

CHAPTER 96

BUILDING SEWERS AND CONNECTIONS

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96.01 PERMIT. No unauthorized person shall uncover, make any connection with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the City. The application for the permit shall set forth the following information:

1. The location and description of the property to be connected with the sewer system.
2. The purpose for which the sewer is to be used.
3. Plans, specifications, or other information considered pertinent.

The permit shall require the owner to complete construction and connection of the building sewer to the public sewer within 60 days after the issuance of the permit, except that when a property owner makes sufficient showing that due to conditions beyond the owner's control or peculiar hardship, such time period is inequitable or unfair, an extension of time within which to comply with the provisions herein may be granted. Any sewer connection permit may be revoked at any time for a violation of these chapters.

96.02 CONNECTION CHARGE. The person who makes the application shall pay a connection charge in the amount of \$1,100.00, plus an additional charge of \$125.00 for each unit in excess of one which is to be served by the connection, to reimburse the City for costs borne by the City in making sewer service available to the property served.

96.03 PLUMBER REQUIRED. All installations of building sewers and connections to the public sewer shall be made by a State-licensed plumber.

96.04 EXCAVATIONS. All trench work, excavation, and backfilling required for the installation of a building sewer shall be performed in accordance with the provisions of the *State Plumbing Code* and the provisions of Chapter 135 of this Code of Ordinances.

96.05 CONNECTION REQUIREMENTS. Any connection with a public sanitary sewer must be made under the direct supervision of the Public Works Director and in accordance with the following:

1. **Old Building Sewers.** Old building sewers may be used in connection with new buildings only when they are found, on examination and test conducted by the owner and observed by the Public Works Director, to meet all requirements of this chapter.
2. **Separate Building Sewers.** A separate and independent building sewer shall be provided for every occupied building; except where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard, or driveway. In such cases the

building sewer from the front building may be extended to the rear building and the whole considered as one building sewer.

3. Installation. The installation and connection of the building sewer to the public sewer shall conform to the requirements of the *State Plumbing Code* and applicable rules and regulations of the City. All such connections shall be made gastight and watertight. Any deviation from the prescribed procedures and materials must be approved by the Public Works Director before installation.

4. Water Lines. When possible, building sewers should be laid at least 10 feet horizontally from a water service. The horizontal separation may be less, provided the water service line is located at one side and at least 12 inches above the top of the building sewer.

5. Size. Building sewers shall be sized for the peak expected sewage flow from the building with a minimum building sewer size of four inches.

6. Alignment and Grade. All building sewers shall be laid to a straight line to meet the following:

- A. Recommended grade at one-fourth inch per foot.
- B. Minimum grade of one-eighth inch per foot.
- C. Minimum velocity of two feet per second with the sewer half full.
- D. Any deviation in alignment or grade shall be made only with the written approval of the Public Works Director and shall be made only with approved fittings.

7. Depth. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. The depth of cover above the sewer shall be sufficient to afford protection from frost.

8. Sewage Lifts. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such drain shall be lifted by approved artificial means and discharged to the building sewer.

9. Pipe Specifications. Building sewer pipe shall be free from flaws, splits, or breaks. Materials shall be as specified in the *State Plumbing Code* except that the building sewer pipe, from the property line to the public sewer, shall comply with the current edition of one of the following:

- A. Clay sewer pipe – A.S.T.M. C-700 (extra strength).
- B. Extra heavy cast iron soil pipe – A.S.T.M. A-74.
- C. Ductile iron water pipe – A.W.W.A. C-151.
- D. P.V.C. – SDR26 – A.S.T.M. D-3034.

10. Bearing Walls. No building sewer shall be laid parallel to or within three feet of any bearing wall that might thereby be weakened.

11. Jointing. Fittings, type of joint and jointing material shall be compatible with the type of pipe used, subject to the approval of the Public Works Director. Solvent-welded joints are not permitted.

12. Unstable Soil. No sewer connection shall be laid so that it is exposed when crossing any watercourse. Where an old watercourse must of necessity be crossed or

where there is any danger of undermining or settlement, cast iron soil pipe or vitrified clay sewer pipe thoroughly encased in concrete shall be required for such crossings. Such encasement shall extend at least six inches on all sides of the pipe. The cast iron pipe or encased clay pipe shall rest on firm, solid material at either end.

13. Preparation of Basement or Crawl Space. No connection for any residence, business or other structure with any sanitary sewer shall be made unless the basement floor is poured, or in the case of a building with a slab or crawl space, unless the ground floor is installed with the area adjacent to the foundation of such building cleared of debris and backfilled. The backfill shall be well compacted and graded so that the drainage is away from the foundation. Prior to the time the basement floor is poured, or the first floor is installed in buildings without basements, the sewer shall be plugged and the plug shall be sealed by the Public Works Director. Any accumulation of water in any excavation or basement during construction and prior to connection to the sanitary sewer shall be removed by means other than draining into the sanitary sewer.

96.06 INTERCEPTORS REQUIRED. Grease, oil, sludge, and sand interceptors shall be provided by gas and service stations, convenience stores, car washes, garages, and other facilities when, in the opinion of the Public Works Director, they are necessary for the proper handling of such wastes that contain grease in excessive amounts or any flammable waste, sand, or other harmful ingredients. Such interceptors shall not be required for private living quarters or dwelling units. When required, such interceptors shall be installed in accordance with the following:

1. Design and Location. All interceptors shall be of a type and capacity as specified in the *State Plumbing Code*, to be approved by the Public Works Director, and shall be located so as to be readily and easily accessible for cleaning and inspection.
2. Construction Standards. The interceptors shall be constructed of impervious material capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight and equipped with easily removable covers that shall be gastight and watertight.
3. Maintenance. All such interceptors shall be maintained by the owner at the owner's expense and shall be kept in continuously efficient operations at all times.

96.07 SEWER TAP. Connection of the building sewer into the public sewer shall be made at the "WYE" branch, if such branch is available at a suitable location. If no properly located "WYE" branch is available, a saddle "TEE" shall be installed at the location specified by the Public Works Director. The public sewer shall be tapped with a tapping machine, and a saddle appropriate to the type of public sewer shall be glued or attached with a gasket and stainless steel clamps to the sewer. At no time shall a building sewer be constructed so as to enter a manhole unless special written permission is received from the Public Works Director and in accordance with the Public Works Director's direction if such connection is approved.

96.08 INSPECTION REQUIRED. No building sewer shall be covered, concealed or put into use until it has been tested, inspected, and accepted as prescribed in the *International Plumbing Code*.

96.09 PROPERTY OWNER'S RESPONSIBILITY. All costs and expenses incident to the installation, connection, and maintenance of the building sewer shall be borne by the owner. The owner shall indemnify the City from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.

96.10 ABATEMENT OF VIOLATIONS. Construction or maintenance of building sewer lines, whether located upon the private property of any owner or in the public right-of-way, which construction or maintenance is in violation of any of the requirements of this chapter, shall be corrected, at the owner's expense, within 30 days after date of official notice from the Council of such violation. If not made within such time, the Council shall, in addition to the other penalties herein provided, have the right to finish and correct the work and assess the cost thereof to the property owner. Such assessment shall be collected with and in the same manner as general property taxes.

(Code of Iowa, Sec. 364.12[3])

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CHAPTER 97

USE OF PUBLIC SEWERS

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97.01 STORMWATER. No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof run-off, sub-surface drainage, uncontaminated cooling water, or unpolluted industrial process waters to any sanitary sewer. Stormwater and all other unpolluted drainage shall be discharged to such sewers that are specifically designated as combined sewers or storm sewers or to a natural outlet approved by the Public Works Director. Industrial cooling water or unpolluted process waters may be discharged on approval of the Public Works Director, to a storm sewer, combined sewer, or natural outlet.

97.02 SURFACE WATERS EXCEPTION. Special permits for discharging surface waters to a public sanitary sewer may be issued by the Council upon recommendation of the Public Works Director where such discharge is deemed necessary or advisable for purposes of flushing, but any permit so issued shall be subject to revocation at any time when deemed to be in the best interests of the sewer system.

97.03 PROHIBITED DISCHARGES. No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers:

1. Flammable or Explosive Material. Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.
2. Toxic or Poisonous Materials. Any waters or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant, including but not limited to cyanides (CN) in excess of two milligrams per liter as CN in the wastes as discharged to the public sewer.
3. Corrosive Wastes. Any waters or wastes having a pH lower than 5.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works.
4. Solid or Viscous Substances. Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.
5. Excessive B.O.D., Solids or Flow.
 - A. Any waters or wastes: (i) having a five-day biochemical oxygen demand greater than 300 parts per million by weight; or (ii) containing more

than 350 parts per million by weight of suspended solids; or (iii) having an average daily flow greater than two percent of the average sewage flow of the City, shall be subject to the review of the Public Works Director.

B. Where necessary in the opinion of the Public Works Director, the owner shall provide, at the owner's expense, such preliminary treatment as may be necessary to: (i) reduce the biochemical oxygen demand to 300 parts per million by weight; or (ii) reduce the suspended solids to 350 parts per million by weight; or (iii) control the quantities and rates of discharge of such waters or wastes. Plans, specifications, and any other pertinent information relating to proposed preliminary treatment facilities shall be submitted for the approval of the Public Works Director, and no construction of such facilities shall be commenced until said approvals are obtained in writing.

97.04 RESTRICTED DISCHARGES. No person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely in the opinion of the Public Works Director that such wastes can harm either the sewers, sewage treatment process, or equipment, have an adverse effect on the receiving stream or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming an opinion as to the acceptability of these wastes, the Public Works Director will give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plant, and other pertinent factors. The substances restricted are:

1. High Temperature. Any liquid or vapor having a temperature higher than 150°F (65°C).
2. Fat, Oil, Grease. Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of 100 milligrams per liter or 600 milligrams per liter of dispersed or other soluble matter.
3. Viscous Substances. Water or wastes containing substances that may solidify or become viscous at temperatures between 32°F and 150°F (0°C to 65°C).
4. Garbage. Any garbage that has not been properly shredded, that is, to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half inch in any dimension.
5. Acids. Any waters or wastes containing strong acid iron pickling wastes, or concentrated plating solution, whether neutralized or not.
6. Toxic or Objectionable Wastes. Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances; or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the sewage treatment works exceeds the limits established by the Public Works Director for such materials.
7. Odor or Taste. Any waters or wastes containing phenols or other taste or odor producing substances, in such concentrations exceeding limits that may be established by the Public Works Director as necessary, after treatment of the composite sewage, to meet the requirements of State, federal, or other public agencies of jurisdiction for such discharge to the receiving waters.

8. Radioactive Wastes. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Public Works Director in compliance with applicable State or federal regulations.
9. Excess Alkalinity. Any waters or wastes having a pH in excess of 9.5.
10. Unusual Wastes. Materials that exert or cause:
 - A. Unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).
 - B. Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).
 - C. Unusual B.O.D., chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.
 - D. Unusual volume of flow or concentration of wastes constituting “slugs” as defined herein.
11. Noxious or Malodorous Gases. Any noxious or malodorous gas or other substance that, either singly or by interaction with other wastes, is capable of creating a public nuisance or hazard to life or of preventing entry into sewers for their maintenance and repair.
12. Damaging Substances. Any waters, wastes, materials, or substances that react with water or wastes in the sewer system to release noxious gases, develop color of undesirable intensity, form suspended solids in objectionable concentration, or create any other condition deleterious to structures and treatment processes.
13. Untreatable Wastes. Waters or wastes containing substances that are not amenable to treatment or reduction by the sewage treatment processes employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

97.05 RESTRICTED DISCHARGES; POWERS OF PUBLIC WORKS DIRECTOR. If any waters or wastes are discharged or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated in Section 97.04 and which in the judgment of the Public Works Director may have a deleterious effect upon the sewage works, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the Public Works Director may:

1. Rejection. Reject the wastes by requiring disconnection from the public sewage system;
2. Pretreatment. Require pretreatment to an acceptable condition for discharge to the public sewers;
3. Controls Imposed. Require control over the quantities and rates of discharge; and/or
4. Special Charges. Require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under the provisions of Chapter 99.

97.06 SPECIAL FACILITIES. If the Public Works Director permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Public Works Director and subject to the requirements of all applicable codes, ordinances, and laws. Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at the owner's expense.

97.07 CONTROL MANHOLES. When required by the Public Works Director, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable control manhole together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes. Such manhole, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the Public Works Director. The manhole shall be installed by the owner at the owner's expense, and shall be maintained by the owner so as to be safe and accessible at all times.

97.08 TESTING OF WASTES. All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this chapter shall be determined in accordance with the latest edition of *Standard Methods for the Examination of Water and Wastewater*, published by the American Public Health Association, and shall be determined at the control manhole provided, or upon suitable samples taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the public sewer to the point at which the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the sewage works and to determine the existence of hazards to life, limb, and property. (The particular analyses involved will determine whether a 24-hour composite of all outfalls of a premises is appropriate or whether a grab sample or samples should be taken. Normally, but not always, B.O.D. and suspended solids analyses are obtained from 24-hour composites of all outfalls whereas pH's are determined from periodic grab samples.)

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