed in the ground, either inside or outside of any building or structure on public or privately owned property, it shall be enclosed in a meter vault. Such vault shall be built of hard pressed common brick or portland cement concrete blocks laid up in portland cement mortar, poured portland cement concrete, extra heavy, salt-glazed vitrified clay tile pipe, portland cement concrete pipe, or equally durable material. This meter vault shall be provided with a ~~cast iron~~ cast-iron cover frame and removable ~~cast iron~~ cast-iron cover. Each meter vault shall be built to conform to the specifications and dimensions for meter vaults ~~eft-file at the offices of the department of water management~~ ent issued by the Commissioner of Water Management.

18-29-603.3.6 Installation of taps.

No water main shall be tapped other than by a tapper employed by the ~~department of water management~~ Department of Water Management, and all tapping shall be performed only under the authority of the ~~commissioner of water maRagement~~ Commissioner of Water Management. All service cocks or ferrules must be inserted at or

near the top of the street main, and not nearer than 6 inches (150 mm) from the bell of the pipe. The size of the cock shall be that specified in the permit. Each service pipe shall have its own independent tap at the main and said tap shall be of the type in use by the ~~department of water management~~ Department of Water Management.

18-29-603.3.7 Plans accompany permit application.

No permit for the installation of any pipe or system of piping taking water from the Chicago Waterworks System for distribution in any building or structure shall be granted until a plan of such water supply or distribution system has been examined and approved by the ~~department of water management~~ Commissioner of Buildings or Commissioner of Water Management. Such plan or plans shall be presented with the application for permit ~~to the department of water management in duplicate~~, and shall clearly show the complete water supply piping system from the service to the plumbing fixtures and other appliances including fire protection equipment, to which such water supply piping system is connected, together with detail drawings of connections to surge tanks, storage tanks, pressure tanks, filters, swimming pools, bathing and display pools, hydrotherapy pools, sterilizers, condensers, compressors, reservoirs, and washers. ~~Said plans shall be drawn to a scale of not less than 1/8 inch to the 1 foot; provided, however, that detail plans shall be drawn to 1/4 inch scale and diagrams may be presented in either horizontal and vertical plans or isometric form.~~

For private water systems within the city City of Chicago the owner, agent, contractor or permittee shall provide to the ~~department of water management~~ Commissioner of Water Management an ~~as-built~~ as-built drawing within 30 days of completion of the private water system. The ~~as-built~~ as-built drawing shall identify the location and size for every main, control valve, meter vault, fire hydrant, line valve, service valve, meter and individual service location connected to the Chicago Water Works System.

18-29-603.3.8 Notification of wrecking buildings for terminating water service.

No building, structure, or premises shall be permanently abandoned, wrecked, or destroyed without the previous notification, in writing, to the ~~commissioner of water management~~ Commissioner of Water Management of such abandonment, wrecking or destroying, in order that the water service may be shut off, and leaking or wasting water shall be eliminated or prevented; and accompanying said notification, ample financial provisions, such as the deposit of the estimated costs of disconnection and sealing of water service pipes or posting of a surety bond, shall be made to the satisfaction of said ~~commissioner of water management~~ the Commissioner of Water Management to ensure the payment of all costs and charges for the shutting off of said water service. Such notification and assurance of payment shall be given by the person in charge of the wrecking or destroying of the building or by the owner of the building, structure, or premises.

No person, other than employees, agents or contractors of the ~~department of water management~~ Department of Water Management, shall be allowed to operate any line valve in any water main. Such employees, agents and contractors shall follow the ~~department's~~ Department's written policy for service terminations. If the termination is not performed pursuant to the ~~department's~~ Department's written policy, in addition to other applicable remedies, the ~~commissioner of water management~~ Commissioner of Water Management may repair the defective termination at the owner's expense, require the owner to repair the defective termination, or terminate any new water service to the building at the owner's expense.

SECTION 5. Section 18-29-604.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-604.1 General.

The design of the water distribution system shall conform to accepted engineering practice. Methods utilized to determine pipe sizes shall be approved by the ~~commissioner of water management~~ Commissioner of Buildings.

SECTION 6. Section 18-29-604.3 of the Municipal Code of Chicago is hereby amended by inserting the language

underscored, as follows:

18-29-604.3 Water distribution system design criteria.

The water distribution system shall be designed, and pipe sizes shall be selected such that under conditions of peak demand, the capacities at the fixture supply pipe outlets shall not be less than shown in Table 18-29-604.3. The minimum flow rate and flow pressure provided at fixtures and appliances not listed in Table 18-29-604.3 shall be in accordance with the manufacturer's installation instructions.

SECTION 7. Section 18-29-604.4 and Table 18-29-604.4 of the Municipal Code of Chicago are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-604.4 Maximum flow and water consumption.

The maximum water consumption flow rates and quantities for all plumbing fixtures and fixture fittings shall be in accordance with Table 18-29-604.4. ~~Water consumption for urinals listed in the following exceptions shall not be greater than 1.5 gallons (5.7 L) per flushing cycle.~~

Exceptions:

1. Blowout design fixtures water closets having a water consumption not greater than 3 1/2 gallons (13 L) per flushing cycle.
2. ~~Penalware~~ Vegetable sprays.
3. Clinical sinks having a water consumption not greater than 4 1/2 gallons (17 L) per flushing cycle.

(omitted text is not affected by this ordinance)

Table 18-29-604.4

Maximum Flow Rates and Consumption for Plumbing Fixtures and Fixture Fittings

Plumbing Fixture or Fixture Fitting	Maximum Flow Rate or Quantity ³
Lavatory, private	2-515 gpm at 80 60 psi
Lavatory, public (other than metennq)	0.5 gpm at 80 60 psi
Lavatory, public-; (metering) or self closing	0t5 0.25 gallons per metering cycle
Shower head -	2-5 Z0 gpm at 80 psi

(table continues on following page)

Sink faucet	2-5 Z2 gpm at 60 psi
Sink faucet (residential kitchen)	1.8 qpm at 60 psi
Urinal	4t0 0J5 gallons per flushing cycle
Water closet	4t€ 1.28 gallons per flushing cycle or equivalent dual flush ^c

For SI: 1 gallon = 3.785 L, 1 gpm = 3.785 L/m, 1 psi = 6.895 kPa

- a. Consumption tolerances shall be determined from referenced standards.
- b. A hand-held shower spray is a shower head.
- c. A dual flush water closet where one third of the sum of the high flush volume plus twice the low flush volume is less than or equal to 1.28 gallons.

SECTION 8. Chapter 18-29 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-29-604.4.1, as follows:

18-29-604.4.1 WaterSense compliance.

New and replacement water closets, urinals, shower heads, weather-based irrigation controllers, spray sprinkler bodies, commercial pre-rinse spray valves and private residential lavatory faucets shall meet the specifications required for the United States Environmental Protection Agency's WaterSense program label and shall bear such label or be approved in accordance with this chapter.

SECTION 9. Section 18-29-604.4.2 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 10. Table 18-29-604.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Table 18-29-604.5 Minimum Sizes of Fixture Water Supply Pipes

Fixture	Minimum Pipe Size (inch)
Bathtubs; (60" by 32" and smaller)	1/2
Bathtubs: Larger (larger than 60" by 32")	1/2
<i>(omitted text is not affected by this ordinance)</i>	
Drinking fountain	4/2 3/8
Hose bibbs	3/4 1/2
Kitchen sink	1/2
Domestic	3/4
C o m m p r i n l	3/4
<i>(omitted text is not affected by this ordinance)</i>	
<i>(table continues on following page)</i>	

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Sinks, service	3/4 1/2
<i>(omitted text is not affected by this ordinance)</i>	
Urinal, flushometer valve	4 3/4
Wall hydrant	3/4 1/2
<i>(omitted text is not affected by this ordinance)</i>	
Water closet, flush tank	4/2 3/8
Water closet, flushometer valve	1
<i>(omitted text is not affected by this ordinance)</i>	

SECTION 11. Section 18-29-604.8.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-604.8.1 Valve design.

The pressure reducing valve shall be designed to remain ~~closed~~ open to allow uninterrupted water flow in case of valve failure.

SECTION 12. Section 18-29-604.9 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-604.9 ~~Dolboratoly omitted~~ Water hammer.

The flow of velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A water-hammer arrestor shall be installed where quick-closing valves are utilized. Water-hammer arrestors shall be installed in accordance with the manufacturer's instructions. Water-hammer arrestors shall conform to ASSE 1010.

SECTION 13. Section 18-29-604.10 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-604.10 Size of water supply pipes.

~~Each main supply pipe, principal supply pipe, branch supply pipe, riser pipe, distributing pipe, or branch distributing pipe shall be of a size which under normal pressure shall deliver a full volume of water to each and all of its outlets sized in accordance with this section.~~

(omitted text is not affected by this ordinance)

18-29-604.10.1.2 Size of piping.

~~The size of piping shall be such that the velocity of each flow during maximum domestic demand will not exceed 8 feet (2440-mm) per second (2.44 m/s) velocity in the main supply-pipe, principal supply-pipe and branch supply pipe. When a water service requires a pump, the velocity of flow in the service shall not exceed 5 feet (1525 mm) per~~

(omitted text is not affected by this ordinance)

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SECTION 14. Section 18-29-604.11 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-604.11 Individual pressure balancing in-line valves for individual fixture fittings.

Where individual pressure balancing in-line valves for individual fixture fittings are installed, such valves shall comply with ASSE 1066. Such valves shall be installed in a location with access. The valves shall not be utilized alone as a substitute for the balanced pressure, thermostatic or combination shower valves required by Section 18-29-424.3.

SECTION 15. Section 18-29-605.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-605.3 Lead content of water supply pipe and fittings.

The maximum lead content of pipe and pipe fittings (including valves and faucets) utilized in the water supply system shall be governed by the federal Safe Drinking Water Act and applicable U.S.E.P.A. regulations, as amended. Pipe and pipe fittings, including valves and faucets, utilized in the water supply system shall have not more than 8-percent lead content.

605.3.1 Lead content of drinking water pipe and fittings.

Pipe, pipe fittings, joints, valves, faucets and fixture fittings utilized to supply water for drinking or cooking purposes shall comply with NSF 372 and shall have a weighted average lead content of 0.25 percent or less.

SECTION 16. Table 18-29-605.6 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Table 18-29-605.6 Pipe Fittings

(omitted text is not affected by this ordinance)

*Polypropylene (PP) plastic pipe and tubing*³

AST-M-F 1442 ASTM F2389; CSA B137.11

(omitted text is not affected by this ordinance)

*Chlorinated polyvinyl chloride (CPVC) plastic*³

ASSE 1061; ASTM D2846; ASTM F 437; ASTM F 43; B137.6

Copper or copper alloy

ASME B 16.15; ASME B 16.18; ASME B 16.22; ASME B 16.26; ASME B 16.29; ASME B 16.32 ASME B16.51; F1476; ASTM F1548; ASTM F3226

Gray iron and ductile iron

ASTM F1476; ASTM F1548; AWWA C 110/A21.10: A

(omitted text is not affected by this ordinance)

SECTION 17. Section 18-29-605.10 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-605.10 ~~Deliberately omitted Flexible water connectors-Flexible water connectors exposed to continuous pressure shall conform to ASME A112.18.6/CSA B125.6. Access shall be provided to all flexible water connectors. Flexible water connectors for sink and lavatory faucets and water closets shall not exceed 30 inches (762 mm).~~

SECTION 18. Section 18-29-605.14 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-605.14 Copper pipe.

Joints between copper or copper-alloy pipe or fittings shall comply with Sections 18-29-605.14.1 through ~~18 29 605.14.3~~ 18-29-605.14.5.

18-29-605.14.1 ~~Deliberately omitted Brazed joints-Joints surfaces shall be cleaned. An approved flux shall be applied where required. The joint shall be brazed with a filler metal conforming to AWS A5.8.~~

18-29-605.14.2 ~~Deliberately omitted Mechanical joints.~~

Mechanical joints shall be installed in accordance with the manufacturer's instructions. 18-29-605.14.3

Soldered joints.

Solder joints shall be made in accordance with the methods of ASTM B 828. All cut tube ends shall be reamed to the full inside diameter of the tube end. All joint surfaces shall be cleaned. A flux conforming to ASTM B 813 shall be applied. The joint shall be soldered with a solder conforming to ASTM B 32. The joining of water supply piping shall be made with lead-free solder and fluxes. "Lead free" shall mean a chemical composition equal to or less than 0.2 percent lead. Solder and flux joining pipe or fittings intended to supply drinking water shall conform to NSF 61.

18-29-605.14.4 Threaded joints-Threads shall conform to ASME B1.20.1. Pipe-joint compound or tape shall be applied on the male threads only.

18-29-605.14.5 Welded joints-Joint surfaces shall be cleaned. The joint shall be welded with an approved filler metal.

SECTION 19. Section 18-29-605.15 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-605.15 Copper tubing.

Joints between copper or copper-alloy tubing or fittings shall comply with Sections 18-29-605.15.1 through 18-29-605.15.4 18-29-605.15.7.

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(omitted text is not affected by this ordinance)

18-29-605.15.3 Grooved and shouldered mechanical joints.

Grooved and shouldered mechanical joints shall comply with ASTM F1476, shall be made with an approved elastomeric seal and shall be installed in accordance with the manufacturer's instructions. Such joints may be exposed or concealed.

18-29-605.15.4 Mechanical joints.

Mechanical joints shall be installed in accordance with the manufacturer's instructions. 18-29-605.15.5

Press-connect joints.

Press-connect joints shall conform to one of the standards indicated in Table 18-29-605.6 and shall be installed in accordance with the manufacturer's instructions. Cut tube ends shall be reamed to the full inside diameter of the tube end. Joint surfaces shall be cleaned. The tube shall be fully inserted into the press-connect fitting. Press-connect joints shall be pressed with a tool certified by the fitting manufacturer.

43-29-605.15.4 18-29-605.15.6 Soldered joints.

(omitted text is not affected by this ordinance)

18-29-605.15.7 Push-fit fitting joints.

Push-fit fittings shall conform to ASSE 1061 and shall be installed in accordance with the manufacturer's instructions.

SECTION 20. Section 18-29-605.28 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-605.28 Permissible exceptions.

Any and all exceptions to this provision Section 18-29-605 will shall only be permitted er+ly by action of the commissi oner of water management Commissioner of Water Management.

SECTION 21. Section 18-29-606.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-606.1 Location of full-open valves.

(omitted text is not affected by this ordinance)

4.

On the top of every water down-feed pipe in occupancies other than ~~one- and two-family residential~~ Group R-5 occupancies;

(omitted text is not affected by this ordinance)

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SECTION 22. Section 18-29-606.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-606.2 Location of shutoff valves.

(omitted text is not affected by this ordinance)

1. On the fixture supply to each plumbing fixture ~~except one- and two-family or multiple family residential occupancies other than bathtubs and showers in Group R occupancies, or individual guestrooms and other than in individual dwelling units or sleeping units that are provided with unit shutoff valves in hotels, motels, boarding houses and similar occupancies or shutoff valves for each bathroom group;~~

(omitted text is not affected by this ordinance)

SECTION 23. Section 18-29-606.5.1.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through, as follows:

18-29-606.5.1.1 Requirements.

All hydropneumatic systems shall consist of a water pump or pumps and a pressure tank and shall be provided with controls to insure complete automatic operation. ~~The material and construction of the tank shall be in accordance with the ASME Rules for the Construction of Unfired Pressure Vessels, Section VIII dated 1973.~~

SECTION 24. Section 18-29-606.5.3.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-606.5.3.1 Approval required.

No check valve shall be installed unless the design and construction thereof shall first have been approved by the ~~commissioner of water management~~ Commissioner of Buildings or Commissioner of Water Management.

SECTION 25. Section 18-29-606.5.4.3 of the Municipal Code of Chicago is hereby amended by deleting the

language struck through and by inserting the language underscored, as follows:

18-29-606.5.4.3 Covers and support.

Such tanks shall have bolted watertight covers of the same material as the tank and shall be located and housed to prevent external pollution. The ~~building commissioner~~ Commissioner of Buildings shall approve the support for all such tanks before the permit is issued.

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SECTION 26. Section 18-29-606.6 of the Municipal Code of Chicago is hereby amended by deleting the language struck through, as follows:

18-29-606.6 Test of distribution pipes.

The entire water distribution system within buildings shall be tested ~~in the presence of a plumbing inspector~~ utilizing a water or air pressure test. All piping, fittings, valves and equipment except any atmospheric tank shall be tested to 1 1/2 times its designed pressure but not less than 100 psi (690 kPa). When the test pressure exceeds 100 psi (690 kPa) only a hydrostatic test shall be given.

SECTION 27. Section 18-29-607 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-607 Hot Water Supply System.

18-29-607.1 Where required.

In residential occupancies, hot water shall be supplied to plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleansing, laundry or building maintenance. In nonresidential occupancies, hot water shall be supplied for culinary purposes, cleansing, laundry or building maintenance purposes. In nonresidential occupancies, hot water or tempered water shall be supplied for bathing and washing purposes.

No water exceeding 140°F (60°C) shall discharge into any lavatory, sink, bathtub or shower. This provision shall not supersede the requirements for temperature-limiting valves in Section 18-29-424.

18-29-607.1.1 Temperature limiting means.

A thermostat control for a water heater shall only serve as the temperature limiting means for the purpose of complying with the requirements of this chapter for maximum hot or tempered water delivery temperature at fixtures where the water heater complies with ASSE 1082 or ASSE 1085.

18-29-607.1.2 Tempered water temperature control.

Tempered water shall be controlled by one of the following:

1. A limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70 and set to not greater than 100°F (43°C).
2. A thermostatic mixing valve conforming to ASSE 1017.
3. A water heater conforming to ASSE 1082.
4. A water heater conforming to ASSE 1084.

This provision shall not supersede the requirement for protective shower valves in accordance with Section 18-29-424.

18-29-607.2 Hot or tempered water supply to fixtures.

The developed length of hot or tempered water piping, from the source of hot water to the fixtures that require hot or tempered water, shall not exceed 50 feet (15 240 mm). Recirculating system piping and heat-traced piping shall be considered to be sources of hot or tempered water.

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18-29-607.2.1 Circulation systems and heat trace systems for maintaining heated water temperature in distribution systems.

For Group R-2, R-3, R-4 and R-5 occupancies that are four stories or less in height above grade plane, the installation of heated water circulation and temperature maintenance systems shall be in accordance with Section R403.5.1 of the Chicago Energy Conservation Code. For other than Group R-2, R-3, R-4 and R-5 occupancies that are four stories or less in height above grade plane, the installation of heated water circulation and heat trace systems shall be in accordance with Section C404.6 of the Chicago Energy Conservation Code.

18-29-607.2.1.1 Pump controls for hot water storage system.

The controls on pumps that circulate water between a water heater and a storage tank for heated water shall limit operation of the pump from heating cycle startup to not greater than 5 minutes after the end of the cycle.

18-29-607.2.1.2 Demand recirculation controls for distribution systems.

A water distribution system having one or more recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold water supply pipe shall be a demand recirculation water system. Pumps shall have controls that comply with both of the following:

1. The control shall start the pump upon receiving a signal from the action of a user of a fixture or appliance, sensing the presence of a user of a fixture, or sensing the flow of hot or tempered water to a fixture fitting or appliance.
2. The control shall limit the temperature of the water entering the cold water piping to 104°F (40°C).

18-29-607.2.2 Piping for recirculation systems having temperature-actuated mixing valves.

Where a temperature-actuated mixing valve is used in a system with a hot water recirculating pump, the hot water or tempered water return line shall be routed to the cold water inlet pipe of the water heater and the cold water inlet pipe or the hot water return connection of the temperature-actuated mixing valve.

18-29-607.3 Thermal expansion control.

Where a storage water heater is supplied with cold water that passes through a check valve, pressure reducing valve or backflow preventer, a thermal expansion control device shall be connected to the water heater cold water supply pipe at a point that is downstream of all check valves, pressure reducing valves and backflow preventers. Thermal expansion tanks shall be sized in accordance with the tank manufacturer's instructions and shall be sized such that the pressure in the water distribution system shall not exceed that required by Section 18-29-604.8.

18-29-607.4 Flow of hot water to fixtures.

Fixture fittings, faucets and diverters shall be installed and adjusted so that the flow of hot water from the

fittings corresponds to the left-hand side of the fixture fitting.

Exception: Shower and tub/shower mixing valves conforming to ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1 /CSA B125.1, where the flow of hot water corresponds to the markings on the device.

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18-29-607.5 Insulation of piping.

For other than Group R-2, R-3, R-4 and R-5 occupancies that are four stories or less in height above grade plane, piping to the inlet of a water heater and piping conveying water heated by a water heater shall be insulated in accordance with Section C404.4 of the Chicago Energy Conservation Code. For Groups R-2, R-3, R-4 and R-5 that are four stories or less in height above grade plane, piping to the inlet of a water heater and piping conveying water heated by a water heater shall be insulated in accordance with Section R403.5.3 of the Chicago Energy Conservation Code.

18-29-607.6 Expansion joints.

Mechanical expansion joints may be used where necessary to provide for expansion and contraction of piping. Access to mechanical expansion joints shall be provided. For hot water piping, the expansion function shall be provided by the flexing of the piping material with expansion loops or swing joints. The piping shall be properly anchored and installed as follows:

1. Each hot water riser shall be provided with anchors at a maximum distance of 100 feet (30.5 m) with an expansion loop of adequate length provided between such anchors.
2. Each hot water main shall be provided with anchors at a maximum distance of 100 feet (30.5 m) with an expansion loop of adequate length provided between such anchors. Offsets of 90 degrees in a horizontal main shall be of adequate length to absorb expansion by flexure.
3. Branches from mains connected to risers shall be provided with a swing joint of adequate length unless the branch is of adequate length to absorb expansion by flexure.
4. Branches from risers to fixtures shall be provided with a swing joint of adequate length unless the branch is of adequate length to absorb expansion by flexure.

SECTION 28. Section 18-29-608.16.4 of the Municipal Code of Chicago is hereby amended by deleting the language struck through, as follows:

18-29-608.16.4 Fire protection equipment, risers, standpipes, tanks to be drained and flushed.

All fire protection equipment, tanks, risers, standpipes, domestic house tanks, compression tanks and all other tanks that have a weight check valve for backflow prevention and are supplied with water from the Chicago Waterworks System shall be drained and flushed at least every 12 months ~~in the presence of a plumbing-inspector~~. Further, fire protection systems and equipment shall be kept free from accumulations of sand, silt, and stagnant water which would nullify the action of the chlorine content of city water.

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ARTICLE VII. AMENDMENTS TO CHAPTER 18-29, ARTICLE 7

SECTION 1. Section 18-29-701 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-701 General.

(omitted text is not affected by this ordinance) 18-29-701.2

Sewer required.

Every building in which plumbing fixtures are installed and every premises having drainage piping shall be connected to a public sewer, where available. When a public sewer is not available, drain pipes from buildings shall be connected to a drainage system for sewage disposal, as approved by the ~~commissioner of water management~~ Commissioner of Water Management.

18-29-701.3 Separate building sewer connection.

~~Unless the commissioner of water management determines that a sewer connection has sufficient capacity to serve multiple buildings, every~~ A building having plumbing fixtures installed and intended for human habitation, occupancy or use on premises abutting on a street, alley or easement in which there is a public sewer shall have a separate building sewer connection with the public sewer in the street. Where located on the same lot, multiple buildings shall not be prohibited from connecting to a common building sewer that connects to the public sewer.

Unless the ~~commissioner of water management~~ Commissioner of Water Management determines that it is not feasible for a building to connect its sewer to the public sewer in a street, new building sewer connections to the public sewer in alleys or easements are prohibited.

18-29-701.4 Sewage treatment.

Sewage or other waste from a plumbing system that is deleterious to surface or subsurface waters shall not be discharged into the ground or into any waterway unless it has first been rendered innocuous through subjection to an approved a form of treatment acceptable to the Commissioner of Water Management.

18-29-701.5 Damage to drainage system or public sewer.

Wastes detrimental to the public sewer system or detrimental to the functioning of the sewage-treatment plant shall be treated and disposed of as ~~determined by the commissioner of water management~~ in accordance with Section 18-29-805.

18-29-701.6 Tests.

~~The sanitary drainage system shall be inspected and tested in accordance with Sections 18-29-312 through 18-29-312.9~~ Section 18-29-312. Plastic piping shall not be tested using air.

(omitted text is not affected by this ordinance)

SECTION 2. Section 18-29-702 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-702 Materials.

18-29-702.1 Above-ground sanitary drainage and vent pipe.

Above-ground soil, waste and vent pipe shall conform to one of the standards listed in Table 18-29-702.1. Use of combustible pipe materials shall be limited in accordance with note a to Table 18-29-702.1 and Section 18-29-702.1.1.

Table 18-29-702.1 Above-ground Drainage and Vent Pipe

Material	Standard
Cast-iron pipe, hub and spigot ³	ASTM A74; ASTM A888; CISPI 301
Cast-iron pipe, hub and spigot ^b	
Cast-iron pipe, hubless ³	
Copper or copper-alloy pipe	ASTM B42; ASTM B43; ASTM B302
Copper or copper-alloy tubing (Type K, L or M)	ASTM B75; ASTM B88; ASTM B251; ASTM B306
Copper or copper-alloy tubing (Type DWV) ^a	
Galvanized steel pipe	ASTM A53
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140), with a solid wall ³	ASTM D2665; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 -inch O.D. and a solid wall ³	ASTM D2949
Stainless steel drainage systems, Types 304 and 316L	ASME A112.3.1

For SI: 1 inch = 25.4 mm.

- a. Limited to areas of residential occupancy in buildings with a building height not exceeding 60 feet (18.3 m).
- b. Lead and oakum joints only.

18-29-702.1.1 Mixed-occupancy buildings.

Where the plumbing system in a mixed-occupancy building uses both combustible and noncombustible drainage and vent pipe materials in accordance with Table 18-29-702.1, the noncombustible pipe material shall extend as least 4 inches (102 mm) beyond the fire-resistance-rated assembly separating the residential occupancy from other areas of the building that are not eligible to use combustible pipe materials.

18-29-702.2 Underground building sanitary drainage and vent pipe.

Underground building sanitary drainage and vent pipe shall conform to one of the standards listed in Table 18-29-702.2.

Pipe

Material	Standard
Cast-iron pipe, hub and spigot	ASTM A74; ASTM A888; CISPI 301
Copper or copper-alloy pipe	ASTM B42; ASTM B43; ASTM B302
Copper or copper-alloy tubing (Type K)	ASTM B75; ASTM B88; ASTM B251
Ductile iron pipe	AWWA C115; AWWA C151
Polyethylene (PE) plastic pipe (SDR-PR) ³	ASTM F714
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140), with a solid wall ³	ASTM D2665; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25-inch O.D. and a solid wall ³	ASTM D2949
Stainless steel drainage systems, Type 316L	ASME A112.3.1

For SI: 1 inch = 25.4 mm.

a. Limited in accordance with note a to Table 18-29-702.1.

18-29-702.3 Building sewer pipe.

Building sewer pipe shall conform to one of the standards listed in Table 18-29-702.3.

Table 18-29-702.3 Building Sewer Pipe³

Material	Standard
Cast-iron pipe	ASTM A74; ASTM A888; CISPI 301
Concrete pipe, 24-inch or larger	ASTM C14; ASTM C76; CSA A257.1; CSA A257.2
Copper or copper-alloy tubing (Type K)	ASTM B75; ASTM B88; ASTM B251
Ductile iron pipe	AWWA C115; AWWA C151
Polyethylene (PE) plastic pipe (SDR-PR) ^b	ASTM F714
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including Schedule 40, DR 22 (PS 200) and DR 24 (PS 140), with a solid wall ^b	ASTM D2665
Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS 140 and PS 200, with a solid wall ^b	ASTM F891; ASTM D3034; CSA B182.2; CSA B182.4
Polyvinyl chloride (PVC) plastic pipe with a 3.25-inch O.D. and a solid wall ^b	ASTM D2949
Stainless steel drainage systems, Type 316L	ASME A112.3.1

(table continues on following page)

Vitrified clay pipe, extra strength, 21-inch or smaller

For SI: 1 inch = 25.4 mm.

- a. Additional materials may be approved by the Commissioner of Water Management for subsurface soil drainage and non-conveyance stormwater management uses.
- b. Limited in accordance with note a to Table 18-29-702.1.

18-29-702.4 Fittings.

Pipe fittings shall be suitable for installation with the piping material and shall comply with the applicable standards listed in Table 18-29-702.4.

Table 18-29-702.4 Pipe Fittings

Material	Standard
Cast iron	ASME B16.4; ASME B16.12; ASTM A74; ASTM A888; CISPI 301
Copper or copper-alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29
Glass	ASTM C1053
Gray iron and ductile iron	AWWA C110
Polyethylene (PE) ^a	ASTM D2683
Polyolefin ^a	ASTM F1412; CSA B181.3
Polyvinyl chloride (PVC) plastic in IPS diameters ³	ASME A112.4.4; ASTM D2665; ASTM F1866
Polyvinyl chloride (PVC) plastic in sewer and drain diameters ³	ASTM D3034
Polyvinyl chloride (PVC) plastic with a 3.25-inch O.D. ³	ASTM D2949
Polyvinylidene fluoride (PVDF) plastic ³	ASTM F1673; CSA B181.3
Stainless steel drainage systems, Types 304 and 316L	ASME A112.3.1
Steel	ASME B16.9; ASME B16.11; ASME B16.28
Vitrified clay pipe, extra strength	ASTM C700

For SI: 1 inch = 25.4 mm.

- a. Limited in accordance with note a to Table 18-29-702.1 or for use with chemical waste systems in accordance with Section 18-29-702.6.

18-29-702.5 Temperature rating.

Where the wastewater temperature will be greater than 140°F (60°C), the sanitary drainage piping material shall be rated for the highest temperature of the wastewater.

18-29-702.6 Chemical waste system.

A chemical waste system shall be completely separated from the sanitary drainage system. The chemical waste shall be treated in accordance with Section 18-29-803.3 before discharging into the sanitary drainage system. Separate drainage systems for chemical wastes and vent pipes

shall comply with the applicable standards listed in Table 18-29-702.1 or 18-29-702.6 and shall be made of materials that are resistant to corrosion and degradation for the concentrations of chemicals involved.

Table 18-29-702.6 Chemical Waste System Pipe

Material	Standard
Chlorinated polyvinyl chloride (CPVC) plastic pipe	ASTM F2618
Glass pipe	ASTM C1053
Polyolefin pipe	ASTM F1412; CSA B181.3
Polyvinylidene fluoride (PVDF) plastic pipe	ASTM F1673; CSA B181.3

18-29-702.7 [Reserved].

18-29-702.8 Safe pans.

Safe pans shall conform to the material and construction requirements in Sections 18-29-702.8.1 through 18-29-702.8.2.

18-29-702.8.1 Material.

Safe pans shall be made of copper, aluminum, galvanized steel, stainless steel, PVC or fiberglass material, and shall meet the following requirements:

1. Copper sheets for safe pans shall weigh at least 12 ounces per square foot (3662 g/m²).
2. Aluminum, galvanized steel and stainless steel safe pans shall be of at least 24 gauge material.
3. PVC safe pans or liners shall be 30 mil (0.76 mm) or 40 mil (1.02 mm).
4. Fiberglass for safe pans or liners shall be equally durable to PVC material described in item 3.

18-29-702.8.2 Construction.

Safe pans shall be constructed with preformed dam corners, shall be watertight, adequately reinforced and provided with a drain opening designed to make a watertight joint. PVC safe pans and liners shall be solvent welded together with the proper cement.

SECTION 3. Section 18-29-703 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-703 Building Sewer.

(omitted text is not affected by this ordinance) 18-29-703.2

Drainage pipe in filled ground.

Where a building sewer or building drain is installed on filled or unstable ground, the drainage pipe shall conform to one of the respective standards for cast-iron pipe, copper or copper-alloy tubing or PVC plastic pipe as listed in Table 18-29-702.3.

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(omitted text is not affected by this ordinance)

18-29-703.4 Existing building sewers and drains.

Where the sanitary drainage system of an existing building is entirely replaced or substantially modified, existing building drains under concrete slabs and existing building sewers that will serve the new or substantially modified system shall be internally examined to verify that the pipe is sloping in the correct direction, is not broken, is not obstructed and is sized for the drainage load of the new or modified plumbing drainage system to be installed. Existing building sewers and drains shall connect with new building sewer and drainage systems only when found by examination and test to conform to the new system in quality of material. The ~~building commissioner~~ Building Commissioner shall notify the owner to make the changes necessary to conform to this chapter.

18-29-703.4.1 Inspection of existing underground building sewers for drain and reuse.

Existing underground building sewers, regardless of their age, may be reused if ~~the pipe has been approved following an inspection by closed-circuit television in the presence of~~

~~water management~~ in accordance with Section 18-29-301.3.

SECTION 4. Section 18-29-704.5 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety.

SECTION 5. Section 18-29-705 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-705 Joints.

(omitted text is not affected by this ordinance)

~~18-29-705.4 Brass Joints between brass pipe or fittings shall comply with Sections 18-29-705.4.1 through 18-29-705.4.4.~~

~~48-29-705.4.1 Braze joints-All joint surfaces shall be cleaned. An approved flux shall be applied where required. The joint shall~~

~~**18-29-705.4.2 Mechanical joints.**~~

~~lint c.hnll hp in-Qtollf^H in nr~~

~~**ded joints**~~

~~TTt irO OI liJll vjrt rCrtcttv^VJ rri Cr~~

~~B-42-0-1-Ripe-joint-eempeund-er4ape-sr4alt-bø-applied~~

~~**on the male threads only.** ' 18-29-705.4.4 Welded joints.~~

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~~All joint surfaces shall be cleaned. The joint shall be welded with an approved filler metal.~~

(omitted text is not affected by this ordinance) **18-29-705.5.2**

Compression gasket joints.

Compression gaskets for hub and spigot pipe and fittings shall conform to ASTM C 564 and shall be tested to ASTM C1563. Gaskets shall be compressed when the pipe is fully inserted.

18-29-705.5.3 Mechanical joint coupling.

Mechanical joint couplings for hubless pipe and fittings shall consist of an elastomeric sealing sleeve and a metallic shield that comply with CISPI 310, ASTM C1227 or ASTM C1540 ~~or ASTM C 1277~~ and shall meet the requirements of Factory Mutual Standard 1680, Class I, with a minimum working pressure of 15 psi (103.4 kPa). The elastomeric sealing sleeve shall conform to ~~ASTM C 564 or CSA CAN/CSA B 602~~ ASTM C564 or CSA B602 and shall be provided with a center stop. Mechanical joint couplings shall be installed in accordance with the manufacturer's installation instructions.

(omitted text is not affected by this ordinance)

18-29-705.10.1 Threaded joints.

Threads shall conform to ASME B 1.20.1. Pipe joint compound or tape shall be applied on the male threads only.

(omitted text is not affected by this ordinance)

18-29-705.14 Polyethylene plastic-Joints between polyethylene plastic pipe and fittings shall be underground and shall comply with Section 18-29-705.14.1 or 18-29-705.14.2.

18-29-705.14.1 Heat-fusion joints-Joint surfaces shall be clean and free from moisture. Joint surfaces shall be cut, heated to melting temperature and joined using tools specifically designed for the operation-Joints shall be undisturbed until cool. Joints shall be made in accordance with ASTM D2657 and the manufacturer's instructions.

18-29-705.14.2 Mechanical joints-Mechanical joints in drainage piping shall be made with an elastomeric seal conforming to ASTM C1173. ASTM D3212 or CSA B602. Mechanical joints shall be installed in accordance with the manufacturer's instructions.

18-29-705.15 Polyolefin plastic.

Joints between polyolefin plastic pipe and fittings shall comply with Sections 18-29-705.15.1 and 18-29-705.15.2.

18-29-705.15.1 Heat-fusion joints.

Heat-fusion joints for polyolefin pipe and tubing joints shall be installed with socket-type heat-fused polyolefin fittings or electrofusion polyolefin fittings. Joint surfaces shall be clean and free from moisture. The joint shall be undisturbed until cool. Joints shall be made in accordance with ASTM F1412 or CSA B181.3.

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18-29-705.15.2 Mechanical and compression sleeve joints.

Mechanical and compression sleeve joints shall be installed in accordance with the manufacturer's instructions.

18-29-705.16 Polyvinylidene fluoride plastic-Joints between polyvinylidene fluoride plastic pipe and fittings shall comply with Sections 18-29-705.16.1 and 18-29-705.16.2.

18-29-705.16.1 Heat-fusion joints.

Heat-fusion joints for polyvinylidene fluoride pipe and tubing joints shall be installed with socket-type heat-fused polyvinylidene fluoride fittings or electrofusion polyvinylidene fittings and couplings. Joint surfaces shall be clean and free from moisture. The joint shall be undisturbed until cool. Joints shall be made in accordance with ASTM F1673.

18-29-705.16.2 Mechanical and compression sleeve joints.

Mechanical and compression sleeve joints shall be installed in accordance with the manufacturer's instructions.

18-29-705.17 Reserved].

18-29-705.18 Joints between different materials.

Joints between different piping materials shall be made with a mechanical joint of the compression or mechanical-sealing type conforming to ASTM C1173. ASTM C1460 or ASTM C1461. ~~or as permitted in Sections 18-29-705.14.1 through 18-29-705.14.6.~~ Connectors and adapters shall be approved for the application and such joints shall have an elastomeric seal conforming to ASTM C 425, ASTM C 443, ASTM C 564, ASTM C 1173, ASTM D 1869, ASTM F 477, CSA A2573 or CSA CAN/CSA B602 or as required in Sections 18-29-705.18.1 through 18-29-705.18.7. Joints shall be installed in accordance with the manufacturer's instructions.

18-29-705.14 18-29-705.18.1 Copper pipe or copper-alloy tubing to cast-iron hub pipe.

Joints between copper pipe or copper-alloy tubing and cast-iron hub pipe shall be made with a brass copper or copper-alloy ferrule or compression joint. The copper pipe or copper-alloy tubing shall be soldered to the ferrule in an approved manner, and the ferrule shall be joined to the cast-iron hub by a caulked joint or a mechanical joint.

hub-coupling compression joint.

18-29-705.14 18-29-705.18.2 Copper or copper-alloy pipe or tubing to galvanized steel pipe.

Joints between copper or copper-alloy pipe or tubing and galvanized steel pipe shall be made with a brass connector copper-alloy fitting or dielectric fitting. The copper tubing shall be soldered to the fitting in an approved manner, and the fitting shall be screwed to the threaded pipe.

18-29-705.14 18-29-705.18.3 Cast-iron pipe to galvanized steel or brass pipe.

Joints between cast-iron pipe and galvanized steel or brass pipe shall be made by either caulked or threaded joints or with an approved adapter fitting.

18-29-705.14 18-29-705.18.4 Plastic pipe or tubing to other piping material.

Joints between different types of plastic pipe shall be made with an approved adapter fitting. Joints between different grades of plastic pipe or between plastic pipe and other piping material shall be made with an approved adapter fitting. Joints between plastic

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pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

18-29-705.14 18-29-705.18.5 Deliberately omitted.

18-29-705.14 18-29-705.18.6 Borosilicate glass to other materials.

(omitted text is not affected by this ordinance)

18-29-705.18.7 Stainless steel drainage systems to other materials.

Joints between stainless steel drainage systems and other piping materials shall be made with approved mechanical couplings.

18-29-705.15 18-29-705.19 Drainage slip joints.

(omitted text is not affected by this ordinance) 18-29-705.16 18

18-29-705.20 Caulking ferrules.

Ferrules shall be of red brass copper alloy and shall be in accordance with Table 18-29-705.16 18-29-705.20.

Table	43-29	705^46	18-29-705.20	Caulking
Ferrule Specifications				

(omitted text is not affected by this ordinance)

18-29-705.17 Deliberately omitted 18-29-705.21 Soldering bushings-Soldering bushings shall be of copper or copper alloy and shall be in accordance with Table 18-29-705.21.

Table 18-29-705.21 Soldering Bushing Specifications

Pipe Sizes (inches)	Minimum Weight Each
1 1/4	6 ounces
1 1/2	8 ounces
2	14 ounces
2 1/2	1 pound 6 ounces
3	2 pounds

4 3 pounds 8 ounces

For SI: 1 inch = 25.4 mm, 1 ounce = 28.35 g, 1 pound = 0.454 kg.

18-29-705.22 Stainless steel drainage systems.

O-ring joints for stainless steel drainage systems shall be made with an elastomeric seal.

SECTION 6. Section 18-29-706.2 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-29-706.2 Obstructions.

The fittings shall not have ledges, shoulders or reductions capable of retarding or obstructing

flow in the piping. Threaded drainage pipe fittings shall be of the recessed drainage type. This section shall not apply to tubular waste fittings used to convey vertical flow upstream of the trap seal liquid level of a fixture trap.

SECTION 7. Section 18-29-707.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-707.1 Prohibited joints.

The following types of joints and connections shall be prohibited, ~~unless approved by the department of water management guidelines or as referenced in the current edition of that department's permit requirements~~

(omitted text is not affected by this ordinance)

- 5. Solvent-cement joints between different types of plastic pipe except where provided for in Section 18-29-705.18.4; and

(omitted text is not affected by this ordinance)

SECTION 8. Table 18-29-709.1 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

Table 18-29-709.1 Drainage Fixture Units for Fixtures and Groups

Fixture Type	Drainage Fixture Unit Value as Load Factors	Minimum Size of Trap (inches)
Automatic clothes washers, commercial ^{a g}	3	2
Automatic clothes washers, residential ^g	2	2
Bathroom group as defined in Section 202 (< 1.6 gpf water closet) ^e	5	-
Bathroom group as defined in Section 202 (water closet flushing greater than 1.6 gpf) ^f	6	-
Bathtub (with or without overhead shower or whirlpool attachments) ^b	2	1 1/2
Bidet	1	1 1/4

Combination sink and tray	2	1 1/2
Dental lavatory	1	1 1/4
Dental unit or cuspidor	1	1 1/4
Dishwashing machine, domestic, with independent drain ⁰	2	1 1/2

(table continues on following page)

Drinking fountain	1/2	1 1/4
Emergency floor drain	0	2
Floor drains^h	^{zh} 2	2
Floor sinks	Note h	2
Kitchen sink, commercial, with food waste	3	2
Kitchen sink, domestic (with or without food waste disposer, dishwasher or both)	2	1 1/2
Laundry tray (1 or 2 compartments)	2	1 1/2
Lavatory	1	1 1/4
Shower (based on the total flow rate through showerheads and body sprays) Flow rate: 5.7 gpm or less Greater than 5.7 gpm to 12.3 gpm Greater than 12.3 gpm to 25.8 gpm Greater than 25.8 gpm to 55.6 gpm	2 3 5 6	1 1/2 2 3 4
Service sink	2	1.1/2
Sink	2	1 1/2
Urinal	4	Note d
Urinal, 1 gallon per flush or less	2^e	Note d
Wash sink (circular or multiple) each set of faucets	2	1 1/2
Water closet, flushometer tank, public or private	4^e	Note d
Water closet, private (< 1.6 gpf)	3⁰	Note d
Water closet, private (flushing greater than 1.6 gpf)	4^e	Note d
Water closet, public (< 1.6 gpf)	4⁰	Note d
Water closet, public (flushing greater than 1.6 gpf)	6^e	Note d

For SI: 1 inch = 25.4 mm, 1 gallon = 3.785 L, gpf = gallon per flushing cycle, gpm = gallon per minute.

- a. For traps larger than 3 inches, use Table 18-29-709.2
- b. A showerhead over a bathtub or whirlpool bathtub does not increase the drainage fixture unit value.
- c. See Sections 18-29-709.2 through 18-29-709.5 for methods of computing unit value of fixtures not listed in this table or for rating of devices with intermittent flows.
- d. Trap size shall be consistent with the fixture outlet size.
- e. For the purpose of computing loads on building drains and sewers, water closets and urinals shall not be rated at a lower drainage fixture unit unless the lower values are confirmed by testing
- f. For fixtures added to a bathroom group, add the dfu value of those additional fixtures to the bathroom group fixture count.
- g. See Section 18-29-406.2 for sizing requirements for fixture drain, branch drain and drainage stack for an automatic clothes washer standpipe.
- h. See Sections 18-29-709.5 and 18-29-709 5 1

SECTION 9. Section 18-29-709.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-709.3 Values for continuous flow Conversion of gpm flow to dfu values-Drainage Where discharges to a waste

receptor or to a drainage system are only known in gallons per minute (liters per second) values, the drainage fixture unit values for continuous flow into a drainage system those flows shall be computed on the basis that 1 gallon per minute (0.06 L/s) of flow is equivalent to eight two drainage fixture units.

SECTION 10. Section 18-29-709.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-709.5 Values for indirect waste receptor.

The drainage fixture unit load of an indirect waste receptor receiving the discharge of indirectly connected fixtures shall be the sum of the drainage fixture unit values of the fixtures that discharge to the receptor. If this drainage fixture value is but not less than the indirect waste receptor drainage fixture value given in Table 18-29-709.1 or Table 18-29-709.2, then the values in the referenced tables shall be used.

18-29-709.5.1 Clear-water waste receptors.

Where waste receptors such as floor drains, floor sinks and hub drains receive only clear-water waste from display cases, refrigerated display cases, ice bins, coolers and freezers, such receptors shall have a drainage fixture unit value of one-half.

SECTION 11. Section 18-29-710 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-710 Drainage System Sizing.

(omitted text is not affected by this ordinance)

18-29-710.1.1 Maximum building drain and building sewers for combined sanitary and storm drainage.

~~The maximum number of fixture units that may be connected to a given size of house drain, horizontal branch, or vertical soil or waste stack is given in Tables 18-29-710A and 18-29-710B. Storm and combined house drains and house sewers shall comply~~ Combined building drains and combined building sewers shall be sized in accordance with Sections 18-29-1106 and 18-29-1108 ~~of this chapter.~~

18-29-710.1.2 Minimum size.

The minimum required pipe size for water closets or pedestal urinal branches and stacks shall be 4 inches (100 mm), ~~except that any~~

Exception: A building three stories or less in height ~~and used exclusively for family unit occupancy,~~ may utilize a 3-inch (75 mm) soil stack when not exceeding 30 ~~48~~ fixture units, with not more than six water closets per vertical stack and not more than ~~two water closets per floor or two three water closets per~~ horizontal branch.

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~~The waste connection to any water closet shall be provided with an approved 4-inch (100 mm) closet flange. The minimum required pipe sizes for underground branches from downspouts, floor drains, laundry trays and sink stacks shall be 3 inches (75 mm) 2 inches (51 mm). (See Tables 18-29-710A and 18-29-710B.)~~

(omitted text is not affected by this ordinance)

18-29-710.3 Underground drainage piping.

Any portion of the drainage system installed underground or below a basement or cellar shall not be less than ~~A inches (100 mm)~~ 2 inches (51 mm) in diameter.

Table 18-29-71 OA Building Drains and Sewers

Diameter of Pipe (inches)	Maximum Number of Drainage Fixture Units Connected to any Portion Building Sewer, Including Branches of the <i>Building Drain</i> ³			
	Slope per Foot			
	4/6 1/16 inch	1/8 inch	1/4 inch	1/2 inch
(omitted text is not affected by this ordinance)				
12	QrMQ 3,900	4,600	5,600	6,700

(omitted text is not affected by this ordinance)

Table 18-29-710B Horizontal Fixture Branches and Stacks³

Diameter of Pipe (inches)	Any Horizontal Fixture Branch	Maximum Number of Fixture Units that may be Connected to:		
		One Stack of 3 Stories in Height 3 Intervals	More than 3 Stories in Height Total for Stack	Total at One Story Interval
(omitted text is not affected by this ordinance)				
3	20	30 48	50 72	40 20
(omitted text is not affected by this ordinance)				
15	7,000	- Footnote c	- Footnote c	- Footnote c

For SI. 1 inch = 25.4 mm

- a. Does not include branches of Reuse the building drain. Refer to Table 18-29-71 OA.
- b. Stacks shall be sized based on the total accumulated connected load at each story or branch interval. As the total accumulated connected load decreases, stacks are permitted to be reduced in size. Stack diameter shall not be reduced to less than one-half of the diameter of the largest stack size required
- c. Sizing load based on design criteria

ARTICLE VIII. AMENDMENTS TO CHAPTER 18-29, ARTICLE 8

SECTION 1. Section 18-29-802 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-802 Indirect Wastes.

18-29-802.1 Where required.

Indirect sanitary wastes shall be installed as follows: Waste piping from filters, refrigerators, ice boxes, steam tables, egg boilers, coffee makers, bottleholders, ice cube containers, or any equipment or other receptacle where food or drink is stored shall discharge to the drainage piping system through an air gap into a waste receptor. The minimum size shall be 1 inch (25 mm) and the maximum length of the indirect waste shall not exceed 15 foot (4.57 m) and shall be provided with

~~cleanouts at every 90 degree turn and shall be accessibly located. Indirect wastes shall be piped to the waste receptor with material that is required by this chapter. Waste receptors serving indirect pipes connected to equipment shall not be installed in any toilet room, closet, storeroom or any inaccessible space. Each waste receptor shall be trapped and vented as required by this chapter. The air gap shall not be less than 1 inch. Food-handling equipment in other than dwelling units and sleeping units, clear-water waste, humidifiers, commercial dishwashing machines and utensil, pot, pan and dishwashing sinks shall discharge through an indirect waste pipe as specified in Sections 18-29-802.1.1 through 18-29-802.1.7. Fixtures not required to be indirectly connected by this section and the exception to Section 18-29-301.6 shall be directly connected to the plumbing system in accordance with Article 7.~~

~~18-29-802.1.1 Deliberately omitted Food handling-Equipment and fixtures utilized for the storage, preparation and handling of food, other than in dwelling units and sleeping units, shall discharge through an indirect waste pipe by means of an air gap. Each well of a multiple-compartment sink shall discharge independently to a waste receptor. Exception: Where a sink is within 4 feet (1219 mm) horizontally of and located in the same room as a floor drain, the sink waste pipes may be directly connected on the sewer side of the floor drain trap, provided that the fixture waste pipes are trapped and vented as required by this chapter. No other fixture waste pipe shall be connected between the floor drain trap and the fixture being protected.~~

~~18-29-802.1.2 Deliberately omitted Floor drains in food storage areas.~~

~~Floor drains located within walk-in refrigerators or freezers in food service and food establishments shall be indirectly connected to the sanitary drainage system by means of an air gap. Where a floor drain is located within an area subject to freezing, the waste line serving the floor drain shall not be trapped and shall indirectly discharge into a waste receptor located outside of the area subject to freezing.~~

~~Exception: Where protected against backflow by a backwater valve, such floor drains shall be indirectly connected to the sanitary drainage system by means of an air break or air gap.~~

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18-29-802.1.3 Potable clear-water waste and swimming pools.

Where devices and equipment, such as sterilizers, swimming pools and relief valves, discharge potable water to the building drainage system, the discharge shall be through an indirect waste pipe by means of an air gap.

Where wastewater from swimming pools, backwash from filters and water from pool deck drains discharge to the building drainage system, the discharge shall be through an indirect waste pipe by means of an air gap.

(omitted text is not affected by this ordinance)

~~18-29-802.1.6 Dishwashing machine Commercial dishwashing machines-Dishwashing machines shall be indirectly connected, except when located adjacent to a floor drain, whereby the waste may be connected directly on the sewer side of the floor drain trap, and the fixture shall be trapped and vented as required by this chapter; provided, however, that no other waste or soil drainage line be permitted between the floor drain waste connection and the fixture drain.~~

AU-iftdirectly connected dishwashing machine wastes shall be provided with a vented trap located as close as possible to the dishwashing machine and in the same room. The air gap shall not be less than 1 inch (25 mm). The discharge from a commercial dishwashing machine shall be through an air gap into a waste receptor in accordance with Section 18-29-802.3.

Exception: Where the fixture is within 4 feet (1219 mm) horizontally of and located in the same room as a floor drain, the fixture waste pipe may be directly connected on the sewer side of the floor drain trap, provided that the fixture waste pipe is trapped and vented as required by this chapter. No other fixture waste pipe shall be

connected between the floor drain trap vent connection and the fixture being protected.

18-29-802.1.7 Sinks.

Commercial dishwashing sinks, pot washing sinks, pre-rinse sinks, silverware sinks, bar sinks, soda fountain sinks, and other similar fixtures shall be indirectly connected except when located adjacent to a floor drain, whereby the waste may be connected directly on the sewer side of the floor drain trap, and the fixture shall be trapped and vented as

between the floor drain waste connection and the fixture drain. All indirectly connected sinks shall be provided with a vented trap located as close as possible to the sink and in the same room. The piping from the equipment to the air gap shall not exceed 5 feet (1,525 mm) and shall be of material as required by this chapter. The air gap shall be a minimum of 1 inch (25 mm). Sinks used for the washing, rinsing or sanitizing of utensils, dishes, pots, pans or service ware used in the commercial preparation, serving or consumption of food or drink shall discharge indirectly through an air gap to the drainage system. Each well of a multiple-compartment sink shall discharge independently to a waste receptor.

Exception: Where a sink is within 4 feet (1219 mm) horizontally of and located in the same room as a floor drain, the sink waste pipes may be directly connected on the sewer side of the floor drain trap, provided that the fixture waste pipes are trapped and vented as required by this chapter. No other fixture waste pipe shall

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be connected between the floor drain trap vent connection and the fixture being protected.

18-29-802.2 Deliberately omitted Materials, joints and connections.

The materials, joints, connections and methods utilized for the construction and installation of indirect waste piping systems shall comply with the applicable provisions of Article 7.

18-29-802.3 Installation-Indirect waste piping shall discharge through an air gap or air break into a waste receptor. Waste receptors shall be trapped and vented and shall connect to the building drainage system. Waste receptors shall not be located in a toilet facility, closet, storeroom or any inaccessible space. Indirect waste piping that exceeds 30 inches (762 mm) in developed length measured horizontally or 54 inches (1372 mm) in total developed length shall be trapped. Indirect waste pipes shall not exceed 15 feet (4572 mm) in total length and shall be provided with cleanouts at every 90 (1.57 rad) degree turn-Exception: Where a waste receptor receives only clear-water waste and does not directly connect to a sanitary drainage system, the receptor shall not require a trap.

18-29-802.3.1 Air gap.

The air gap between the indirect waste pipe and the flood level rim of the waste receptor shall be not less than twice the effective opening of the indirect waste pipe and not less than 1 inch (25 mm).

18-29-802.3.2 Air break.

An air break shall be provided between the indirect waste pipe and the trap seal of the waste receptor.

18-29-802.4 Waste receptors.

Every waste receptor shall be of an approved type. For other than hub drains that receive only clear-water waste and standpipes, a removable strainer or basket shall cover the outlet of waste receptors. Waste receptors shall not be installed in concealed spaces. Waste receptors shall not be installed in plenums, crawl spaces, attics, or interstitial spaces above ceilings or below floors-Ready access shall be provided to waste receptors.

18-29-802.4.1 Size of receptors.

A waste receptor shall be sized for the maximum discharge of all indirect waste pipes served by the receptor. Receptors shall be installed to prevent splashing or flooding.

48-29-802v3v4 18-29-802.4.2 Open hub waste receptors drains.

Waste receptors shall be permitted in the form of a hub or pipe extending not less than 1 inch (25 mm) above a water-impervious floor and are not required to have a strainer.

18-29-802.4 18-29-802.4.3 Standpipes.

Standpipes shall be individually trapped. Standpipes shall extend a minimum of 18 inches (457 mm) and a maximum of 42 inches (1,066 mm) above the trap weir. Access shall be provided to all standpipe and drains for rodding.

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ARTICLE IX. AMENDMENTS TO CHAPTER 18-29, ARTICLE 9

SECTION 1. Section 18-29-902 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-902 Materials.

18-29-902.1 Vents.

The materials and methods utilized for the construction and installation of venting systems shall comply with the applicable provisions of Sections 18-29-702.1 through 18-29-702.6.2 Section 18-29-702.

(omitted text is not affected by this ordinance)

18-29-902.4.

~~Sec Section 18-29-305.7, Water Proofing of Openings.~~

SECTION 2. Section 18-29-903.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-903.5 Vent headers.

Stack vents and vent stacks connected into a common vent header at the top of the stacks and extending to the open air at one point shall be sized in accordance with the requirements of Section 18-29-916.1. The number of fixture units shall be the sum of all fixture traits units on all stacks connected thereto, and the developed length shall be the longest vent length from the intersection at the base of the most distance stack to the vent terminal in the open air, as a direct extension of one stack.

SECTION 3. Section 18-29-904 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-904 Vent Terminals.

18-29-904.1 Roof extension Vent terminals required.

All open vent pipes that extend through a roof shall be terminated at least 12 inches (305 mm)

protection, the vent extensions shall be run at least 7 feet (2134 mm) above the deck or walking surface. The vent pipe shall terminate by extending to the outdoors through the roof or the side wall in accordance with one of the methods identified in Sections 18-29-904.1.1 through 18-29-904.1.4.

18-29-904.1.1 Roof extension unprotected-Open vent pipes that extend through the roof shall be terminated not less than 12 inches (305 mm) above the roof.

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18-29-904.1.2 Occupiable rooftop.

Where the rooftop is to be used as a promenade, restaurant, bar, sunbathing deck, observation deck or for similar purposes (occupiable rooftop), open vent pipes shall terminate not less than 7 feet (2134 mm) above the highest walking surface located within 10 feet (3048 mm) horizontally.

18-29-904.1.3 fReservedl.

18-29-904.1.4 Sidewall vent terminal.

Vent terminals extending through the wall shall terminate not less than 10 feet (3048 mm) from the nearest lot line and 10 feet (3048 mm) above the highest adjacent grade within 10 feet (3048) horizontally of the vent terminal. Vent terminals shall not terminate under the overhang of a structure with soffit vents. Sidewall vent terminals shall be protected to prevent birds and rodents from entering and blocking the vent opening.

18-29-904.2 Frost closure.

Every vent extension through a roof or wall shall be a minimum of 4 inches (100 mm) in diameter. Any increase in the size of the vent shall be made inside the structure a minimum of 1 foot (305 mm) below the roof or inside the wall inside the thermal envelope of the building.

(omitted text is not affected by this ordinance)

18-29-904.4 Prohibited use.

Vent terminals shall not be used as a flag pole or to support flag poles, TV aerials or similar items, or for any purpose other than a vent terminal.

18-29-904.5 Location of vent terminal.

Ne An open vent terminal from a drainage system shall not be located directly beneath a door, openable window, overhead or other ventilating intake opening of the building or of an adjacent building, nor shall any such vent terminals be within 42-1_0 feet (3t6€ 3.05 m) horizontally of such an opening unless it the vent terminal is at least 2 3 feet (640 914 mm) above the top of such opening.

18-29-904.6 Extension through the wall outside a structure.

Vent terminals extending through the wall shall terminate a minimum of 12 feet (3.66 m) from the lot line and 12 feet (3.66 m) above average ground level. Vent terminals shall not terminate under the overhang of a structure with soffit vents. Sidewall vent terminals shall be protected to prevent birds or rodents from entering or blocking the vent opening. Vent pipes installed on the exterior of a structure shall be protected against freezing by insulation, heat or both.

SECTION 4. Section 18-29-906.1 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-29-906.1 Distance of trap from vent.

Each fixture trap shall have a protecting vent located so that the slope and the developed length in the fixture drain from the trap weir to the vent fitting are within the requirements set forth in Table 18-29-906.1.

Exception: The developed length of the fixture drain from the trap weir to the vent fitting for self-siphoning fixtures, such as water closets, shall not be limited.

SECTION 5. Section 18-29-914.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-914.2 Size and connection.

The size of the relief vent shall be equal to the size of the vent stack to which it connects. The relief vent shall be vented by venting the upper section of the drainage stack and the lower section of the drainage stack system. The lower end of each relief vent shall connect to the soil or waste stack through a wye below the horizontal branch serving the floor, and the upper end shall connect to the vent stack through a fitting not less than 42 inches (1067 mm) above the floor.

SECTION 6. Section 18-29-915.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-915.1 Vent for horizontal offset of drainage stack.

Horizontal offsets of drainage stacks shall be vented where five or more branch intervals are located above the offset. The offset shall be vented by venting the upper section of the drainage stack and the lower section of the drainage stack.

SECTION 7. Section 18-29-916 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-29-916 Vent Pipe Sizing.

18-29-916.1 Size of stack vents and vent stacks.

The minimum required diameter of stack vents and vent stacks shall be determined from the developed length and the total of drainage fixture units connected thereto in accordance with Table 906.1, but in no case shall the diameter be less than one-half the diameter of the drain served, or less than 1 1/4 inches (32 mm).

Table 18-29-916.1 Size and Developed Length of Stack Vents and Vent Stacks

Diameter of Soil or Waste Stack (inches)	Total Fixture Units Being Vented (dfu)	Maximum Developed Length of Vent (feet) ^a Diameter of \									
		1/4	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
1 1/4	8	10	15	20	25	30	35	40	45	50	55
1 1/2	12	20	30	40	50	60	75	90	100	120	150
2	20	42	60	80	100	120	150	200	300	400	500

18-29-914.2.

18-29-916.3 Developed length.

The developed length of individual, branch, circuit and relief vents shall be measured from the farthest point of vent connection to the drainage system to the point of connection to the vent stack, stack vent or termination outside of the building.

18-29-916.4 Multiple branch vents.

Where multiple branch vents are connected to a common branch vent, the common branch vent shall be sized in accordance with this section based on the size of the common horizontal drainage branch that is or would be required to serve the total drainage fixture unit load being vented.

18-29-916.5 Sump vents.

Sump vent sizes shall be determined in accordance with Sections 18-29-916.5.1 and 18-29-916.5.2.

18-29-916.5.1 Sewage pumps and sewage ejectors other than pneumatic.

Drainage piping below sewer level shall be vented in the same manner as that of a gravity system. Building sump vent sizes for sumps with sewage pumps or sewage ejectors, other than pneumatic, shall be determined in accordance with Table 18-29-916.5.1.

Table 18-29-916.5.1 Size and Length of Sump Vents

Discharge Capacity of Pump (gpm)	Maximum Developed Length of Vent (feet) ^a					
	Diameter of vent (inches)					
	1 1/4	1 1/2	2	2 1/2	3	4
10	No limit ^b	No limit	No limit	No limit	No limit	No limit
20	270	No limit	No limit	No limit	No limit	No limit
40	72	160	No limit	No limit	No limit	No limit
60	31	75	270	No limit	No limit	No limit
80	16	41	150	380	No limit	No limit
100	10 ^c	25	97	250	No limit	No limit
150	NP	10 ^c	44	110	370	No limit
200	NP	NP	20	60	210	No limit
250	NP	NP	10	36	132	No limit
300	NP	NP	10 ^c	22	88	380
400	NP	NP	NP	10 ^c	44	210
500	NP	NP	NP	NP	24	130

For Sf 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m. NP = Not permitted.

- a. Developed length plus an appropriate allowance for entrance losses and friction due to fittings, changes in direction and diameter. Allowances shall be obtained from NBS Monograph 31 or other engineered sources. An allowance of 50 percent of the developed length shall be assumed if a more precise value is not available.
- b. Actual values greater than 500 feet.
- c. Less than 10 feet.

18-29-916.5.2 Pneumatic sewage ejectors.

The air pressure relief pipe from a pneumatic sewage ejector shall be connected to an independent vent stack terminating as required for vent extensions through the roof. The relief pipe shall be sized to relieve air pressure inside the ejector to atmospheric pressure but shall be not less than 1 1/2 inches (38 mm) in size.

**ARTICLE X.
AMENDMENTS TO CHAPTER 18-29, ARTICLE 10**

SECTION 1. Section 18-29-1002.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-1002.1 Fixture traps.

(omitted text is not affected by this ordinance)

3. A Where sinks are permitted to be directly connected in accordance with the exceptions to Section 18-29-802.1.1 and 18-29-802.1.7, a grease trap interceptor intended to serve as a fixture trap in accordance with the manufacturer's installation instructions shall be permitted to serve as the trap for a single fixture or a combination sink of not more than three compartments where the vertical distance from the fixture outlet to the inlet of the interceptor does not exceed 30 inches (762 mm), and the developed length of the waste pipe from the most upstream fixture outlet to the inlet of the interceptor does not exceed 5 feet (1525 mm). When the developed length exceeds 5 feet (1525 mm), or more than one fixture or receptacle is connected to an interceptor, each shall be individually trapped and vented. All receptors shall be individually trapped and vented. Wastes exceeding 140°F shall be cooled before draining into any grease interceptor or interceptor or catch basin.

SECTION 2. Section 18-29-1002.1.4 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-1002.1.4 Basement floor drains.

Basement floor drains shall connect into a trap so located and constructed that it can be readily cleaned and of a size to serve the purpose for which it is intended but in no case less than 3 inches 2 inches (51 mm) in diameter. The drain inlet shall be accessibly located.

SECTION 3. Section 18-29-1003 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-1003 Interceptors and Separators.

18-29-1003.1 Interceptors Where required.

Interceptors for and separators shall be provided to prevent the discharge of oil, grease, sand and other substances harmful or hazardous to the building drainage system, the public sewer or

all -be-determined by the department of water management and as reformed in the current edition of the permit requirement and fees book.

18-29-1003.1.1 Interceptors not required.

Exception: An interceptor or separator shall not be required for:

1. single family dwellings, multiple residential dwelling buildings with six dwelling units or less Group R occupancies with six or fewer dwelling units or sleeping units.
2. and pantry sinks in office building break rooms Sinks in kitchenettes or employee break rooms where no dishwashing machine, oven, microwave oven, stove or range is in use provided.

18-29-1003.2 Size, type and location to be approved Approval.

The size, type and location of each interceptor and of each separator shall be designed and installed in accordance with the manufacturer's instructions, the department of water management standards and as reformed in the current edition of the permit requirements and fees book, and the requirements of this section based on the anticipated conditions of use. Wastes that do not require treatment or separation need shall not be discharged into any interceptor or separator. All interceptors shall be installed in an accessible location to permit the convenient removal of the lid and internal contents.

18-29-1003.3 Grease interceptors or catch basin.

A grease Grease interceptors or catch basin shall be provided where indicated in comply with Sections 18-29-1003.3.1 through 18-29-1003.3.8.

18-29-1003.3.1 Where required Grease interceptors and automatic grease removal devices required.

Every multiple dwelling building with over six dwelling units (exclusive of townhouses), any commercial kitchen, and where required by the department of water management, shall be provided with a grease interceptor or an outside catch basin for all kitchen wastes. A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in commercial food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias and clubs. Fixtures and equipment shall include pot sinks, prerinse sinks, soup kettles or similar devices, wok stations, floor drains or sinks into which kettles are drained, automatic hood wash units and dishwashers without prerinse sinks. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged. Where lack of space or other constraints prevent the installation or replacement of a grease interceptor, one or more grease interceptors shall be permitted to be installed on or above the floor and upstream of an existing grease interceptor.

The Department of Water Management is authorized to require installation of a grease interceptor or other remedial measures for other types of buildings where either:

1. Wastewater discharged to the public sewer contains fats, oils or greases of animal, vegetable or mineral petroleum origin at a concentration exceeding 15 mg/L

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2. The building sewer has a visually evident accumulation of fat, oil or grease of animal, vegetable or mineral petroleum origin which either alone or in combination with other wastes is reasonably likely to be capable of obstructing the flow or interfering with the operation or performance of any part of the sewer system.

18-29-1003.3.2 Grease, fats and oils Food waste disposers restriction.

~~Sinks or other fixtures in restaurants, hotels, clubhouses, public institutions, butcher shops, plumbing systems for institutions or commercial establishments in which grease, fats, culinary oils, or similar waste products from kitchens or food~~

processing areas are washed in connection with utensil, vat, dish or floor cleaning processes, shall include grease interceptors or separators. All waste lines and drains carrying grease, fats, or culinary oil, in the above establishments shall be directed to one or more interceptors, located as close as practical to the fixtures served, or to an inside or outside catch basin.

18-29-1003.3.3 Grease interceptors and discharge.

No grease interceptor or separator shall receive the discharge from a food waste disposer disposal or a commercial dishwasher.

18-29-1003.3.3 Additives to grease interceptors-Systems that dispense interceptor performance additives to grease interceptors shall not be installed except where such systems dispense microbes for the enhancement of aerobic bioremediation of grease and other organic materials, or for inhibiting growth of pathogenic organisms by anaerobic methods. Such microbial dispensing systems shall be installed only where the grease interceptor manufacturer's instructions allow such systems and the systems conform to ASME A112.14.6. Systems that discharge emulsifiers, chemicals or enzymes to grease interceptors shall be prohibited.

18-29-1003.3.4 Construction materials. fReserved-l

All grease interceptors, separators and catch basins located within buildings shall be constructed of precast concrete, concrete with the bottom, sides and baffles poured monolithically, heavy cast iron or durable metal, fiberglass or high-density polyethylene, and shall be vented as provided with a gas tight metal cover, securely fastened.

18-29-1003.3.5 Types Hydromechanical grease interceptors; fats, oils and greases disposal systems and automatic grease removal devices-Type of intercepter-required for commercial kitchens and multiple residential dwelling units exceeding six dwelling units shall be determined by the department of water management. Hydromechanical grease interceptors; fats, oils and greases disposal systems and automatic grease removal devices shall be sized in accordance with ASME A112.14.3. ASME A112.14.4, ASME A112.14.6, CSA B481.3or PDI.G101. Hydromechanical grease interceptors; fats, oils and greases disposal systems and automatic grease removal devices shall be installed in accordance with the manufacturer's instructions. Where manufacturer's instructions are not provided, hydromechanical grease interceptors; fats, oils and greases disposal systems and automatic grease removal devices shall be installed in compliance with ASME A112.14.3. ASME A112.14.4. ASME A112.14.6. CSA B481.3 or PDI G101.

4-8-29-1003r3;6 18-29-1003.3.5.1 Grease trap interceptor capacity.

Grease traps interceptors shall have the grease retention capacity indicated in Table 48-29-4003^6 18-29-1003.3.5.1 for the flow- through flow-through rates indicated.

Table 18-29-1003.3.6 18-29-1003.3.5.1 Capacity of Grease Traps Interceptors ³

(omitted text is not affected by this ordinance)

50	100
75	150
100	200

For SI: 1 gpm = 3.785 L/m, 1 pound = 0.454 kg.

- a. For total flow-through ratings greater than 100 (gpm), double the flow-through rating to determine the grease retention capacity in pounds.

18-29-1003.3.7 18-29-1003.3.5.2 Rate of flow controls.

Inside grease traps Grease interceptors shall be equipped with devices to control the rate of water flow so that the water flow does not exceed the rated flow. The flow-control device shall be vented and terminate not less than 6 inches (150 mm) above the flood rim level or installed in accordance with the manufacturer's instructions.

18 29 1003.3.8 Efficiency of interceptors.

Interceptors shall conform to PDI G 101 or ASME 112.14.3, and shall be installed in accordance with the manufacturer's instructions.

18-29-1003.3.6 Automatic grease removal devices.

Where automatic grease removal devices are installed, such devices shall be located downstream of each fixture or multiple fixtures in accordance with the manufacturer's instructions. The automatic grease removal device shall be sized to pretreat the measured or calculated flows for all connected fixtures or equipment. Ready access shall be provided for inspection and maintenance.

18-29-1003.3.7 Gravity grease interceptors and gravity grease interceptors with fats, oils and greases disposal systems.

The required capacity of gravity grease interceptors and gravity grease interceptors with fats, oils and greases disposal systems shall be determined by multiplying the peak drain flow into the interceptor in gallons per minute by a retention time of 30 minutes.

Prefabricated gravity grease interceptors shall be designed and tested in accordance with IAPMO/ANSI Z1001. Manufactured gravity grease interceptors with fats, oils and greases disposal systems shall be designed and tested in accordance with ASME A112.14.6 and IAPMO/ANSI Z1001. Gravity grease interceptors and gravity grease interceptors with fats, oils and greases disposal systems shall be installed in accordance with manufacturer's instructions. Where manufacturer's instructions are not provided, gravity grease interceptors and gravity grease interceptors with fats, oils and greases disposal systems shall be installed in compliance with ASME A112.14.6 and IAPMO/ANSI Z1001.

18-29-1003.3.8 Engineered gravity grease interceptors (grease catch basin).

Engineered gravity grease interceptors, which are designed by a registered professional engineer or are constructed in compliance with Department of Water Management standards, shall comply with Sections 18-29-1003.3.8.1 and 18-29-1003.3.8.2 and the capacity requirement of Section 18-29-1003.3.7.

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18-29-1003.4 Grease catch basins outside. 18-29-1003.3.8.1 Location and construction.

A grease catch basin shall be located outside a building and shall be constructed of heavy cast iron or equally durable metal, approved fiberglass or high-density polyethylene, concrete (precast in blocks or monolithic) or a brick or concrete block construction with the block or brick laid up in portland cement mortar with walls not less than 5 inches (125 mm) thick, and bottom not less than 2 inches (50 mm) thick. The basin shall be watertight. The basin shall be not less than 36 inches (914 mm) in diameter below the top of the highest inlet pipe. The bottom of the basin shall be not less than 36 inches (914 mm) below the invert of the outlet pipe. The outlet pipe shall be trapped with a catch basin trap and made of a material as required by this chapter. The catch basin trap shall have a minimum seal of 4 inches (100 mm) and shall have an accessible cleanout of a minimum of 3 inches (75 mm).

18-29-1003.4.1 18-29-1003.3.8.2 Basin cover.

The grease catch basin shall be covered with an all cast-iron cover or cast-iron lid in a stone or concrete ring and with a minimum opening of 16 inches (406 mm) diameter. The lid shall not be less than 1/4 inch (6 mm) thick.

18-29-1003.3.9 Direct connection.

The discharge piping from a grease interceptor shall be directly connected to the sanitary drainage system.

18-29-1003.4 Deliberately omitted.

(omitted text is not affected by this ordinance)

18-29-1003.12 Venting of interceptors and separators.

Interceptors and separators shall be designed so as not to become air bound where tight covers are utilized. Each interceptor or separator shall be vented where subject to a loss of trap seal in accordance with one of the methods in

Article 9.

(omitted text is not affected by this ordinance)

ARTICLE XI. AMENDMENTS TO CHAPTER 18-29, ARTICLE 11

SECTION 1. Section 18-29-1101.2.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-1101.2.1 Roof drainage and downspouts.

(omitted text is not affected by this ordinance)

2.

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provided with external downspouts discharging onto a paved or landscaped area, provided the water thus discharged can be drained directly to an area drain⁷ or catch basin ~~er-street gutter~~ connected to a public sewer, without spilling over onto adjacent property, including the public way, or creating a public hazard or nuisance.

(omitted text is not affected by this ordinance)

SECTION 2. Section 18-29-1101.7 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-1101.7 Roof design.

~~The structural integrity of roofs~~ Roofs shall be designed for the maximum possible depth of water that will pond thereon as determined by the relative levels of roof deck and overflow weirs, scuppers, edges or serviceable drains in combination with the deflected structural elements. In determining the maximum possible depth of water, all primary roof drainage means shall be assumed to be blocked.

SECTION 3. Section 18-29-1102.5 and Table 18-29-1102.5 of the Municipal Code of Chicago are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-29-1102.5 Subsoil drain pipe.

Subsoil drains shall be open-jointed, horizontally split or perforated pipe conforming to one of the standards listed in Table 18-29-1102.5, except corrugated pipe is not allowed and the polyvinyl chloride (PVC) used for subsurface soil drainage in stormwater management shall be as stipulated in the latest edition of the "Regulations for Sewer Construction and Stormwater Management" of the department of water management.

(omitted text is not affected by this ordinance)

Polyethylene (PE) plastic pipe	ASTM F405; ASTM F667; CSA B182.1; CSA B182.6; CSAB182.8
Polyvinyl chloride (PVC) plastic pipe (Type Sewer Pipe, SDR35, PS25, PS50 or PS100)	ASTM D 2729; ASTM D 3034; ASTM F891; CAS B182.2 CSA B182.2; CSA CAN/CSA B182.4; SDR 35
Stainless steel drainage systems, Type 316L	ASME A112.3.1
Vitrified clay pipe	ASTM C 4; ASTM C 700
Polyvinyl chloride (PVC) plastic pipe (Schedule 40)	ASTM D 2729; PS25, PS50, PS100; ASTM D 3034, SDR 26, SDR 35; ASTM F891; CSA B182.2; CSA CAN/CSA B182.4

ARTICLE XII. AMENDMENTS TO CHAPTER 18-29, ARTICLE 12

SECTION 1. Article 12 of Chapter 18-29 (Sections 18-29-1201 through 18-29-1204.17, inclusive) of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

Article 12. Swimming Pools and Other Swimming Facilities. 18-29-1201 General.

18-29-1201.1 Scope.

This article shall apply to both private and nonprivate swimming pools.

As used in this article, "nonprivate swimming pool" means a swimming pool or other swimming facility regulated under the Illinois Swimming Facility Act, 210 ILCS 125, as amended. Nonprivate swimming pools and associated bather preparation facilities shall comply with Sections 18-29-1202 and 18-29-1203.

The term "private residential swimming pool" means a receptacle for water, or an artificial pool of water, having a depth at any point of more than 4 feet (1220 mm), intended for the purpose of immersion or partial immersion therein of human beings, including all appurtenant equipment, constructed, installed and maintained in or above the ground outside of or inside of a single family dwelling or a residential building containing no more than three dwelling units or sleeping units, for use by the residential occupants and their guests. Private residential swimming pools shall comply with Section 18-29-1204.

18-29-1202 Nonprivate Swimming Pools.

18-29-1202.1 Scope.

Every existing nonprivate swimming pool and every such pool constructed, installed and maintained hereafter shall comply with all applicable provisions of this article.

18-29-1202.2 Additional requirements.

In addition to complying with the requirements of this article, nonprivate swimming pools shall be maintained in accordance with the Illinois Swimming Facility Code, 77 Ill. Admin. Code 820, as amended.

18-29-1202.3 Location.

Nonprivate swimming pools shall not be constructed in any RS district designated under the Chicago Zoning Ordinance. Outdoor nonprivate swimming pools shall not be located so that any portion of the water is less than 10 feet (3048 mm) from an abutting property line. Pumps, filters and pool water disinfection equipment installations shall be located at a

distance not less than 10 feet (3048 mm) from an abutting property line.

18-29-1202.4 Permit required.

It shall be unlawful to proceed with the construction, installation, enlargement or alteration of any nonprivate swimming pool or bather preparation facilities without a building permit as provided in Chapter 14A-4 of the Municipal Code.

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18-29-1202.5 Construction requirements.

Nonprivate swimming pools shall be constructed in accordance with Sections 18-29-1202.5.1 through 18-29-1202.5.5.

18-29-1202.5.1 Illinois Swimming Facility Code.

Nonprivate swimming pools shall be designed and constructed in accordance with the Illinois Swimming Facility Code, 77 Ill. Admin. Code 820, as amended.

18-29-1202.5.2 Water source.

Pools shall be designed and constructed to only use water from the Chicago Water Works system. The water supply provided shall be capable of providing enough water to raise the water level in the basin at least 1 inch (25.4 mm) in three hours.

18-29-1202.5.3 Piping materials.

Recirculation system pipe and fittings shall be of the materials indicated in Section 18-29-605 for water service pipe or water distribution pipe, or Schedule 40 polyvinyl chloride (PVC) plastic pipe complying with ASTM D1785, ASTM D2241, ASTM D2672 or CSA B137.3 and fittings complying with ASTM D2464, ASTM D2466, ASTM D2467, CSA B137.2 or CSA B137.3.

18-29-1202.5.4 Cleanouts.

Cleanouts shall be provided at such points in the recirculation system as will enable obstructions, accumulations, debris, and similar materials to be readily removed.

18-29-1202.5.5 Working space.

Filters and other equipment shall be conveniently located and provided with adequate working space for inspection and servicing.

18-29-1203 Bather Preparation Facilities.

18-29-1203.1 Scope.

Nonprivate swimming pools shall be provided with bather preparation facilities in accordance with Sections 18-29-1203.2 through 18-29-1203.5.

Exception: Bather preparation facilities are not required for nonprivate swimming pools intended to serve only the residents and residents' guests of residential buildings where each dwelling unit or sleeping unit includes a water closet and shower and is located within 500 feet (152 m) of the area containing the nonprivate swimming pool.

Drinking fountains shall be provided in accordance with Section 18-29-1203.6.

18-29-1203.2 General design requirements.

Bather preparation facilities, including toilet rooms, shower rooms, dressing rooms and locker rooms, shall comply with the general requirements of Sections 18-29-1203.2.1 through 18-29-1203.2.5.

18-29-1203.2.1 Separate facilities.

For nonprivate swimming pools to be used by both sexes, bather preparation facilities shall be divided into separate areas designated for each sex.

Exception: Single-user toilet rooms and single-user bathing rooms may be provided in accordance with Section 18-29-403.1.3.

18-29-1203.2.2 Floors.

Floors of bather preparation facilities shall be slip-resistant, impervious to moisture, and sloped to drain at least 1 inch in 10 feet (25.4 mm in 3048 mm). Materials used for floor covering in these areas shall be easily cleanable, non-fibrous, allow drainage so that it will not remain wet or retain moisture and inert so that it will not support bacterial or fungal growth.

Alternative floor coverings may be installed in locker rooms or dressing areas with prior approval of the Illinois Department of Public Health.

18-29-1203.2.3 Light and ventilation.

Bather preparation facilities shall be provided with light and ventilation as required by the Chicago Building Code and Chicago Mechanical Code.

18-29-1203.2.4 Hose bibbs.

Hose bibbs shall be provided in bather preparation facilities so that all wet areas may be reached for cleaning with hose lengths not exceeding 150 feet (45.7 m).

18-29-1203.2.5 Large facilities.

Bather preparation facilities serving nonprivate swimming pools with a bather load greater than 200 shall be designed so that passage from the showers to the swimming facility shall not be through dressing room areas and other dry areas of the bather preparation facility.

18-29-1203.3 Showers, water closets and lavatories.

Bather preparation facilities shall be provided with at least the number of showers, water closets, urinals and lavatories indicated in Table 18-29-1203.3. Showers and lavatories shall be provided with liquid or powdered soap dispensers. Showers shall be supplied with tempered water or hot water.

Table 18-29-1203.3 Fixtures Required per Bather Load

Bather Load ³	Fixtures Required (Male) ^b				Fixtures Required (Female) ^b		
	Water Closets	Urinals	Lavatories	Showers	Water Closets	Lavatories	Showers
0-100	1	0	1	1	1	1	1
101-200	1	1	1	2	2	1	2
201-300	1	2	2	3	3	2	3
301-400	2	2	2	4	4	2	4
401-500	2	3	2	5	5	2	5
501-1,000	3	3	2	6	6	2	6
1001-1,500	4	5	2	10	9	2	10
1,501-2,000	5	6	2	15	11	2	15
2,001 or more	6	7	3	20	13	3	20

a. Bather load shall be determined in accordance with Section 1004 of the Chicago Building Code.

b. Single-user toilet rooms and single-user bathing rooms may be provided in accordance with Section 18-29-403.1 3. In

such case, water closets shall be provided instead of required urinals.

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18-29-1203.3.1 School facilities.

At a facility used by school classes, one shower for every four persons in the largest class shall be provided for each sex, except that in no case shall the number of showers provided be less than shown in Table 18-29-1203.3.

18-29-1203.4 Dressing rooms.

For facilities with a bather load of more than 300, a dressing area shall be provided for each sex. Shower and toilet areas and walkways shall not be considered dressing areas.

18-29-1203.5 Foot spray.

A foot spray, if provided, shall be supplied from the potable water system or the swimming facility recirculation system, have a spray head 18 to 24 inches (457 to 610 mm) above the walking surface, have a conveniently located valve, be arranged to spray the bathers from knees to feet as they enter the enclosure, and have a drain.

18-29-1203.6 Drinking fountains.

Drinking fountains shall be provided on the pool deck for the use of bathers. 18-29-1204

Private Residential Swimming Pools. 18-29-1204.1 Scope.

Every existing private residential swimming pool and every such pool constructed, installed and maintained hereafter shall comply with all applicable provisions of this article.

18-29-1204.2 Location.

No portion of an outdoor private residential swimming pool shall be located at a distance less than 10 feet (3048 mm) from an abutting property line or rear property line. Pumps, filters and pool water disinfection equipment installations shall be located at a distance not less than 10 feet (3048 mm) from an abutting property line.

18-29-1204.3 Permit required.

It shall be unlawful to proceed with the construction, installation, enlargement or alteration of any private residential swimming pool or appurtenance without a building permit as provided in Chapter 14A-4 of the Municipal Code.

18-29-1204.4 Construction requirements.

Private residential swimming pools shall be constructed in accordance with Sections 18-29-1202.4.1 through 18-29-1202.4.11.

18-29-1204.4.1 Recirculation pools.

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.

18-29-1204.4.2 Materials.

Pools shall be constructed of materials that provide a rigid, watertight shell with a smooth, impervious, light-colored finish that is non-toxic and easily cleaned. The floor of areas in which the water is less than 5 feet (1525 mm) in depth shall have a slip-resistant finish. Pool vinyl liners may be installed only over a base of concrete, steel or other rigid material.

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18-29-1204.4.3 Structural design.

Pools shall comply with the structural provisions of the Chicago Building Code. Pools shall be designed to withstand the water pressure from within and to resist the pressure from the earth when the pool is empty.

18-29-1204.4.4 Pool deck.

Unobstructed walk areas not less than 6 feet (1828 mm) wide shall be provided on at least two sides of the pool; unobstructed walk areas not less than 24 inches (610 mm) wide shall be provided on all sides of the pool. The walk area shall be constructed of impervious material and the surfaces shall be smooth and easily cleaned with a non-slip finish. The slope of the walks shall have a pitch of at least 1/4 inch per foot (6 mm per 300 mm), designed to prevent back drainage from entering the pool. Walk drains shall be provided for each 100 square feet (9.29 m²) of walk area. Drain pipe lines shall be at least 3 inches (75 mm) in diameter, drain openings shall have an open air of at least four times the cross-sectional area of the drain pipe. The walk drain systems shall have an indirect connection to the sewer. The walk drains shall not be connected to the recirculation system piping. The drainage system shall be constructed of materials in conformance with Article 7.

18-29-1204.4.5 Enclosure.

Pools shall be completely enclosed by a fence or walls erected along the perimeter of the pool deck. All fence openings or points of entry into the pool enclosure shall be equipped with gates. Fences and gates shall be at least 5 feet (1525 mm) in height above the grade level outside the enclosure and shall meet the requirements for guards in the Chicago Building Code. All gates shall be equipped with self-closing and self-latching devices placed at least 54 inches (1372 mm) above adjacent walking surfaces.

18-29-1204.4.6 Slope.

The slope of the bottom of any part of the pool in which the water is less than 5 feet (1525 mm) in depth shall not be more than 1 unit vertical in 12 units horizontal (6.67 percent slope). The maximum slope where the water is 5 feet (1525 mm) or more in depth shall not exceed 1 unit vertical in 3 units horizontal (33.3 percent slope).

18-29-1204.4.7 Steps or ladders.

At least two means of egress in the form of steps, ladders or step holes shall be provided from the pool. At least one 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, ladders or step holes shall be constructed of non-slip material and shall be at least 3 inches (75 mm) wide for their full length. Steps, ladders and step holes shall be provided with a handrail on both sides.

18-29-1204.4.8 Overflow gutters.

Pools shall be provided with overflow gutters on all vertical walls and shall extend around the entire perimeter of the pool. The overflow gutter shall be of the open, roll over or semi-recessed type, having a smooth finish. The lip or overflow gutter edge shall be level, the overflow gutter shall have a minimum depth of 4 inches (100 mm); the overflow gutter bottom shall have a slope toward each drain and have a pitch not less than 1/4 inch to the foot (6 mm to 300 mm); drain spacings shall be a minimum of 15 feet (4572 mm) on center; drain pipelines shall be at least 3 inches (75 mm) in diameter; outlet fixtures shall have a grate opening of at least twice the cross-sectional area of the drain pipe; the drain lines shall have an indirect connection to the sewer.

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18-29-1204.4.9 Inlets.

All water recirculation system inlets and makeup water facilities shall be located, equipped and constructed in accordance with Sections 18-29-1204.4.9.1 through 18-29-1204.4.9.3.

18-29-1204.4.9.1 Water recirculation system inlets.

Water recirculation system inlets shall be located to produce uniform circulation throughout the pool without the existence of dead spots and to carry pool bottom deposits to the outlets. Recirculation systems inlets in the pool walls shall be spaced not more than 20 feet (6096 mm) on center around the entire perimeter of the pool and shall discharge at a minimum depth of 10 inches (254 mm) below the pool overflow level.

18-29-1204.4.9.2 Makeup water.

Pools shall be equipped with suitable facilities for adding makeup water as needed. There shall be no physical connection between the water supply line and the pool system. If the makeup water is added directly to the pool, the outlet shall be at least 6 inches (150 mm) above the upper rim of the pool. If the makeup water line discharges to a surge or balancing tank, the point of discharge shall be at least 6 inches (150 mm) above the rim of the tank. If a hose connection from a sill cock or other plumbing fixture is to be used for supplying makeup water, then a vacuum breaker shall be installed between the sill cock or control valve at the fixture and the hose connection.

18-29-1204.4.9.3 Water systems construction conformance.

The systems supplying recirculated water and makeup water to the pool shall be constructed in conformance with Article 6 of this chapter, with the exception that the system supplying recirculated water can utilize Schedule 40 PVC pipe.

18-29-1204.4.10 Outlets.

Water recirculation system outlets and water discharge facilities shall be located, equipped and constructed in accordance with Sections 18-29-1204.4.10.1 through 18-29-1204.4.10.3.

18-29-1204.4.10.1 Water recirculation system outlets.

If the pool width does not exceed 20 feet (6096 mm), water recirculation system outlets shall be so located as to provide at least one outlet at the deepest point of the pool. If the pool width is more than 20 feet (6096 mm), multiple outlets shall be provided and spaced not more than 20 feet (6096 mm) apart, nor more than 10 feet (3048 mm) from the walls. All pool drain outlets shall be equipped with gratings having an area of openings not less than 10 times the cross-sectional area of the outlet pipe. The grating shall be designed such that it cannot be readily removed by bathers and will not injure bather's fingers.

18-29-1204.4.10.2 Drainage system.

Pools shall be equipped with facilities for completely emptying the pool and the discharge from the pool water to the sewer shall be at a rate not exceeding 250 gallons per minute (15.8 Us). No direct connection shall be made to the sewer. The drainage system shall be constructed in conformance with Article 7. The drain pipe diameter shall be at least 6 inches (150 mm).

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18-29-1204.4.10.3 Drain water discharge.

Drain pipe lines from the pool deck, scum gutters and pools shall discharge into a common catch basin. If elevation permits, the catch basin may drain by gravity into the sewer. If, however, the elevations are such as to require pumping, the combined discharge shall be pumped into the sewer. In either case, a back water valve or gate shall be installed downstream from the catch basin and the pump. 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 250 gallons per minute (15.8 Us).

18-29-1204.4.11 Recirculation system and appurtenances.

Recirculation systems and appurtenances shall comply with the standards specified in Sections 18-29-1204.4.11.1 through 18-29-1204.4.11.8.

18-29-1204.4.11.1 Required apparatuses.

The recirculation system shall consist of pumping equipment, hair and lint catchers and 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.

18-29-1204.4.11.2 Water volume turnover.

The recirculating system shall be capable of producing a six-hour turnover of the entire water volume contents.

18-29-1204.4.11.3 Pump capacity.

The recirculation system pump shall have sufficient capacity to discharge the volume of water required for a six-hour turnover of the pool against the maximum head in the recirculating system.

18-29-1204.4.11.4 Backwash filter rate.

The pump used for backwashing filters shall have sufficient capacity to provide a rate of at least 15 gallons per minute per square foot (10 L/s/m²) of filter area.

18-29-1204.4.11.5 Hair and lint strainer.

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 material from reaching the pump filters. Hair and lint catchers shall be so designed that they can be easily dismantled for cleaning and inspection and shall be so located as to be easily accessible for cleaning. The design features shall be as follows: Water passes through the strainer from the outside; the strainer is made of non-corrosive material; the width or diameter of the miner openings is not more than 1/8 inch (3 mm); the area of the strainer openings shall be at least five times the cross-sectional area of the inlet pipe to the strainer.

18-29-1204.4.11.6 Pressure filters.

Recirculating systems shall contain rapid pressure filters. Sufficient filter area shall be provided to filter the entire contents of the pool in six hours at the rate of not more than 3 gallons per minute per square foot (2 L/s/m²) of filter area. The filter backwashing facilities shall be sufficient to backwash at the rate of 15 gallons per minute per square foot (10 L/s/m²) 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

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head or pressure gauges on the inlet and outlet pipes, and an access head or hole 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.

18-29-1204.4.11.7 Disinfection equipment.

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 Illinois Department of Public Health. Disinfection equipment installed for the use of chlorine compounds shall have sufficient capacity to maintain a minimum free chlorine residual of 0.5 parts per million. The disinfectant shall be introduced into the recirculation system ahead of the filters.

18-29-1204.4.11.8 Gaseous chlorination systems prohibited.

Gaseous chlorination systems shall not be made use of as a disinfection method for pool water.

18-29-1204.5 Water source.

No source of water other than the Chicago Waterworks System shall be used. 18-29-1204.6 Safety.

The following safety measures shall be provided:

1. A skilled swimmer shall be present at all times when the pool is in use.
2. The pool area shall be equipped with one or more throwing ring buoys not more than 15 inches (381 mm) in diameter and having 60 feet (18.2 m) of 3/16-inch (4.7 mm) manila line attached, and one or more light but strong poles with blunted ends and not less than 12 feet (3658 mm) in length, for making reach

assists or rescues.

3. No diving board or platform more than three feet (914 mm) above water level shall be installed.
4. Life-saving equipment shall be provided and maintained so as to be immediately available for use in an emergency.

18-29-1204.7 Seasonal operation.

Use of outdoor private residential swimming pools shall be subject to the following limitations:

1. Pools may only be used between June 1st and September 15th, inclusive.
2. Pools may not be used between the hours of 10:00 p.m. and 8:00 a.m.
3. Between September 16th and May 30th, inclusive, pools shall be drained of all water.
4. A substantial protective cover shall be provided and installed over the pool surface from September 16th to May 30th, inclusive.

18-29-1204.8 Maintenance.

Private residential swimming pools shall be maintained in a satisfactory operating condition during periods of use. No private residential swimming pool shall be used, kept, maintained or

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operated, where such use, keeping, maintaining or operating shall be the occasion of any nuisance or shall be dangerous to life or detrimental to health.

ARTICLE XIII. AMENDMENTS TO CHAPTER 18-29, ARTICLE 13

SECTION 1. Article 13 of Chapter 18-29 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Article 13. REFERENCED STANDARDS

.NOTE: Add the prefix 18-29- to all cited sections and tables. 18-29-1301

Referenced Standards. 18-29-1301.1 General.

This article section lists the standards that are referenced in various sections provisions of this document chapter. The standards are listed herein by the promulgating agency of the standard, the standard identification, and the effective date and title, ~~and the section or sections of this document that reference the standard.~~ If a standard is referenced in a provision of this chapter but not listed in this section, the applicable edition shall be determined by reference to Chapter 15 of the International Plumbing Code, 2021 edition. If a more recent edition of a standard listed in this section is listed in either Chapter 15 of the International Plumbing Code, 2021 edition, or Appendix A, Table A of the Illinois Plumbing Code (77 Ill. Admin. Code 890, Appendix A, Table A), an applicant may elect to use the more recent edition listed in those documents instead of the edition listed in this section. The application of the referenced standards shall be as specified in Section 18-29-102.8.

(omitted text is not affected by this ordinance)

Suite 201
5203 Loosburg Piko Falls Church, VA 22041

Standard Reference Number

A117.1.92

text is not affected by this ordinance)

RFPA

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Number Title

National Electrical Code

Reference in code section number

502.1, 1111.3.3

(omitted text is not affected by this ordinance)

ARTICLE XIV. COORDINATING AMENDMENTS

SECTION 1. Section 4-28-010 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-010 Definitions.

As used in this chapter:

"City" means the City of Chicago.

"Commissioner" means ~~commissioner of water management~~ the Commissioner of Buildings.

"Department" means ~~department of water management~~ the Department of Buildings. (omitted text is not affected by this ordinance)

SECTION 2. Section 4-28-020 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

4-28-020 License - Required.

No person shall engage in the business of drain layer without first having obtained a drain layer's license: provided, however, that a duly licensed plumber or plumbing contractor shall not require a drain layer's license to engage in the installation, maintenance or repair of plumbing as defined in Chapter 18-29.

SECTION 3. Section 4-28-040 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-040 License - Application.

An application for a drain layer's license shall be made to the ~~commissioner~~ Commissioner on a form supplied by the ~~department~~ Department, and shall be accompanied by the following:

(omitted text is not affected by this ordinance)

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(9) any other information that the ~~commissioner~~ Commissioner may require.

SECTION 4. Section 4-28-060 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-060 Insurance - Required.

Each applicant for a drain layer's license shall furnish proof of insurance evidencing commercial general liability insurance with limits of not less than ~~\$300,000.00~~ \$1,000,000.00 per occurrence, for bodily injury, personal injury, and property damage arising in any way from the issuance of the license or activities conducted pursuant to the license. The insurance policy required under this subsection shall: (i) be issued by an insurer authorized to ~~insure~~ insure in Illinois, (ii) include a provision requiring 30 days' advance notice to the ~~commissioner~~ Commissioner prior to cancellation or lapse of the policy, and (iii) name the City of Chicago as additional insured on a primary, noncontributory basis for any liability arising directly or indirectly from the licensee's operations. The licensee shall maintain the insurance required under this section in full force and effect for the duration of the license period.

(omitted text is not affected by this ordinance)

SECTION 5. Section 4-28-070 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-070 Bond - Required.

Each applicant for a drain layer's license shall file with the ~~department~~ Department a bond, with good and sufficient sureties, payable to the City of Chicago, in the amount of \$50,000.00.

(omitted text is not affected by this ordinance)

Every bond required by this section shall require 30 days' advance notice to the ~~commissioner~~ Commissioner prior to cancellation. The licensee shall maintain any bond required by this section in full force

and effect for the duration of the license period. Failure to do so shall result in immediate suspension or revocation of the drain layer's license in accordance with Section 4-28-140.

SECTION 6. Section 4-28-090 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-090 Instruction and examination - Required.

An applicant for a drain layer's license must successfully complete a course of instruction in drain laying and pass a standardized drain layer's examination as approved by the ~~commissioner~~ Commissioner or employ an individual who has completed such a course of instruction and passed such an examination. ~~The following persons~~ Any licensee whose license has lapsed for more than 12 months must also successfully complete a course of instruction in

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drain laying and pass a standardized drain layer's examination as approved by the commissioner's Commissioner or employ an individual who has done so in the previous 12 months.

- 1) ~~Any licensee who has allowed his drain layer's license to lapse and is seeking to renew his license; or~~
- 2) ~~Any licensee who has not obtained a permit required by Section 11-16-030 of this code within the preceding three-year period.~~

(omitted text is not affected by this ordinance)

SECTION 7. Section 4-28-100 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-100 Approval, inspection and permit - Required.

No person shall work as a drain layer on any underground drain pipe or sewer structure located inside any building or structure unless the person is a licensed drain layer and the work is done according to plans approved by the department. No person shall work as a drain layer on any underground drain pipe or sewer structure located outside any building or structure unless the person is a licensed drain layer and the work is inspected by the department; provided, however, that no inspection shall be required for rodding. No person shall do any work as a drain layer without first having obtained any permit required by this code. A drain layer shall not perform any work which requires a permit and involves a drain pipe or sewer structure located inside or beneath any building except in accordance with plans approved by the Department. A drain layer shall not perform any work which requires a permit and involves a drain pipe or sewer structure located outside a building except in accordance with plans approved by the Department or as inspected by the Department of Water Management.

SECTION 8. Section 4-28-110 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-110 License - Classification.

The ~~commissioner~~ Commissioner may issue classes of licenses reflecting the different levels of competency of a

drain layer:

(omitted text is not affected by this ordinance)

SECTION 9. Section 4-28-120 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

4-28-120 License - Termination - Penalty for late renewal.

(a) The drain layer's license shall expire on December 31st of each year prior to calendar year 2023. For licenses issued on or after February 1, 2023, licenses shall expire one

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year after issuance. Any person who fails to renew his or her license within 60 days of the license's expiration date shall be assessed a \$75.00 late fee in addition to the license fee.

(b) For licenses issued with an effective date in January 2023 only, the Commissioner may, by rule, establish expiration dates between 12 and 23 months after the date of issuance, based on the first letter of the last name of the licensee, so as to distribute the expiration dates across the calendar year.

SECTION 10. Section 4-28-130 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-130 Regulations.

The commissioner Commissioner shall have the authority to promulgate rules and regulations necessary to implement the provisions of this chapter in accordance with Section 14A-1-104.4.

SECTION 11. Section 4-28-140 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-140 License - Suspension and revocation.

Except as otherwise provided in this code, three or more violations within any calendar year of any provision of this chapter, or Chapter 11-16, or any rules and regulations promulgated thereunder, shall result in license suspension or revocation in accordance with Section 4-4-280 of this code. The suspension or revocation of any drain layer's license pursuant to this section shall also act as the suspension or revocation of any permit issued to the licensee under Chapter 11-16 of this code. No license or permit suspended or revoked pursuant to this section shall be reinstated until all code violations related to the suspension or revocation have been remedied and all assessed penalties and fees have been paid. Drain layers' permit privileges may be suspended in accordance with Section 14A-3-304. Drain layers' licenses may be suspended or revoked in accordance with Section 14A-3-305.

SECTION 12. Section 4-28-150 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

4-28-150 Violation - Penalty.

~~the first offense, and \$1,000.00 for any second or subsequent offense occurring within the same calendar year. Violations of this chapter shall be subject to the remedies described in Chapter 14A-3.~~

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SECTION 13. Article III of Chapter 7-28 (Sections 7-28-530 through 7-28-620, inclusive) of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 14. Section 11-12-140 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 15. Section 11-12-910 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

11-12-910 Homeowner-Initiated Owner-initiated LSLR Program.

a) ~~Homeowners~~ Owners of residential buildings, as that term is defined in Section 17-17-02146, and owners of buildings exempted from real property taxation for the most recent assessment year who voluntarily replace the full lead service line serving the ~~homeowner's~~ Property owner's building may apply to be part of the ~~Homeowner-Initiated~~ Owner-Initiated LSLR program.

b) Subject to need, availability, and appropriation of funds,

1) the Commissioner of Water Management shall provide a buffalo-box, water meter, and information on selecting contractors for the ~~homeowner's~~ owner's lead service line replacement, to each ~~homeowner~~ owner voluntarily replacing the full lead service line at no cost to the ~~homeowner~~ owner.

2) the permit fees and certain costs necessary to perform the full lead service line replacement, including permits and costs from the Department of Water Management, the Department of Transportation, and the Department of Buildings, shall be waived in an aggregate amount not to exceed \$3,100.00. The Commissioners of Water Management, Transportation, and Buildings shall ~~may~~ jointly issue rules specifying the types of permits, permit fees, and costs which may be waived.

SECTION 16. Article XVII of Chapter 13-96 (Sections 13-96-620 through 13-96-810, inclusive) of the Municipal Code of Chicago is hereby repealed in its entirety.

(remainder of this page intentionally blank)

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ARTICLE XV. IMPLEMENTATION AND EFFECTIVE DATE

SECTION 1. Section 14A-1-105.10 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14A-1 -105.10 ~~Reserved~~ Plumbing-Except as the building official may otherwise provide by rule, the amendments made to Chapter 18-29 of the Municipal Code by the amendatory ordinance of 2021 are only applicable to projects permitted under Title 14B in accordance with Section 14A-1-105.2 or Title 14R in accordance with Section 14A-1-105.11. These amendments, as a whole, are optional for permit applications submitted before March 1, 2022 and mandatory for permit applications submitted on or after that date.

SECTION 2. Portions of this ordinance were prepared based on copyrighted source material owned by the International Code Council, Inc. (ICC). ICC reserves all rights in the source material owned by ICC and used in the preparation of this ordinance.

SECTION 3. To the extent any policy or rule promulgated by a City agency or official before the effective date of this ordinance conflicts with any amendment made by this ordinance, such policy or rule is superseded by this ordinance to the full extent of the conflict and the agency or official that promulgated such policy or rule is directed to promptly rescind the superseded policy or rule or promulgate an amended policy or rule consistent with this ordinance.

SECTION 4. Sections 1 through 12 of Article XIV of this ordinance shall take full force and effect on January 1, 2022, following passage and approval. The remainder of this ordinance shall take full force and effect upon its passage and approval.

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OFFICE OF THE MAYOR

CITY OF CHICAGO

LORI E. LIGHTFOOT

MAYOR

September 14, 2021

TO THE HONORABLE, THE CITY COUNCIL OF THE CITY OF
CHICAGO

Ladies and Gentlemen:

At the request of the Commissioner of Buildings, I transmit herewith an ordinance amending the plumbing provisions of the Municipal Code.

Your favorable consideration of this ordinance will be appreciated.

Very truly yours,

OCTOBER 14, 2021

REPORTS OF THE COMMITTEE ON ZONING, LANDMARKS & BUILDING STANDARDS

MADAM PRESIDENT AND MEMBERS OF THE CITY COUNCIL, PRESENTING A SERIES OF REPORTS FOR YOUR COMMITTEE ON ZONING, LANDMARKS & BUILDING STANDARDS WHICH HELD A MEETING ON OCTOBER 12, 2021. THESE REPORTS ARE GROUPED FOR CONVENIENCE. THE FOLLOWING ITEMS WERE PASSED BY A MAJORITY OF THE MEMBERS PRESENT.

PAGE ONE CONTAINS DOCUMENT NO. A-2021 -158 THE APPOINTMENT OF CARLOS PINEIRO

AS A MEMBER OF THE CHICAGO PLAN COMMISSION, I MOVE PASSAGE OF THIS ITEM BY THE LAST MOST FAVORABLE ROLL CALL VOTE OF THE FINANCE COMMITTEE REPORT AND THE ASSOCIATED UNSUCCESSFUL MOTION TO RECONSIDER.

PAGE ONE CONTAINS DOCUMENT NO. 02021-4134 THE AMENDMENT OF MUNICIPAL CODE 18-29, ARTICLES 1 THROUGH 15 REGARDING PLUMBING PROVISIONS. I MOVE PASSAGE OF THESE ITEMS BY THE SAME MOTION IF THERE IS NO OBJECTION.

PAGES ONE THROUGH FIFTEEN CONTAIN VARIOUS MAP AMENDMENTS IN THE 1ST, 2ND, 4TH, 6TH, 9TH, 10TH, 11TH, 12TH, 19TH, 24TH, 25TH, 27TH, 28TH, 30TH, 32ND, 33RD, 36TH, 39TH, 40TH, 43RD, 47TH, AND 50TH WARDS. I MOVE PASSAGE OF THESE ITEMS BY THE SAME MOTION IF THERE IS NO OBJECTION NOTING THAT ALDERMAN LOPEZ WOULD LIKE TO BE RECORDED AS VOTING NO ON DOCUMENT 02021-3962 FOR THE ADDRESS COMMONLY KNOWN AS 3900 S WESTERN AVE

PAGE FIFTEEN CONTAINS THREE HISTORICAL LANDMARK DESIGNATIONS. THE FIRST IN THE 4TH WARD, FOR THE MUDDY WATERS HOUSE LOCATED AT 4339 S LAKE PARK AVE. NEXT IN THE 11TH WARD, THE MONASTERY OF THE HOLY CROSS BUILDING LOCATED AT 3101-3111 S ABERDEEN ST. LASTLY, FOUR BUILDINGS WITH KNOWN AS THE HALSTED WILLOW GROUP LOCATED AT 1800 N HALSTED ST, 1732 N HALSTED ST, 1727-1729 N HALSTED ST AND 1733 N HALSTED ST IN THE 2ND AND 43RD WARDS. I MOVE PASSAGE OF THESE ITEMS BY THE SAME MOTION IF THERE IS NO OBJECTION.

PAGE FIFTEEN CONTAINS ONE HISTORICAL LANDMARK FEE WAIVER IN THE 4TH WARD LOCATED AT 523-529 S PLYMOUTH CT. I MOVE PASSAGE OF THIS ITEM BY THE SAME MOTION IF THERE IS NO OBJECTION.

PAGE SIXTEEN CONTAINS VARIOUS LARGE SIGNS OVER 100 SQ. FT. IN AREA, 24 FEET ABOVE GRADE IN THE 4TH, 8TH, 11TH, 22ND, 27TH, 28TH, 38TH, 41ST, 42ND, 44TH, AND 45TH WARDS. I MOVE PASSAGE OF THESE ITEMS BY THE SAME MOTION IF THERE IS NO OBJECTION.

MADAM PRESIDENT THAT CONCLUDES MY REPORT. RESPECTFULLY SUBMITTED

THOMAS TUNNEY ALDERMAN, 44TH WARD

Approved

Mayor

DATED: (Q^|1~2>|

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