

ORDINANCE NO. 14,490

AN ORDINANCE to amend the Municipal Code of the City of Des Moines, Iowa, 2000, adopted by Ordinance No. 13,827, passed June 5, 2000, by repealing Article VI, Plumbing Code, Sections 26-986 through 26-1248 and adding and enacting a new Article V - Plumbing Code, Division I - Generally, Sections 26-500 through 26-541, Division II - Storm Drainage System, Sections 26-550 through 26-557, Division III - Licenses and Certificates, Sections 26-575 through 26-580, and Division IV, Permits and Inspections, Division IV, Sections 26-590 through 26-593, relating to a new Plumbing Code in Chapter 26, Building and Building Regulations.

Be It Ordained by the City Council of the City of Des Moines, Iowa:

Section 1. That the Municipal Code of the City of Des Moines, Iowa, 2000, adopted by Ordinance No. 13,827, passed June 5, 2000, is hereby amended by repealing Article VI, Plumbing Code, Sections 26-986 through 26-1248 and adding and enacting a new Article V - Plumbing Code, Division I - Generally, Sections 26-500 through 26-541, Division II - Storm Drainage System, Sections 26-550 through 26-557, Division III - Licenses and Certificates, Sections 26-575 through 26-580, and Division IV, Permits and Inspections, Division IV, Sections 26-590 through 26-593, relating to a new Plumbing Code in Chapter 26, Building and Building Regulations, as follows:

**ARTICLE V. PLUMBING CODE**

DIVISION 1. GENERALLY

**Sec. 26-500. Scope.**

- (a) The provisions of the plumbing code shall apply to all new construction, relocated buildings, and to any alterations, repairs or reconstruction, except as otherwise provided for in the plumbing code.
- (b) Additions to, identified faulty work, alterations of and repairs to any part of an existing plumbing or drainage system, if covered by the plumbing code, shall comply with the provisions of the plumbing code.
- (c) Installations which were in compliance with the city plumbing ordinances in existence at the time the installations were made shall be presumed to be safe and proper, which presumption can be rebutted by evidence that the installation is insanitary, dangerous, unsafe, constitutes a nuisance or is a menace to life, health or property, or is contrary to generally accepted standards of good practice.

**Sec. 26-501. Adoption of Uniform Plumbing Code.**

- (a) This article shall consist of the Uniform Plumbing Code ("UPC"), 2003 edition, published by the International Association of Plumbing and Mechanical Officials, which volume is incorporated by this reference in its entirety, except as otherwise indicated in this article.
- (b) This article and all provisions incorporated in this article, by reference or otherwise, shall be known as the plumbing code. References to section numbers not preceded by "26-" will be to sections in the Uniform Plumbing Code.

**Sec. 26-502. Deletions.**

The following are deleted from the Uniform Plumbing Code, and are of no force or effect in this article:

- (1) Chapter 1 - Administration
- (2) Chapter 11 - Storm Drainage - Division 2 Storm Drains (26-1241)
- (3) Chapter 15 - Fire Stop Protection - All references to NFPA 5000 shall be replaced with 2003 International Building Code.

**Sections:**

- (1) Section 908.0 Wet Venting (26-530)
- (2) Section 604.0 Materials H2O Dist (26-533)
- (3) Section 717.0 Size of Building Sewers (26-536)

**Subsections:**

- Subsection 701.1 Drainage Systems (26-523)
- Subsection 701.1.1 Drainage Systems (26-523)

Subsection 710.1	Backwater Valves	(26-522)
Subsection 903.2	Use of Copper Tubing	(26-521)
Subsection 718.1	Min. Grade of Horiz. Drng.	(26-539)
Subsection 903.1	Vents and Venting	(26-525)
Subsection 903.1.1.	Vents and Venting	(26-525)
Table 10.1	Horiz. Dist. Trap Arms	(26-532)

**Sec. 26-503. Amendments and additions.**

- (a) The remaining sections in this article are and represent amendments and additions to the requirements contained in the Uniform Plumbing Code, and where their requirements conflict with those of the Uniform Plumbing Code, the requirements of this article shall prevail.
- (b) The following sections of this article shall be construed in the context of the enumerated chapter of the Uniform Plumbing Code:
  - (1) Section 26-521 - Use of Copper Tubing - chapter 3.
  - (2) Section 26-522 - Backwater Valves - chapter 3.
    - (3) Section 26-523 - Drainage Systems - chapter 7.
    - (4) Section 26-524 - Max FU's on 2in vent - chapter 9
    - (5) Section 26-525 - Vents and Venting - chapter 9.
    - (6) Section 26-526 - Vent Termination - chapter 9.
    - (7) Section 26-527 - Vent Stacks and Relief Vents - chapter 9
    - (8) Section 26-528 - Vent Exceptions - chapter 9
  - (9) Section 26-529 - Air Conditioning Waste - chapter 8
  - (10) Section 26-530 - Appliances - chapter 8.
  - (11) Section 26-531 - Wet Venting - chapter 8.
  - (12) Section 26-532 - Swimming Pools - chapter 8.
  - (13) Section 26-533 - Table of Horiz. Distance of Trap Arms - chapter 10.
    - (14) Section 26-534 - Matls. Used for H2O Dist. - chapter 6.
  - (15) Section 26-535 - Cross Connection Control-containment - chapter 6
  - (16) Section 26-536 - Depth of Water Service - chapter 6.
  - (17) Section 26-537 - Size of Bldg Sewers - chapter 7.
  - (18) Section 26-538 - Clean-outs - chapter 7.
  - (19) Section 26-539 - Showers Sub-pans - chapter 4.
    - (20) Section 26-540 - Min. Grade of Horiz. Drng Piping - chapter 7.
    - (21) Section 26-541 - Floor Drains Required - chapter 4
    - (22) Chapter 15 - Firestop Protection - All references to NFPA 5000 shall be replaced with 2003 International Building Code

**Sec. 26-504. Applicability to moved buildings.**

Buildings or structures moved into the city shall comply with the provisions of the plumbing code for new buildings or structures.

**Sec. 26-505. Applicability to subsurface drainage.**

The provisions of section 26-1241 of this article which relate to subsurface drainage shall apply to all such subsurface drainage from buildings, whether new or existing, if such drainage would, but for compliance therewith, discharge to a point upon or so adjacent to a public sidewalk or street as to permit the water so discharged to drain upon a public sidewalk or street. Failure to comply with this section shall constitute a violation of the plumbing code. It is specifically provided, however, that no offense shall be charged under this section for such discharge during periods of community emergency generated by extraordinarily high levels of precipitation.

**Sec. 26-506. Applicability to county park property.**

The provisions of this article shall not apply or be enforced within or upon county park property situated within the corporate boundaries of the city so long as the county shall maintain in force within the county a nationally recognized plumbing code and shall provide for the enforcement of such plumbing code within and upon such park property.

**Sec. 26-507. Authority of Building Official.**

The building official is responsible for the enforcement of the plumbing code and the rules and regulations of the local boards of health and state board of public health governing plumbing. When used in this subdivision, the term "administrative authority" shall mean the building official or his or her duly authorized representative.

When it is impossible or impractical to install plumbing in strict compliance with the provisions of the plumbing code or any other applicable law, ordinance, rule or regulation, the building official may, with the approval of the state department of public health, permit minor variations which are safe and reasonable.

**Sec. 26-508. Definitions.**

In addition to the definitions described in chapter 1 of the Uniform Plumbing Code, the following words, terms and phrases, when used in this article, shall have the meanings ascribed to

them in this section, except where the context clearly indicates a different meaning:

*Building (house) storm drain* means a building drain used for conveying rainwater, surface water, groundwater, subsurface water, or other similar discharge to a building storm sewer or a combined building sewer, extending to a point not less than three feet outside the building wall.

*Building (house) storm sewer* means the extension from the building storm drain to the public storm sewer, combined sewer, or other point of disposal.

*Storm sewer* means a sewer used for conveying rainwater, surface water, condensate, cooling water, or similar liquid wastes, exclusive of sewage and industrial waste.

*Subsoil drain* means a drain which receives only subsurface or seepage water and conveys it to a place of disposal.

#### **Sec. 26-509. Use of copper tubing.**

- (a) Copper tube for underground drainage and vent piping shall have a weight of not less than that of copper drainage tube type L.
- (b) Copper tube for aboveground drainage and vent piping shall have a weight of not less than type M, except that type DWV may be used in one- and two-family dwellings.
- (c) Copper tube shall not be used for chemical or industrial wastes as defined in section 903.2 of the plumbing code.
- (d) Copper tube for water piping shall have a weight of not less than type M, except that type K shall be used underground.
- (e) In addition to the required incised marking, all hard drawn copper tubing shall be marked by means of a continuous and indelibly colored stripe at least one-quarter inch (6.4 mm) in width, as follows: type K, green; type L, blue; type M, red; type DWV, yellow.
- (f) Listed flexible copper water connections shall be installed in exposed locations, unless otherwise listed.

#### **Sec. 26-510. Backwater valves.**

- (a) In areas of the city that have been determined to experience sanitary sewer backups by the city engineer, drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover of the public sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type backwater valve. Fixtures above such elevation shall not discharge through a required

backwater valve.

- (b) Backwater valves required by this section shall either be manually operated or automatic in operation as described in section 25.4 (10) of the Iowa State Plumbing Code administrative rule 641 chapter 25 (135). Note: In existing structures where the installation of backwater valves are desired but not required, this section shall not apply.

**Sec. 26-511. Drainage systems.**

- (a) Drainage pipe shall be cast iron, no-hub cast iron, galvanized steel, galvanized wrought iron, lead, copper, brass, ABS, PVC or other approved materials having a smooth and uniform bore. Exceptions shall be as follows:
  - (1) No galvanized wrought iron, galvanized steel, or DWV copper pipe shall be used underground, and it shall be kept at least six inches (152.4 mm) aboveground.
  - (2) ABS and PVC pipes and fittings shall be marked to show conformance with the standards in the plumbing code. ABS and PVC installations are limited to construction not exceeding the following conditions:
    - a) ABS, PVC and SDR 23.5 shall be installed with a minimum bedding of four inches below and up all sides with three-eighths-inch clean smooth gravel or a bedding product allowed by the Des Moines Metropolitan Design Standards, class I, 1 inch clean bedding.
    - b) All installations shall be made in accordance with the manufacturer's recommendations.
- (b) Drainage fittings shall be of cast iron, malleable iron, lead, brass, copper, ABS, PVC, no-hub fittings or other approved materials having a smooth interior waterway of the same diameter as the piping served, and all such fittings shall conform to the type of pipe used, as follows:
  - (1) Fittings on screwed pipe shall be of the recessed drainage type. Burred ends shall be reamed to the full bore of the pipe.
  - (2) The threads of drainage fittings shall be tapped so as to allow one-fourth inch per foot (20.9 mm/m) grade.

**Sec. 26-512. Maximum number of fixture units on two-inch vent piping.**

Footnote 3 of table 7.3 of the plumbing code shall not be applicable to the maximum number of units permitted on two-inch diameter vent piping.

**Sec. 26-513. Vents and venting.**

Vent pipe shall be cast iron, galvanized steel, galvanized wrought iron, lead, copper, brass, ABS, PVC or other approved materials. Exceptions shall be as follows:

- (1) Galvanized wrought iron, galvanized steel, or copper DWV pipe shall not be used underground and shall be kept at least six inches aboveground.
- (2) ABS and PVC pipes and fittings shall be marked to show conformance with the standards in the plumbing code. ABS and PVC installations are limited to construction not exceeding the following conditions:
  - a. ABS, PVC shall be installed with a minimum bedding of four inches below and up all sides with three-eighths-inch clean smooth gravel or a bedding product allowed by the Des Moines Metropolitan Design Standards, class I, 1 inch clean bedding.
  - b. All installations shall be made in accordance with the manufacturer's recommendations.

**Sec. 26-514. Vent termination.**

- (a) Each plumbing vent extension through a roof shall be increased in size as follows:

Vent Diameter (inches)	Extension Diameter (inches)
Less than 3	3
3 to 4	4
Over 4	Same as vent

- (b) The change in diameter shall be made at least one foot below the roof and shall extend to the point of vent termination, which shall be not less than ten inches above the roof or as required by the plumbing inspector. Increasers shall be no longer than thirty inches in length.

**Sec. 26-515. Vent stacks and relief vents**

- (a) Each vent stack, which extends ten or more stories above the building drain or other horizontal drain, shall be served by a parallel vent stack, which shall extend undiminished in size from its upper terminal and connect to the drainage stack at or immediately below the lowest

fixture branch. Each such vent stack shall also be connected to the drainage stack at each fifth floor below the uppermost fixture branch by means of a relief yoke vent, the size of which shall not be less in diameter than either the drainage or the vent stack, which ever is smaller.

- (b) The yoke vent intersection with the vent stack shall be placed not less than 42 inches (1.1M) above the floor level, and the yoke vent intersection with the drainage stack shall be by means of a wye branch fitting placed below the fixture branch serving that floor.
- (c) A vent stack or a main vent shall be installed with a soil or waste stack whenever back vents, relief vents or other branch vents are required in two or more branch intervals or stories.

**Sec. 26-516. Vent exceptions.**

No vents will be required on a downspout or rain leader trap, a backwater valve or a subsoil catch basin trap.

**Sec. 26-517. Air conditioning wastes.**

- (a) *Size.* Air conditioning waste pipes shall be independent of any drainage and waste systems and shall not be smaller than shown in the following:
  - (1) Three-fourths inch serving five tons maximum.
  - (2) One inch serving 25 tons maximum.
  - (3) One and one-fourth inches serving 50 tons maximum.
  - (4) One and one-half inches serving 100 tons maximum.
  - (5) Two inches serving over 100 tons.

Acrylonitrilic-butadiene-styrene (ABS) and polyvinyl chloride (PVC) plastic drain, waste, and vent pipe and fittings conforming to table I or other approved material may be used for air conditioning condensate waste.

- (b) *Point of discharge.* Air conditioning condensate waste pipes shall discharge at one of the following:
  - (1) Indirectly to a properly trapped fixture, floor drain or open sight drain.
  - (2) Sump pump.
  - (3) Surface (permission must be obtained from the building official for this point of discharge).
  - (4) Indirectly to the building storm sewer through a roof drain.
- (c) *Vents and traps.* Vents and traps shall not be required on air conditioning condensate waste pipes.

**Sec. 26-518. Appliances.**



No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air-gap fitting on the discharge side of the dishwashing machine, or by looping the discharge line of the dishwasher as high as possible near the flood level of the kitchen sink where the waste disposer is connected. Listed air-gaps shall be installed with the flood level (FL) marking at or above the flood level of the sink or drain board, whichever is higher.

**Sec. 26-519. Wet venting.**

- (a) Wet venting is limited to drainage piping receiving the discharge from the trap arm of one- and two-fixture unit fixtures that also serves as a vent for not more than four fixtures. All wet vented fixtures shall be within the same story provided, further, that fixtures with a continuous vent discharging into a wet vent shall be within the same story as the wet vented fixtures. The distance between fixtures, measured vertically, shall not be more than six feet.
- (b) The piping between two consecutive inlet levels shall be considered a wet vented section. Each wet vented section shall be a minimum of one pipe size larger than the required minimum waste pipe size of the upper fixture or shall be one pipe size larger than the required pipe size for the sum of the fixture units served by such wet vented section, whichever is larger, but in no case less than two inches.
- (c) Common vent sizing shall be the sum of the fixture units served, but in no case smaller than the minimum vent pipe size required for any fixture served or by section 904.0 of the plumbing code.

**Sec. 26-520. Swimming pools.**

Pipes carrying wastewater from swimming pools, wading pools, or hot tubs, including pool drainage, backwash from filters, water from scum gutter drains or floor drains which serve walks around pools, shall be installed as an indirect waste by an air gap. Where the recirculation pump is used to discharge waste pool water to the drainage system, the pump discharge shall be installed as an indirect waste, with an air gap, to the sewer.

**Sec. 26-521. Table of horizontal distance of trap arms.**

The following is the table of horizontal distance of trap arms:

TABLE 7-1 HORIZONTAL DISTANCE OF TRAP ARMS\*

(Except for water closets and similar fixtures not exceeding six feet)

Trap Arm (inches)	Distance Trap to Vent	
	Feet	Inches
1 1/4	5	0
1 1/2	6	0
2	8	0
3	12	0
4 and larger	13	0

\* The developed length between the trap of a water closet, or similar fixture, and the vent shall not exceed six feet.

**Sec. 26-522. Materials used for water distribution.**

- (a) Water pipe and fittings used for water distribution, except for underground applications, shall be of brass, copper, cast iron ductile, galvanized steel, PVC, CPVC, PEX, or other approved materials. Water piping and fittings used for exterior underground applications shall be of brass, copper, cast iron, ductile or other approved materials. Asbestos cement material shall not be used for water distribution piping or fittings. All piping and fittings shall comply with all the conditions and limitations of section 604 of the plumbing code. PVC piping of four inches or larger may be used for service lines provided that it conforms to AWWA standard C 900 DR 14 and the following:
    - (1) A no. 12 or larger type TW or THWN solid single strand copper tracer wire is installed throughout the length of the pipe. Wire connections shall be soldered and waterproofed. Connection points shall be in accordance with water works specifications.
    - (2) PVC shall not be used within five feet of a building.
- When ductile iron pipe and cast iron fittings are used, they shall be encased in plastic at least eight mills thickness. Lead pipe, lead solders, and flux containing more than 0.2 percent

lead shall not be used. All materials used in the water supply system, except valves and similar devices, shall be of a like material, except where otherwise approved by the building official. Galvanized pipe may only be used underground with prior approval of the plumbing inspector.

- (b) Cast iron fittings up to and including two inches (50.8 mm) in size, when used in connection with potable water piping shall be galvanized.
- (c) All malleable iron water fittings shall be galvanized.
- (d) Piping and tubing which has previously been used for any purpose other than for potable water systems shall not be used.
- (e) Notwithstanding the provisions of section 608.5, relief valve drains located inside a building shall not be of CPVC or PB.

**Sec. 26-523. Cross connection control-containment.**

- (a) *Definitions.* For the purpose of this section, the following definitions supersede definitions given elsewhere in this article or in the plumbing code and shall apply only to this section:

*Administrative authority* means the city water works and building official.

*Approved backflow prevention assembly for containment* means a backflow prevention assembly which is listed by the University of Southern California-Foundation for Cross Connection Control and Hydraulic Research as having met the requirements of ANSI-AWWA standard C510-89, Double Check Valve Backflow-Prevention Assemblies, of ANSI-AWWA standard C511-89, Reduced-Pressure Principle Backflow-Prevention Assemblies for containment. The listing shall include the limitations of use based on the degree of hazard. The International Association of Plumbing and Mechanical Officials must also list the backflow prevention assembly.

*Approved backflow prevention assembly for containment in a fire protection system* means a backflow prevention assembly to be used in a fire protection system which meets the requirements of Factory Mutual Research Corporation (FM) and Underwriters' Laboratories, Inc. (UL), and the requirements of the city fire code and building code, in addition to the requirements of subsection (g)(1). Devices sized smaller than 2 1/2 inches, which have not been listed by Underwriters' Laboratories, Inc. (UL) and tested by Factory Mutual Research Corporation (FM), may be allowed if they meet the requirements of the city fire code and building code.

*Auxiliary water supply* means any water supply on or available to the premises other than the water purveyor's approved public water supply, such as but not limited to a private well, pond,

or river.

*Containment* means a method of backflow prevention which requires the installation of a backflow prevention assembly at the water service entrance.

*Cross connection* means any actual or potential connection or arrangement, physical or otherwise, between a potable water supply system and any plumbing fixture or tank, receptacle, equipment, or device, through which it may be possible for non-potable, used, unclean, polluted, and contaminated water or other substance to enter into any part of such potable water system under any condition.

*Customer* means the owner, operator, or occupant of a building or property which has a water service from a public water system, or the owner or operator of a private water system which has a water service from a public water system.

*Degree of hazard* means the rating of a cross connection or water service which indicates if it has the potential to cause contamination or pollution.

*Double check valve backflow prevention assembly* means a backflow prevention device consisting of two independently acting internally loaded check valves, four properly located test cocks, and two isolation valves.

*High hazard cross connection* means a cross connection which may cause an impairment of the quality of the potable water by creating an actual hazard to the public health, through poisoning or through the spread of disease by sewage, industrial fluids, or waste.

*Isolation* means a method of backflow prevention in which a backflow prevention assembly is located at the cross connection rather than at the water service entrance.

*Low hazard cross connection* means a cross connection which may cause an impairment of the quality of potable water to a degree which does not create a hazard to the public health, but which does adversely and unreasonably affect the aesthetic qualities of such potable waters for domestic use.

*Reduced pressure principle backflow prevention assembly* means a backflow prevention device consisting of two independently acting internally loaded check valves, a differential pressure relief valve, four properly located test cocks, and two isolation valves.

*Registered backflow prevention assembly technician* means a person who is registered by the state to test or repair backflow prevention assemblies and report on the condition of those assemblies.

*Thermal expansion* means volumetric increase of water due to heating resulting in increased pressure in a closed system.

*Water service*, depending on the context, means the physical connection between a public water system and a customer's building, property, or private water system, or the act of

providing potable water to a customer.

*Water works* means the city water works.

(b) *Administrative authority.*

(1) Water works or the building official shall have the right to enter, with the consent of the customer or upon the basis of a suitable warrant issued by a court of appropriate jurisdiction, any property to inspect for possible cross connections.

(2) Water works shall maintain records of cross connection hazard surveys and the installation, testing, and repair of all backflow prevention assemblies installed for containment purposes.

(c) *New water services.* New water services shall comply with the following:

(1) Plans shall be submitted to water works for review on all new water services in order to determine the degree of hazard.

(2) The water works shall, in consultation with the building official, determine the type of backflow prevention assembly required for containment based on the degree of hazard.

(3) The building official shall inspect the installation of the required backflow prevention assembly for containment before the initiation of water service.

(d) *Existing water services.* Existing water services shall comply with the following:

(1) Upgrades of existing water services shall be treated as new water services for the purpose of this section.

(2) The water works shall, on the basis of information received from customers or gathered through on-premises investigations or surveys, determine the type of backflow prevention assembly required for containment based on the degree of hazard.

(3) Within the timeframe specified in writing by water works, the customer shall install a backflow prevention assembly for containment required by water works.

(4) For existing water services, water works may inspect the premises to determine the degree of hazard. When high hazard cross connections are found, water works shall, at its sole discretion:

a. Develop a schedule of compliance which the customer shall follow; or

b. Terminate the water service until a backflow prevention assembly for containment required by water works has been installed.

(5) Failure of water works to notify a customer that the customer is believed to have a high hazard cross connection and that the customer shall install backflow prevention assemblies for containment in no

way relieves a customer of the responsibility to comply with all requirements of this section.

- (e) *Customer.* Responsibilities of the customer shall be as follows:
  - (1) The customer shall be responsible for ensuring that no cross connections exist without approved backflow protection within his or her premises starting at the point of service from the public potable water system.
  - (2) The customer shall, at his or her own expense, cause installation, operation, testing and maintenance of backflow prevention assemblies.
  - (3) The customer shall ensure that copies of records of the installation and of all tests and repairs made to the backflow prevention assembly on the approved form within 15 days after testing and/or repairs are completed.
  - (4) If a backflow incident occurs, the customer shall immediately notify water works of the incident and take steps to confine the contamination or pollution.
- (f) *Required backflow prevention assemblies for containment for water services.* Backflow prevention assemblies for containment for water services shall be required as follows:
  - (1) An air-gap or an approved reduced pressure principle backflow prevention assembly is required for water services having one or more cross connections which the administrative authority has classified as high hazard.
  - (2) An approved double check valve assembly is required for water services having no high hazard cross connections but having one or more cross connections which the water works has classified as low hazard.
- (g) *Required backflow prevention assemblies for containment for fire protection systems.* Backflow prevention assemblies for containment for fire protection systems shall be required as follows:
  - (1) A reduced pressure principle backflow prevention assembly shall be installed on all new and existing fire protection systems which water works determines to have any of the following:
    - a. Direct connections from public water mains with an auxiliary water supply on or available to the premises for pumper connection.
    - b. Interconnections with auxiliary supplies such as reservoirs, rivers, ponds, wells, mills, or other industrial water systems.
    - c. Use of antifreezes or other additives in the fire protection system.
    - d. Combined industrial and fire protection systems

- supplied from the public water mains only, with or without gravity storage or pump suction tanks.
- e. Any other facility, connection, or condition which may cause contamination.
- (2) A double check valve assembly will be required for all other fire protection systems. The double check valve assembly shall be required on all new systems at the time of installation and on existing systems at the time that they are upgraded.
- (3) Submittal of proposed backflow prevention devices to water works does not relieve the designer or the sprinkler contractor of the responsibility of submitting plans, including backflow prevention devices to the fire marshal for approval.
- (h) *Backflow prevention assembly technicians.* A backflow prevention assembly technician registered by the state shall include his or her registration number on all correspondence and forms required by or associated with this section.
- (i) *Registered backflow prevention assembly technician noncompliance.* Noncompliance with any of the following by a registered technician shall be grounds for reporting such individual to the state department of public health:
- (1) Improper testing or repair of backflow prevention assemblies.
- (2) Improper reporting of the results of testing or of repairs made to backflow prevention assemblies.
- (3) Failure to meet registration requirements.
- (4) Related unethical practices.
- (j) *Installation of backflow prevention assemblies.* Backflow prevention assemblies shall be installed in compliance with the following:
- (1) The required backflow prevention assemblies for containment shall be installed in horizontal plumbing immediately following the meter or as close to that location as deemed practical by water works. In any case, it shall be located upstream from any branch piping. Installation at this point does not eliminate the responsibility of the customer to protect the water supply system from contamination or pollution between the backflow prevention assembly and the water main.
- (2) Reduced pressure principle backflow prevention assemblies shall be installed so as to be protected from flooding.
- (3) Reduced pressure principle backflow prevention assemblies shall not be installed in underground vaults or pits.
- (4) All backflow prevention assemblies shall be protected from freezing. Those devices used for seasonal water services may be removed in lieu of being protected

from freezing; however, the devices must be reinstalled and tested by a registered backflow prevention technician prior to service being reactivated.

- (5) If hot water is used within the water system, thermal expansion shall be provided for when installing a backflow prevention assembly for containment.
- (6) Provisions shall be made to convey the discharge of water from reduced pressure principle backflow prevention assemblies to a suitable drain.
- (7) No backflow prevention assemblies shall be installed in a place where it would create a safety hazard, such as but not limited to over an electrical panel or above ceiling level.
- (8) If interruption of water service during testing and repair of backflow prevention assemblies for containment is unacceptable, another backflow prevention assembly, sized to handle the temporary water flow need during the time of test or repair, should be installed in parallel piping.
- (9) All backflow prevention assemblies shall be installed so that they are accessible for testing as stated in section 603.3.4.
- (10) All shutoff valves shall conform with the current edition of the Manual of Cross-Connection Control (University of Southern California) requirements for either ball or resilient seat gate valves at the time of installation. Ball valves shall be used on assemblies installed in piping two inches and smaller and resilient seat gate valves on assemblies installed in piping larger than two inches.
- (11) Location and protection of the containment assembly shall be approved by water works prior to installation.
- (k) *Testing of backflow prevention assemblies.* Backflow prevention assemblies shall be tested as follows:
  - (1) Testing of backflow prevention assemblies shall be performed by a registered backflow prevention assembly technician. The costs of tests required in the subsections (k)(2) through (5) of this section shall be borne by the customer.
  - (2) Backflow prevention assemblies shall be tested upon installation and tested and inspected at least annually.
  - (3) Backflow prevention assemblies which are in place, but have been out of operation for more than three months, shall be tested before being put back into operation. Backflow prevention assemblies used in seasonal applications shall be tested before being put into operation each season.



- (4) Any backflow prevention assembly which fails a periodic test shall be repaired or replaced. When water service has been terminated for noncompliance, the backflow prevention assembly shall be repaired or replaced prior to the resumption of water service. A registered backflow prevention assembly technician shall retest Backflow prevention assemblies immediately after repair or replacement.
- (5) Water works or the building official may require backflow prevention assemblies to be tested at any time in addition to the annual testing requirement.
- (6) The registered backflow prevention assembly technician shall report the successful test of a backflow prevention assembly to the customer and to water works on the form provided by water works within 15 days of the test.
- (7) Water works or the building official may require, at the owner's expense, additional tests of individual backflow prevention assemblies as it shall deem necessary to verify test procedures and results.
- (1) *Repair of backflow prevention assemblies.* Backflow prevention assemblies shall be repaired in accordance with the following:
  - (1) All repairs to backflow prevention assemblies shall be performed by registered backflow prevention assembly technicians.
  - (2) The registered backflow prevention assembly technician shall not change the design, material, or operational characteristics of a backflow prevention assembly during repair or maintenance, and shall use only original manufacturer replacement parts.
  - (3) The registered backflow prevention assembly technician shall report the repair of a backflow prevention assembly to the customer and to water works on the form provided by water works within 15 days of the repair. The report shall include the list of materials or replacement parts used.
  - (4) Any time fire services are discontinued for a period of time longer than necessary to test the device, the tester is required to notify the fire marshal's office that the fire services are shut off for repair.
- (m) *Customer noncompliance.* The water service may be discontinued in the case of noncompliance with this section. Noncompliance includes but is not limited to the following:
  - (1) Refusal to allow water works and/or the plumbing inspection division personnel access to the property to inspect for cross connections.
  - (2) Removal of a backflow prevention assembly which has been

- required by water works.
- (3) Bypassing of a backflow prevention assembly which has been required by water works.
  - (4) Providing inadequate backflow prevention when cross connections exist.
  - (5) Failure to install a backflow prevention assembly which has been required by water works.
  - (6) Failure to test and/or properly repair a backflow prevention assembly as required by water works.
  - (7) Failure to comply with the requirements of this section.
  - (n) *Replacements.* Replace listed RPZ with stainless steel dual check with an atmospheric opening complying with section 603.4.13 of the plumbing code.

**Sec. 26-524. Depth of water service.**

Water service piping shall, wherever feasible, be no less than five feet below the surface of the ground.

**Sec. 26-525. Size of building sewers.**

The size of any building sewer shall be determined on the basis of the total number of fixture units drained by the sewer, in accordance with section 25.4(12) Iowa State Plumbing Code, except that the minimum diameter for any building sewer, regardless of the number of fixtures, shall be four inches.

**Sec. 26-526. Cleanouts.**

In addition to the requirements of 719.0 of the plumbing code, a cleanout shall be provided in each vertical waste or soil stack at a point at least 42 inches above the base of the stack.

**Sec. 26-527. Shower sub-pans or linings of asphalt impregnated roofing felt prohibited.**

Notwithstanding the provisions of section 412.8 , shower sub-pans or linings constructed of asphalt impregnated roofing felt shall not be permitted.

**Sec. 26-528. Minimum grade of horizontal drainage piping.**

Notwithstanding the provision of sections 708.0 and 718.0 which require administrative approval before horizontal drainage piping or a building sewer may be installed at a slope of less than one-quarter inch per foot, such piping or sewers may be installed at a slope of not less than one-eighth inch per foot without such prior administrative approval where it is

impractical, due to the depth of the street sewer or to the structural features or to the arrangement of any building or structure, to obtain a slope of one-quarter inch per foot.

**Sec. 26-529. Floor drains required.**

- (a) Unless otherwise approved by the plumbing inspector, at least one floor drain shall be provided in each room where an automatic water heater is or will be installed and in each mechanical room. When installed in a basement floor, such floor drain shall be at least three inches in diameter. Floor drains in other locations may be no less than two inches in diameter.
- (b) Every water heater shall be located in close proximity to a floor drain.

DIVISION 2. STORM DRAINAGE SYSTEMS

**Sec. 26-550. General requirements.**

- (a) *Drainage required.* Roofs, paved areas, yards, courts, courtyards, and areaways shall be drained into a storm sewer when such a sewer is abutting the property, or otherwise available as required by the senior plumbing inspector. Such drainage may be discharged into a combined sewer system where such a system is available and where not prohibited by the administrative authority having jurisdiction.
- (b) *Prohibited drainage.* Stormwater runoff, roof runoff, and subsurface drainage shall not be drained into sewers intended for sanitary sewage only.
- (c) *Disposal of subsurface drainage and stormwater.* Where a storm sewer is not available, the disposition of stormwater and subsurface drainage shall be as follows:
  - (1) For one- and two-family dwellings, to sump and pump to grade or drywell seepage pit as shown in the illustration of proper disposal of subsurface drainage and stormwater, on file in the office of the senior plumbing inspector.
  - (2) For other than one- and two-family dwellings, to sump and pump to drywell seepage pit, or use lateral system similar to septic system with overflow on end.
  - (3) Exception to subsections (c)(1) and (2) of this section, gravity drainage approved if footing and area drainage elevation is higher than drywell seepage pit drain discharge flow line.
- (d) *Traps.* Leaders or downspouts, when connected to a combined sewer, shall be trapped.

- (e) *Expansion joints.* Expansion joints or sleeves shall be provided where warranted by temperature variations or physical conditions.
- (f) *Subsoil drainage.* No subsoil drainage system shall be installed to drain into a sewer intended for sanitary sewage.
- (g) *Subsoil drain.* Where subsoil drains are placed under the cellar or basement floor or are used to surround the outer walls of a building, they shall be installed in accordance with the building code and shall be made of open-jointed, horizontally split, or perforated clay tile or asbestos-cement pipe or rigid plastic pipe not less than four inches in diameter. They shall be drained into an open sump with protective cover. Such sumps need not be vented. The building storm and subsoil drainage systems shall be connected to a storm sewer when such a sewer abuts the property. Where a sump pump is used, the discharge piping to the storm sewer, drywell seepage pit, or lateral system shall be inspected and approved before use.
- (h) *Parking lot and retention pond drains.* Parking lot and retention pond drains shall be installed as directed by the city engineer and in accordance with the approved site plan, a copy of which shall be available on the job site.

**Sec. 26-551. Materials.**

- (a) *Inside conductors.* Materials for inside conductors shall be as follows:
  - (1) Conductors placed within a building or run in a vent or pipe shaft shall be of cast iron, galvanized steel, galvanized wrought iron, galvanized ferrous alloy pipe, brass, copper tube, plastic, or lead.
  - (2) Plastic pipe and fittings marked to show conformance with ANSI designation D2261-78 or ASTM designation D2665-78 or current issue thereof and standard number 14 of the National Sanitation Foundation Testing Laboratory may be used in buildings under the following conditions:
    - a. All installations shall be made in accordance with recommendations of the manufacturer when found specifically conforming with other sections of the plumbing code and the installation procedures appearing in the appendix of the applicable ASTM standard.
    - b. Installations shall not be made in any space where the surrounding temperature will exceed 140 degrees Fahrenheit.
    - c. A variance in application of these materials may be allowed by the building official in a particular case when specifically certified as warranted by

a professional engineer or professional architect.

- (b) *Outside leaders.* When outside leaders are of sheet metal and connected with a building storm drain or storm sewer, they shall be connected to a cast iron drain extending above the finish grade, or the sheet metal leader shall be protected against injury.
- (c) *Building storm drains.* Building storm drains, which are underground and beneath the building, shall be of cast iron soil pipe, seamless copper pipe, schedule 40 PVC, or copper tube.
- (d) *Building storm sewers.* The building storm sewer shall be of cast iron soil pipe, vitrified clay pipe, concrete pipe, asbestos cement pipe, or approved plastic pipe. Plastic pipe shall be installed at a minimum depth of four feet.

**Sec. 26-552. Traps.**

- (a) *Main trap.* Stormwater drains connected to a combined sewer system shall be trapped except where the roof or gutter opening is located in accord with the requirements for vent terminals, section 906.0. One trap may serve several conductors, but traps must be set below frost or inside the building.
- (b) *Material.* Stormwater traps, when required, shall be of cast iron or copper pipe or copper tube.
- (c) *Exception.* No traps shall be required for stormwater drains that are connected to a sewer carrying stormwater exclusively.
- (d) *Size.* Traps for individual conductors shall be the same size as the horizontal branch to which they are connected.
- (e) *Location.* Conductor traps shall be so located that an accessible cleanout may be installed on the building side of the trap.

**Sec. 26-553. Conductors and connections.**

- (a) *Prohibited uses.* Conductor pipes shall not be used as soil, waste, or vent pipes nor shall soil, waste, or vent pipes be used as conductors.
- (b) *Protection.* Rainwater conductors installed along alleyways, driveways, or other locations where they may be exposed to drainage shall be protected by metal guards, recessed into the wall, or constructed from ferrous alloy pipe.

**Sec. 26-554. Roof drains.**

- (a) *Material.* Roof drains shall be of cast iron, copper, aluminum, brass, lead, or other acceptable corrosion-

resisting material, securely bolted or screwed to the conductor or leader.

- (b) *Strainers.* All roof areas, except those draining to hanging gutters, shall be equipped with roof drains having strainers. Plastic strainers may be used.
- (c) *Flat decks.* Roof drain strainers for use on sun decks, parking decks, and similar areas, normally serviced and maintained, may be of the flat surface type, level with the deck.
- (d) *Roof drain flashings.* The connection between roofs and roof drains which pass through the roof and into the interior of the building shall be made watertight by the use of proper flashing material or roof connection.

**Sec. 26-555. Size of leaders and storm drains.**

- (a) *Leaders.* Under this division, vertical leaders shall be sized on the maximum projected roof area, according to the following table:

TABLE IX. SIZE OF VERTICAL LEADERS

Diameter of Leader or Conductor* (inches)	Maximum Projected Roof Area (sq. ft.)
2	720
2 1/2	1,300
3	2,200
4	4,600
5	8,650
6	13,500
8	29,000

\* The equivalent diameter of a square or rectangular leader may be taken as the diameter of that circle which may be inscribed within the cross sectional area of the leader.

Table IX is based on a maximum rate of rainfall of four inches

per hour.

TABLE X. SIZE OF HORIZONTAL STORM DRAINS

Maximum Projected Roof Area for Drains for Various Slopes			
Diameter of Drain (inches)	1/8 inch (sq. ft.)	1/4 inch (sq. ft.)	1/2 inch (sq. ft.)
3	822	1,160	1,644
4	1,880	2,650	3,760
5	3,340	4,720	6,680
6	5,350	7,550	10,700
8	11,500	16,300	23,000
10	20,700	29,200	41,400
12	33,300	47,000	66,600
15	59,500	84,000	119,000

Table X is based on a maximum rate of rainfall of four inches per hour.

- (b) *Building storm drain.* The size of the building storm drain or any of its horizontal branches having a slope of one-half inch or less per foot shall be based upon the maximum projected roof area to be handled according to the following table:
- (c) *Roof gutters.* The size of semicircular gutters shall be based on the maximum projected roof area, according to the following table:

TABLE XI. SIZE OF GUTTERS

Maximum Projected Roof Area for Gutters of Various Slopes				
Diameter of gutter* (inches)	1/16 inch (sq. ft.)	1/8 inch (sq. ft.)	1/4 inch (sq. ft.)	1/2 inch (sq. ft.)
3	170	240	340	480
4	360	510	720	1,020
5	625	880	1,250	1,770
6	900	1,360	1,920	2,770
7	1,380	1,950	2,760	3,900
8	1,990	2,800	3,980	5,600
10	3,600	5,100	7,200	10,000

\* Gutters other than semicircular may be used provided they have an equivalent cross sectional area.

**Sec. 26-556. Size of combined drains and sewers.**

In computing the size of combined building drains or sewers to which storm drains serving a roof, court, or paved area are to be connected, the area drained may be converted to equivalent fixture unit loads by placing a value of 256 fixture units on the first 1,000 square feet or portion thereof of area to be drained and one additional fixture unit for each 3.9 square feet thereafter.

**Sec. 26-557. Values for continuous flow.**

Where there is a continuous or semi-continuous discharge into the building storm drain or building storm sewer, as from a pump, ejector, air conditioning plant, or similar device, each gallon per minute of such discharge shall be computed as being equivalent to 24 square feet of roof area, based on a four-inch rainfall.



DIVISION 3. LICENSES AND CERTIFICATES

**Sec. 26-575. Contractor's license.**

- (a) *Required.* Except as otherwise provided in this article, no person, firm or business shall engage in, or represent to the public as engaging in the activity or business of contracting, reconstructing, altering, or repairing any plumbing or building drainage system in or for any building within the city without first having obtained from the city a plumbing contractor's license. The owner, in the case of a sole proprietorship, or one active manager of plumbing operations, in the case of any other form of business organization, shall hold a master plumber's certificate of competency before such person, firm or business may be granted a plumbing contractor's license. The license issued shall recite the name of the person holding the master plumber's certificate of competency and the name of the firm or business. The plumbing contractor's license shall be automatically revoked in the event the person named thereon ceases to hold a master plumber's certificate of competency or ceases to actively manage plumbing operations conducted under the plumbing contractors license.
- (b) *Exceptions.* Exceptions to license requirements of subsection (a) of this section shall be as follows:
- (1) A plumbing contractor's license shall not be required in cases where a private sewer, other than a building or house sewer, is constructed under the jurisdiction, standard specifications, and inspection of the city engineer, or in cases where lateral sewer studs, extending from a public sewer to the property line, are constructed under the jurisdiction, standard specifications and inspection of the city engineer.
- (2) The city waterworks shall not be required to hold a plumbing contractor's license in order to perform the following work:
- a. Reconnection of an existing water service from an existing water main to a new water main, provided that the city waterworks obtained a plumbing permit for such work prior to the commencement of the work and that such work is inspected and approved by the building official.
- b. Minor adjustments to a stop box in order to terminate water service when such service must be terminated because of leaks in the service or delinquent payment of water bills, provided the affected property owner refuses to cause such minor adjustments to be made.

- c. Minor temporary water service adjustments to control flows in emergency situations where damage is caused or a hazard is created. Upon termination of the service the city waterworks shall notify the owner that permanent repair work must be done.
  - d. All work done by the city waterworks shall be the responsibility of the city waterworks, and the city waterworks shall correct all damage caused to stop boxes by the city waterworks.
- (3) Any person holding a Class A, B, or D mechanical contractor's license may install water heaters in accordance with the Uniform Plumbing Code, provided such person has first obtained a mechanical permit , and provided further, that no water heater installed under this exception shall exceed 65 gallons capacity or 50,000 Btu fuel input.
  - (4) A plumbing contractor's license shall not be required for the repair and maintenance of plumbing facilities in city-owned buildings when the work is performed by a regular city employee who holds a current journeyman plumber's certificate of competency. Any person working under the provisions of this subsection shall obtain plumbing permits and inspections as required by section 26-135 and 26-177, respectively.
  - (5) In cases which an owner-occupant of a single-family dwelling desires to perform any plumbing work within his or her single-family dwelling the owner may obtain a plumbing permit by paying the proper fee. For purposes of this section an owner-occupied single-family dwelling shall mean a detached residence designed for or occupied by one family only and occupied by the recorded owner of the property. This exception does not allow a homeowner to install or repair building sewers, private disposal systems, water services or required testable backflow devices. In this case, the permittee is required to obtain all required inspections and the homeowner must be the individual doing the work. This individual must be knowledgeable of plumbing systems, applicable code provisions and capable of designing and laying out their work.

**Sec. 26-576. Contractor's bond.**

- (a) Prior to the issuance or renewal of any plumbing contractor's license, the applicant shall file with the building official a bond running to the city in the sum of \$5,000.00 to be approved by the building official and the

city legal department, to save the city harmless on account of any and all failures on the part of such applicant to comply in all particulars with the provisions of the plumbing code and all other applicable laws, ordinances, rules and regulations, and to ensure the rectification of defective work for which a permit has been issued.

- (b) To ensure the collection of permit fees, the applicant shall, in addition to the bond required in subsection (a) of this section and before the license is issued, deposit with the city treasurer \$100.00 in cash or a certificate of deposit in a like amount made payable to the city by a bank doing business in the state. Such cash bond or certificate of deposit shall remain on deposit with the city for 90 days after the expiration or surrender of the license. Upon the death of the licensee, the treasurer may, upon the approval of the licensing and appeals board and the building official, release such bond or certificate of deposit before the expiration of 90 days. A letter of request must be submitted to the building official for release of the bond or certificate of deposit.

**Sec. 26-577. Master plumber's certificate of competency.**

- (a) To obtain a master plumbers certificate of competency a person shall meet the following conditions:
- (1) They shall have successfully passed a master plumber's examination administered and/or approved by the licensing and appeals board.
  - (2) They must have been certified by the city, or any other approved jurisdiction, as a journeyman plumber for a period of two years and been actively engaged in the plumbing trade during that period, unless exempt under subsection 26-578 (b) (4).
- (b) Exceptions: The requirements to obtain a master plumber's certificate of competency may be waived for individuals qualifying under the following:
- (1) Holders of plumbing contractor's licenses granted by the city prior to the date of the ordinance from which this subsection derives shall be issued a master plumbers certificate of competency.
  - (2) A master plumbers certificate of competency may be issued without examination, as required by subsection (a) (1) of this section, for any person holding a similar certificate or license if so denoted from another municipal corporation in this State that is recognized by the licensing and appeals board as having similar certification standards.

**Sec. 26-578. Journeyman plumber's certificate of competency.**

- (a) *Required.* Except as otherwise provided in this article, no person shall engage in the work or practice the trade of installing, altering, maintaining or repairing any plumbing or building drainage system within the scope of the plumbing code unless such person has obtained a journeyman plumber's certificate of competency and is either the holder of a plumbing contractor's license or is performing such work while in the employ of another person holding a plumbing contractor's license.
- (b) *Exceptions.* Exceptions to subsection (a) of this section shall be as follows:
- (1) Employees of the city water works shall not be required to hold a journeyman plumber's certificate of competency when performing work for the city water works under the provisions of section 26-575 of this division.
  - (2) A journeyman plumber's certificate of competency shall not be required when a private sewer, other than a building or house sewer, is constructed under the jurisdiction, standard specifications, and inspection of the city engineer.
  - (3) A journeyman plumber's certificate of competency shall not be required for the installation of water heaters not exceeding 65 gallons capacity or 50,000 btuhr provided that a plumbing or a mechanical permit is obtained.
  - (4) Upon written request of the individual to the License and Appeals Board the board shall review for consideration any post secondary training in the plumbing field, from an accredited educational institution or trade school and being employed full time for a period of two years with a plumbing contractor, under a master or journeyman's direct supervision. The educational training may not occur simultaneously.
- (c) *Qualifications.* An applicant for a journeyman plumber's certificate of competency must be able to read mechanical drawings and do appropriate mathematical problems and must know the provisions of the plumbing code and all other applicable laws, ordinances, rules and regulations governing plumbing. The applicant shall have at least four years' practical experience as an apprentice assisting in the installation of plumbing work. The applicant shall furnish the board with bona fide affidavits as to the applicant's practical experience and satisfactorily pass an examination for a certificate of competency as a journeyman plumber.

**Sec. 26-579. Reissuance of current licenses and certificates of competency.**

Any person holding a current plumbing contractor's license, master plumber's certificate of competency, or a journeyman plumber's certificate of competency, on the effective date of the ordinance from which this section derives, shall be reissued the respective license or certificate without taking the examinations required in this article. In addition, such license or certificate may be issued without examination to any person holding a certificate from another governmental jurisdiction recognized by the licensing and appeals board as having licensing standards similar to those of the board.

**Sec. 26-580. Apprentice.**

- (a) The term "apprentice" shall include any person who, while learning the trade of plumbing under the direction and control of a certified journeyman plumber, is working in the installation, alteration or repair of plumbing equipment.
- (b) No person shall engage in the work of an apprentice without first obtaining an apprentice license.
- (c) No plumbing contractor shall hire or employ any apprentice who does not have a license, and no plumbing contractor shall hire or employ more than two apprentices for each certified journeyman plumber in his or her employ. The same ratio shall apply to every permittable job.

DIVISION 4. PERMITS AND INSPECTIONS

**Sec. 26-590. Excavation permits.**

Excavation permits issued by the building official to open streets, parking or other public property for the purpose of installation or repair shall be issued only after plumbing permits for the work have been obtained in accordance with this division. Each excavation permit shall contain the plumbing permit number.

**Sec. 26-591. Permit exceptions**

No plumbing permits shall be required for the following:

- (a) Any work generally known as maintenance work, such as the repairing of leaks, the removal of stoppage in sewer or waste pipes, or the repairing of faucets and closet tanks. However, nothing in this subsection shall be construed as permitting the excavation of any part of a street, parking or sidewalk without a plumbing

permit.

- (b) When a private sewer, other than a building or house sewer, is constructed under the jurisdiction, standard specifications and inspection of the city engineer, or when lateral sewer stubs, extending from a public sewer to the property line, are constructed under the jurisdiction and standard specifications and inspection of the city engineer.

**Sec. 26-592. Permit issuance criteria; plans and specifications.**

- (a) *Issuance.* Plumbing permits shall be issued in the name of the person holding a plumbing contractor's license. The application for a plumbing permit shall recite the name of the person holding the plumbing contractor's license, the personal signature of the certified master plumber or his or her duly authorized agent, the street and building number of the proposed work, the owner's name and address, the occupancy or use of the premises, the specific items of work to be performed, and such other pertinent information as may be required by the building official. No plumbing permit shall be issued to any person who has fees outstanding as required by this article or any other laws or city ordinances.
- (b) *Plans and specifications.* Plans and specifications shall be submitted as follows:
  - (1) When required by the building official for the enforcement of any provisions of the plumbing code, plans and specifications for the installation of any plumbing or plumbing system shall be filed with and approved by the department of building before the issuance of any permit.
  - (2) The building official may require such plans and specifications to be prepared and designed by an engineer licensed by the state to practice as such.
  - (3) One set of plans and specifications may be filed for checking, provided that not less than two sets of corrected plans and specifications are filed before the building official gives approval. After approval, one set of plans shall be retained by the building official and the other set shall be returned to the applicant, which set shall be kept on such building or work at all times during which the work authorized is in progress.
  - (4) When the plans and specifications do not comply with provisions of the plumbing code, the necessary changes or revisions shall be made thereto.
  - (5) Every plan shall be a print or other type of approved plan.

The information contained on the plans shall be clearly legible and specifically indicated. Plans shall be drawn to an appropriate scale.

- (6) Specifications, legibly and definitely stated, shall be included either on the plan or on separate sheets.
- (7) The approval of any plans or specifications shall not be construed to sanction any violation of the plumbing code.
- (8) No person shall deviate materially from any approved plans or specifications or fail, neglect, or refuse to comply therewith unless permission to do so has been obtained from the building official.
- (9) The plans or specifications shall show the following data, along with such other information as may be required by the building official:
  - a. Layout for each floor drawn to accurate scale or dimensions of all working spaces and a legend of all symbols used.
  - b. Locations, size, and material of all piping and fixtures.
  - c. The first sheet of each set of plans and specifications shall show the address of the proposed work and the name and address of the owner or lessee of the premises.
  - d. Plans and specifications shall be of sufficient clarity to show that the proposed installation will conform to the provisions of the plumbing code and all applicable laws, ordinances, rules, regulations and orders.

(c) *Validity.*

- (1) The issuance or granting of a permit or approval of plans and specifications shall not be construed to be a permit for or an approval of any violation of any of the provisions of the plumbing code. No permit presuming to give authority to violate or cancel the provisions of the plumbing code shall be valid, except insofar as the work or use which it authorizes is lawful.
- (2) The issuance of a permit based upon plans and specifications shall not prevent the building official from thereafter requiring the correction of errors in such plans and specifications or from preventing construction being carried on when in violation of the plumbing code or of any other ordinance.

**Sec. 26-593. Factory-built buildings.**

Sections 26-1086 and 26-1160 of this article requiring personal inspection by the plumbing inspector; sections 26-1120, 26-1122

and 26-1123 of this article requiring a contractor's license and a master plumber's and a journeyman plumber's certificate of competency, respectively; and section 26-1160 of this article prohibiting the concealment of plumbing work prior to inspection by the plumbing inspector shall not be applicable to factory-built buildings constructed and certified in accordance with the Iowa State Building Code. The correction of violations and all on-site plumbing work shall be subject to the provisions of sections 26-1086, 26-1120, 26-1122, 26-1123 and 26-1160 of this

article. The term "on-site plumbing work" shall include all plumbing work not certified by such certificate of inspection.

Sec. 2. This ordinance shall be in full force and effect from and after its passage and publication as provided by law.

FORM APPROVED:

Vicky Long Hill, Assistant City Attorney

T.M. Franklin Cownie, Mayor

Attest:

I, Diane Rauh, City Clerk of the City of Des Moines, Iowa, hereby certify that the above and foregoing is a true copy of an ordinance (Roll Call No. 05-2353), passed by the City Council of said City at a meeting held September 26, 2005 signed by the Mayor on September 26, 2005 and published as provided by law in the Business Record on October 10, 2005 Authorized by Publication Order No.4848.

Diane Rauh, City Clerk