

ORDINANCE NO. 484

AN ORDINANCE REGULATING THE APPOINTMENT OF A PLUMBING INSPECTOR
AND PRESCRIBING THE DUTIES THEREOF: THE LICENSING OF PLUMBERS:
AND REGULATING THE INSTALLATION, ALTERATION, AND REPAIR OF
PLUMBING WORK, AND PRESCRIBING PENALTIES THEREFOR

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND
JUNCTION, COLORADO.

PART I

PLUMBING INSPECTOR

SECTION 1. There is hereby created the office of Plumbing Inspector, who shall have the qualifications of a Master Plumber, who shall be the head of the Plumbing Department, and who, under the direction and control of the City Manager shall have full power to direct the affairs of that Department, and until he is appointed and qualified, the Superintendent of the Department of Water and Sewers shall act as Plumbing Inspector.

SECTION 2. DUTIES OF THE PLUMBING INSPECTOR. It shall be the duty of said Plumbing Inspector to see that the construction and maintenance of the plumbing, draining and ventilating of all buildings in the City of Grand Junction shall hereafter conform to and comply with all the rules and regulations established by this title, to pass upon all plans submitted, and to keep a daily record of his work, including all notices and applications received, permits granted, violations of these regulations, and all other matters which may pertain thereto. He shall inspect all plumbing in course of construction in new or old buildings, performed either by a Master Plumber, a Journeyman Plumber, or Owner, and shall see that all plumbing work complies with this Ordinance.

SECTION 3. RECORD OF INSPECTOR. The Plumbing Inspector shall keep a complete record of all inspections and tests made by him as Plumbing Inspector, and shall make a monthly report of the same to the City Manager of the number of permits and fees collected.

SECTION 4. ACCESS TO BUILDINGS. The Plumbing Inspector shall have the right and authority to enter any building or any premises at all reasonable hours, to ascertain if the provisions of this ordinance, or any ordinance relating to plumbing, have been or are being complied with.

SECTION 5. INSTALLATIONS IN VIOLATION. The Plumbing Inspector shall notify in writing, the agent or owner of the premises where any existing defective or unsanitary plumbing is found, and order him to forthwith cause such plumbing to be changed and made to comply with the rules and regulations of this ordinance, and such agent or owner is hereby required within ten days after receiving such notification, to comply therewith. In case such agent or owner fails or neglects to do so, he shall be considered as maintaining defective or unsanitary plumbing and violating the requirements of this ordinance, and it shall be the duty of the Plumbing Inspector to make complaint against such agent or owner and cause him to be prosecuted.

All plumbing work in the process of construction, alteration, or repair, shall be under the supervision of the Plumbing Inspector, who is hereby empowered to stop such work when it is being done contrary to the provisions of this ordinance, and it shall be unlawful for any person to proceed further with said work.

Any person, firm or corporation within the City of Grand Junction, Colorado, selling any plumbing fixtures, requiring a proper connection to the waste and vent lines, as provided for in this ordinance, to other than licensed master plumbers for use within the City of Grand Junction, Colorado, must file within thirty days of such sale with the Plumbing Inspector a record of the date of sale, number and description of fixtures, and the name and address of person to whom sold.

PART II

LICENSE OF PLUMBERS

SECTION 6. LICENSE REQUIRED. It shall be unlawful for any person, firm or corporation to engage in plumbing work, (as defined in Section 20 of this ordinance) as a business, in the City of Grand Junction, Colorado, without first securing from the City Clerk, a plumber's license, or to do any plumbing work as a Master or a Journeyman Plumber as hereinafter specified; provided, that this section shall not be construed to prohibit an owner in person from doing plumbing, either new or repair work in or upon his own property, provided, that such work passes the inspection and approval of the Plumbing Inspector, and that he has previously taken out a permit therefor.

For the purpose of this ordinance the words and phrases used in this ordinance and in this section set forth, are defined to have the following meaning, to-wit:

A "Master Plumber" is hereby defined to be any person skilled in the planning, superintending and the practical installation of plumbing, and is familiar with the laws, rules and regulations governing the same.

A "Journeyman Plumber" is hereby defined to be any person other than a Master Plumber, who as his principal occupation is engaged in the practical installation, alteration, repair and removal of plumbing.

SECTION 7. BOARD OF EXAMINERS FOR PLUMBERS. There is hereby created a Board of Examiners for plumbers for this City, whose duties shall be to act as a Board of Arbitration on interpretation of this ordinance and to examine, as to their fitness and qualifications, all persons applying to said Board for license to engage in the business, trade or calling of a Journeyman Plumber or a Master Plumber. Such Board shall consist of the City Manager, Plumbing Inspector, two Master Plumbers, and one Journeyman Plumber, said plumbers to be appointed by the City Manager.

The Board may, if it deems it necessary so to do, authorize and empower one member only, of said Board, to hold and conduct a certain examination. A report of the results of all Master Plumber's examinations shall be presented to the City Council before license is granted.

SECTION 8. EXISTANT PLUMBERS LICENSED WITHOUT EXAMINATION. All Journeyman Plumbers and Master Plumbers actually engaged in the business as such at the time this ordinance goes into effect, may within sixty (60) days thereafter procure a license as a Journeyman Plumber or a Master Plumber, as the case may be, without examination, upon completion of such other conditions as herein required. A license in the City of Grand Junction, Colorado, may be issued to all persons holding a license from the State of Colorado without examination, at the discretion of the Board of Examiners.

SECTION 9. APPLICATION FOR PLUMBER'S LICENSE. Any person firm or corporation desiring to engage in or work at the business of installing plumbing, or who shall install plumbing in connection with the dealing in or selling of plumbing materials and supplies, shall be required to have a Master Plumber who shall

have a Master Plumber's license from the City of Grand Junction, Colorado, in charge at all times, who shall be responsible for the proper installation of such plumbing.

Any person, firm or corporation desiring to engage in the business of plumbing in the City of Grand Junction, Colorado, as above defined, shall first procure a plumber's license from the City Clerk of said City of Grand Junction to conduct said business, after he shall have first entered into a good and sufficient surety bond in the sum of One Thousand (\$1,000.00) Dollars payable to the City of Grand Junction, to be approved by the City Council, conditioned that he will save and keep harmless the City of Grand Junction, and all persons therein of and from all accidents, damages and loss which may accrue to the said City or any of its inhabitants, by reason of his failure to comply with all the rules and regulations which are now or may be hereafter established by the City Council of the City, or by reason of the carelessness or negligence in connection with any such work; and after the applicant shall have paid to the City Treasurer the sum of Twenty-five (\$25.00) Dollars per annum prior to the issuance of said permit.

The City Clerk shall, after the applicant has complied with all conditions precedent to the issuance of a plumber's license, and after the approval of the bond by the City Council, issue to such person, firm or corporation, a plumber's license.

SECTION 10. MASTER PLUMBER'S LICENSE. Licenses will be issued by the City Clerk to all Master Plumbers after a certificate of approval from the Board of Examiners, showing that he has the qualifications of a Master Plumber above defined, together with a receipt for \$2.00 from the City Treasurer for annual license fee.

SECTION 11. JOURNEYMAN PLUMBER'S LICENSE. Licenses will be issued by the City Clerk to practical plumbers in the employ, or seeking to be employed by a licensed Master Plumber, after a certificate of approval from the Board of Examiners together with a receipt for the sum of One (\$1.00) Dollar from the City Treasurer for annual license fee.

SECTION 12. INSTALLATION WORK IN CHARGE OF MASTER PLUMBERS. All installations of plumbing under the provisions of this ordinance shall be in charge of a Master Plumber at all times, who shall be responsible for the proper installation of all such work.

No Journeyman Plumber, unless in the employ of a Master Plumber will be permitted to do any plumbing work without first having taken out a Master Plumber's license.

PART III

PERMITS

SECTION 13. PERMITS REQUIRED. It shall be unlawful for any person, firm or corporation to begin any job of plumbing work or to connect with any sewer, until the Master Plumber has secured from the Plumbing Inspector a permit to do said work, except as hereinafter provided for.

SECTION 14. NO PERMIT FOR MINOR REPAIRS. No permit will be required for minor repair work. By minor repair work is meant the repair of leaks in pipes, drains, and faucets, opening up of waste and supply pipes, traps or drains, or replacing broken fixtures or frozen pipes inside the walls of buildings. Where wastes or fixtures are changed, inspection will be required and a permit must be taken out and the Plumbing Inspector notified to inspect before the work is covered up.

SECTION 15. APPLICATION FOR PERMIT. The Master Plumber shall make a written application for permit upon blanks furnished for that purpose. Said application shall show the name and location of such premises, lot, block, and addition, street and number, the name of the Master Plumber having charge of the work, also a description of the work to be done, setting forth the number and kind of fixtures already installed or to be installed.

SECTION 16. FEES FOR PERMIT. (a) The applicant shall pay an inspection fee of Two (\$2.00) Dollars for the first five (5) fixtures or openings left in the work, and twenty-five (25¢) cents for each additional fixture or opening thereafter; provided, however, that a minimum charge of Two (\$2.00) Dollars shall be made for any permit.

(b) No permit will be issued to any plumber who is delinquent in any fees.

SECTION 17. EXPIRATION OF PERMIT. When a permit has been given to do plumbing work, such work must be started within thirty (30) days from the date of the permit, and such work must be carried on and completed within six (6) months after commencement of the work otherwise such permit will become void

and a new permit must be obtained unless prohibited by conditions over which the plumber has no control.

SECTION 18. PERMIT FOR CONNECTION WITH PUBLIC SEWER. Where a connection is made from a public sewer within the City limits of the City of Grand Junction, Colorado, to the curb or lot line, such connection being intended for future use, the Master Plumber shall secure from the Plumbing Inspector a permit for such connection, and shall pay therefor a fee of Two (\$2.00) Dollars for each such connection.

SECTION 19. LOCATION OF Y. After receiving a permit for plumbing work, if such work necessitates the location of a Y on a public sewer, the Master Plumber shall notify the City Engineer twenty-four (24) hours before beginning such work, exhibiting to him the permit. The City Engineer will then be allowed twenty-four (24) hours to locate the Y on the sewer for which such permit is issued.

No cutting into the sewer will be permitted. If no Y is located to meet the requirements for the building, the Superintendent of Water and Sewers may, at his discretion, permit a Y to be inserted or a tap made in the sewer. Such permission to be in writing.

PART IV

INSPECTIONS

SECTION 20. NOTICE BEFORE INSPECTION. (a) It shall be the duty of the plumber to notify the Plumbing Inspector in writing not less than eight (8) working hours before the hours of 8:00 A. M. and 5:00 P. M. before the work is to be inspected or tested, and the Plumbing Inspector shall thereupon notify the plumber as to the time of the inspection.

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

(c) If by reason of the non-compliance with the provisions of this ordinance, or any of them, or through the use of defective material or due to inferior workmanship, the approval of the Plumbing Inspector is not given and either a subsequent "roughing in" or "final" inspection becomes necessary; the Master Plumber to whom the permit has been issued shall notify the Plumbing Inspector in writing when such work will be ready

for such subsequent inspection, which shall be made in the same manner as is hereinbefore provided for such test as it may be. The Master Plumber in charge of the work shall pay for such subsequent inspection, the sum of Two (\$2.00) Dollars to be paid in the same manner as hereinbefore required for the payment of inspection fees.

(d) If the Plumbing Inspector fails to appear within 24 hours of the time set for each inspection or test, the inspection or test shall be deemed to have been made, and the plumber required to file an affidavit with the Plumbing Inspector that the work was installed in accordance with this ordinance, the approved plans and permit, and that it was free from defects and that the required tests had been made and the system found free from leaks; also, whether the owner or his authorized agent was present when such inspection or test was made, or was duly notified.

SECTION 21. MATERIAL AND LABOR FOR TESTS. All equipment, material and labor necessary for the inspection and test shall be furnished by the plumber at his own expense.

SECTION 22. METHOD OF TEST. All tests of "roughed-in" plumbing may be made with either water or air.

The water test may be applied to the drainage system in its entirety or in sections. If applied to the entire system, all openings in the piping shall be entirely closed except the highest opening above the roof, and the system filled with water to the point of overflow above the roof.

If the system is tested in sections, each opening shall be tightly plugged except the highest opening of the section under test and each section shall be filled with water, but no section shall be tested with less than ten-foot head of water or five-pound pressure of air. In testing successive sections at least the upper ten feet of the next preceding section shall be retested, so that no joint or pipe in the building shall have been submitted to a test of less than ten-foot head of water or a five-pound pressure of air.

Under any test the water or air pressure shall remain constant for not less than fifteen (15) minutes without any further addition of water or air.

All tests required herein must be applied by the plumber in the presence of the Plumbing Inspector and maintained for a

sufficient length of time to allow the Plumbing Inspector to make a thorough and complete examination of the work, and if defective material, workmanship, or design be found in the job, the same must be removed at the expense of the Master Plumber having charge of the work and replaced with proper kind of material and workmanship.

SECTION 23. TEMPORARY TESTS. When it is necessary to cover up work in the ground or in any part of a building before all the "roughing in" is ready for inspection, the Plumbing Inspector must be notified and a test made by filling the same with water, under a pressure that will equal the pressure were the entire plumbing system filled to the top of the vent pipes, or test made with air, as provided in Section 22. Provisions must be made for testing the entire job before the work shall be approved.

SECTION 24. PENALTY FOR CONCEALING WORK BEFORE INSPECTION. Any person having charge of the construction, alteration or repair of the plumbing work in any building, where test is required on such work, or any person or workman, whosoever, who covers, conceals or causes to be so covered or concealed, any of the drains, waste or vent system, for which a special permit has been issued, before the said waste or vent system shall have been inspected, tested and approved by the Plumbing Inspector, shall be subject upon conviction thereof, to the penalty hereinafter provided for the violation of this ordinance.

SECTION 25. INSPECTION TAG. At the time of the acceptance of any "roughing in" work the Plumbing Inspector shall stick, paste or tie upon the soil or waste pipe in the basement, or if there is not a basement, on the plumbing in some convenient place, a notice in printing or writing, that such "roughing in" has been tested and approved or rejected, also giving the date of acceptance and approval and the name of the Plumbing Inspector and his title.

SECTION 26. FINAL INSPECTION. When the plumbing work covered by a permit has been completed, the Plumbing Inspector shall be notified by the Master Plumber that such work is ready for the final inspection, and the Plumbing Inspector may, at his discretion, require a final test of either smoke or peppermint, to be applied by the Master Plumber or a Journeyman Plumber employed by him, and such test to be made in the presence of the Plumbing Inspector. No plumbing shall be used until a certificate of final approval has been attached to such plumbing work. Such certificate shall be in form required for the

"roughing-in" work, but shall be on cards or paper of a different color.

SECTION 27. PLUMBING WORK. The term "Plumbing Work", as herein provided, covers labor and material for all water pipes from curb cocks in the street, and through premises and buildings; all pipes used to ventilate sewerage systems in buildings to a distance of three (3) feet outside of foundation wall; all material and work used in new construction or reconstruction, alteration or placing of new or replacing of old pipe, to conduct water to and from and to distribute in and out or about any building for any use whatsoever; all pipes in connection with gas, vapor or waste of any kind which may be discharged into drains or sewer, also all repairs or connections on aforesaid pipes, fixtures and appurtenances.

PART V

GENERAL REGULATIONS

SECTION 28. DWELLINGS ETC. MUST CONNECT WITH SEWER. Each and every dwelling, residence, store, tenement house, factory and work shop shall be furnished with a suitable privy or water closet, and a cesspool, but no privy or cesspool shall hereafter be permitted on any lot or lots or lands adjoining to or abutting upon or within two hundred fifty (250) feet of any street or alley or other place through which there is a public or private sewer connected with the sanitary sewer system of the City of Grand Junction, Colorado, and all cesspools, vaults or privies already existing within such territory, when found to create a nuisance shall be forthwith condemned. All buildings within the limits above described shall hereafter be connected with a sewer.

SECTION 29. CESSPOOLS PROHIBITED. No cesspools or other system of sewage disposal shall be constructed where a sewer is available nor shall any connection from such cesspool be made with a sewer.

SECTION 30. NO CONNECTION OUTSIDE OF CITY. No connection, for any purpose, will be permitted with any public sewer system of the City of Grand Junction for any premises located outside of the City limits of Grand Junction, Colorado, unless the owner has previously signed a contract or agreement with said City and has paid all fees set forth in said contract; provided also that all plumbing work in or on the premises conforms to this ordinance.

SECTION 31. WATER CLOSETS REQUIRED IN PUBLIC PLACES. Every person who shall be the owner, lessee, keeper or manager of any tenement house, lodging house, work shop or manufactory shall provide or cause to be provided for the accommodation thereof and for the use of the tenants, lodgers, boarders or workers therein, adequate water closets. The same shall be so adequately ventilated and shall be at all times kept in such cleanly and wholesome condition as not to be offensive and dangerous and detrimental to health; and no offensive odor of gases from or through any outlet or sewer, or through any such water closet shall be allowed by any person aforesaid to exist in any such house or part thereof.

In all places of employment where men and women are employed, separate and sufficient water closets shall be provided for males and females. Water closets for men shall be plainly marked "Men's Toilet". The water closets for women shall be plainly marked "Women's Toilet". In places of employment, water closets shall be provided for every twenty (20) males or less number, and one water closet shall be provided for every fifteen (15) females or less number. Such water closet facilities shall be furnished upon at least every second floor.

SECTION 32. DURHAM SYSTEM. The Durham System may be installed in any building, and is considered preferable to any other class of installation. When installed, it must be of cast iron or galvanized wrought iron pipe which must be perfectly smooth inside. All fittings must be recessed cast iron fittings. All vent and waste pipes and all changes of direction must conform to the provisions of this Ordinance.

SECTION 33. GRADES OF HORIZONTAL PIPING. All horizontal piping shall be run in practical alignment and at a uniform grade of not less than one-fourth (1/4) of an inch per foot and be supported by strong iron hangers or anchors at intervals of not to exceed five (5) feet.

SECTION 34. CHANGE IN DIRECTION. All horizontal changes in direction shall be made with "Y" branches and one-eighth bends. Connection with vertical pipes shall be made with "Y" branches, sanitary tees, and quarter bends. All drains shall be exposed when practicable.

SECTION 35. PROHIBITED FITTINGS. Sanitary tees of short radius shall not be used except in connecting horizontal to vertical soil or waste pipes in which the flow is toward the vertical line. All double hub, double T, double sanitary T branches or

inverted caulk joint are prohibited when used on soil or waste lines. Double hubs and double hub fittings may be used on rain water leaders.

The use of Raymond ferrule, drive ferrule, or a similar ferrule is strictly prohibited.

The drilling or tapping of soil, vent and waste pipes and house drains to receive waste and vent pipes of any description is strictly prohibited, and in no case will the use of saddles or bands be permitted without special permission from the Plumbing Inspector.

SECTION 36. DEAD ENDS. In the installation of any drainage system the use of dead ends shall be avoided.

SECTION 37. INSTALLATION BY OWNER. All plumbing work installed by the owner in person shall comply with the requirements of this ordinance, and in such event the word "owner" shall be substituted for the word "master plumber" or "plumber" throughout this ordinance.

SECTION 38. PROTECTION OF MATERIAL. All pipes passing under or through walls shall be protected from breakage. All pipes passing through or under cinder concrete or other corrosive material shall be protected against external corrosion.

PART VI

QUALITY AND WEIGHTS OF MATERIALS

SECTION 39. MATERIALS, QUALITY OF. All materials used in any drainage or plumbing system, or part thereof, shall be free from defects.

SECTION 40. QUALITY OF PIPE. All clay pipe, wrought-iron pipe, cast-iron pipe, and brass and copper pipe shall conform respectively to the A.S.T.M., Standard Specifications.

SECTION 41. CAST-IRON PIPE UNDER GROUND. All cast-iron pipe and fittings for under-ground use shall be extra heavy and coated with asphaltum or coal tar pitch.

SECTION 42. LEAD PIPE, DIAMETER WEIGHTS. All lead pipe shall be of best quality of drawn pipe, of not less weight per linear foot than shown below.

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

Internal diam. Inches	Weights per foot	
	Lbs.	Ozs.
1	2	--
1 1/4	2	8
1 1/2	3	8
2	4	--
3	4	12
4	6	--

(b) Lead water-supply pipe (double extra strong);

Internal diam. Inches	Weights per foot	
	Lbs.	Ozs.
1/2	3	--
5/8	3	8
3/4	4	--
1	6	--
1 1/4	6	12
1 1/2	9	--
2	10	10

SECTION 43. THREADED FITTINGS. (a) Plain screwed fittings shall be of cast iron, malleable iron, or brass of standard weight and dimensions.

(b) Drainage fittings shall be of cast iron, malleable iron, or brass, with smooth interior waterway, with threads tapped out of solid metal.

(c) All cast-iron fittings used for water-supply distribution shall be galvanized.

(d) All malleable iron fittings shall be galvanized.

SECTION 44. CALKING FERRULES. Brass calking ferrules shall be of best quality cast brass, with weights and dimensions in accordance with the following table:

Pipe size (inches)	Actual inside diameter	Length	Weight	
			Lbs.	Ozs

2	2 ¼	ins.	4 1/2	ins.	1	
3	3 ¼	ins.	4 1/2	ins.	1	12
4	4 ¼	ins.	4 1/2	ins.	2	8

SECTION 45. SOLDERING NIPPLES AND BUSHINGS. (a) Soldering nipples shall be of brass pipe, iron-pipe size, or of heavy, cast brass not less than the following weights:

Diameters Inches	Weights Ozs.	Diameters Inches	Weights Lbs.	Ozs.
1 1/4	6	2 1/2	1	6
1 1/2	8	3	2	0
2	14	4	3	8

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

SECTION 46. FLOOR FLANGES FOR WATER-CLOSETS. Floor flanges for water-closets shall be not less than three-sixteenths (3/16) of an inch thick, and of brass or cast iron.

PART VII

JOINTS AND CONNECTIONS

SECTION 47. WATER AND AIR TIGHT JOINTS. All joints and connections mentioned under this ordinance shall be made permanently gas and water tight.

SECTION 48. VITRIFIED PIPE. All joints in vitrified clay pipes, or between vitrified clay pipe and metals, shall be made of cement or recognized joint compound.

SECTION 49. CALKED JOINTS. All calked joints shall be firmly packed with oakum or hemp, and shall be secured only with pure lead, not less than one (1) inch deep, well calked, and no paint, varnish, or putty will be permitted until after the joint is tested.

SECTION 50. SCREW JOINTS. All screw joints shall be American standard screw joints, and all burrs or cuttings shall be removed.

SECTION 51. CAST IRON. Cast-iron joints may be either calked or screw joints made in the approved manner.

SECTION 52. WROUGHT IRON, STEEL, OR BRASS TO CAST IRON. The joints may be either screwed or calked joints made in the approved manner.

SECTION 53. LEAD PIPE. Joints in lead pipe or between lead pipe and brass or copper pipes, ferrules, soldering nipples, bushings or traps, in all cases on the sewer side of the trap and in concealed joints on the inlet side of the trap, shall be fully wiped joints, and with an exposed surface of the solder to each side of the joint of not less than three quarters (3/4) of an inch and a minimum thickness at the thickest part of the joint of not less than three-eighths (3/8) of an inch.

SECTION 54. LEAD TO CAST IRON, STEEL, OR WROUGHT IRON. The joints shall be made by means of a calking ferrule, soldering nipple or bushing.

SECTION 55. SLIP JOINTS AND UNIONS. Slip joints will be permitted only in trap seals or on the inlet side of the trap. Unions on the sewer side of the trap shall be ground faced, and shall not be concealed or inclosed.

SECTION 56. ROOF JOINTS. The joint at the roof shall be made water tight by use of copper, lead, or iron plates or flashings.

SECTION 57. CLOSET, PEDESTAL URINAL AND TRAP STANDARD SLOP SINK, FLOOR CONNECTIONS. A brass floor connection shall be wiped or soldered to lead pipe, an iron floor connection shall be calked to cast-iron pipe, or an iron floor connection calked or screwed to wrought-iron pipe, and the floor connection bolted to an earthenware trap flange. A metal to earthenware, a metal to metal union, or a lead or asbestos gasket or washer shall be used to make a tight joint.

SECTION 58. INCREASERS AND REDUCERS. Where different sizes of pipes or pipes and fittings are to be connected, proper size increasers or reducers, pitched at an angle of 45° between the two sizes, shall be used.

SECTION 59. PROHIBITED JOINTS AND CONNECTIONS. Any fitting or connection which has an enlargement, chamber, or recess with a ledge shoulder or reduction of the pipe area in the direction of the flow on the outlet or drain side of any trap is prohibited.

No bolted joints will be permitted at any time. No slip joint will be allowed on any fixture for vent or waste except on closet flush only.

SECTION 60. EXPANSION BOLTS. Connections of wall hangers, pipe supports, or fixture settings with the masonry, stone, or concrete backing shall be made with expansion bolts without the use of wooden plugs.

SECTION 61. NEW MATERIALS. Any other material than that specified in this code, which the Plumbing Inspector approves as being equally efficient, may be permitted.

PART VIII

TRAPS AND CLEAN OUTS

SECTION 62. TRAPS, PROHIBITED. No form of trap which depends for its seal upon the action of movable parts or concealed interior partitions shall be used for fixtures.

SECTION 63. TRAPS, WHERE REQUIRED. Each and every fixture having a waste pipe shall be separately and independently trapped with a water-sealed trap placed not exceeding fifteen (15) inches from the vent pipe, and each trap shall be protected from siphonage and air pressure by special vent pipe, connected to crown of trap, or by continuous ventilating system.

Waste from bath tub and wash trays shall be connected to drum trap, which may be of lead, brass or cast iron, extra heavy, with trap screw, not less than four (4) inches in diameter, the ring of which shall be wiped on lead traps - trap to be accessible and as close to the fixture as practicable. Bath and wash tray plugs shall be one and one-half (1 1/2) inches.

SECTION 64. WATER SEAL. Each fixture trap shall have a water seal of not less than two (2) inches and not more than four (4) inches.

SECTION 65. TRAP LEVELS AND PROTECTION. All traps shall be set true with respect to their water seals and protected from frost and evaporation.

SECTION 66. PIPE CLEAN OUTS, WHERE REQUIRED. A clean out easily accessible shall be provided at the foot of each vertical waste or soil stack. There shall be at least two (2) clean outs in the house drain - one at or near the base of the stack and the other, with full size Y branch, inside the wall near the connection between the house drain and house sewer. Except for the latter, clean outs shall be of the same nominal size as the

pipes up to 4 inches and not less than 4 inches for larger pipes. The distance between clean outs in horizontal soil lines shall not exceed fifty (50) feet.

SECTION 67. GREASE TRAPS. (a) Waste pipes from kitchen sinks in any hotel or restaurant or other public cooking establishment and in every dwelling house, shall run separate to a grease trap in yard, when practical, and when the same is not practical to put in yard, a grease trap must be placed below each sink with a water jacket to keep the water in the grease trap chilled. Pantry sinks may be connected directly to house drains.

Grease traps placed inside of dwellings shall not be less than 12" x 16" x 14". Grease traps in hotels or cooking establishment shall not be less than 20 inches in diameter, and installed according to directions of the Plumbing Inspector.

(b) CONSTRUCTION. Grease traps in yards shall be built in an easily accessible location not less than three (3) feet nor more than eight (8) feet from wall of building, and shall be constructed either of hydraulic cement, sand and gravel in the proportion to one part cement, and three parts of all other materials, or of earthenware.

Grease traps for small buildings or ordinary dwelling houses shall not be less than twenty-four (24) inches in diameter and forty-eight (48) inches deep.

Each grease trap shall be covered with a stone, iron, or cement concrete cover, the top of which is not less than six (6) inches nor more than twelve (12) inches below the surface of the ground and covered with dirt. Each lid shall be equipped with suitable ring or hand holds for removing. No stone cover shall be less than three (3) inches in thickness. No wooden cover will be permitted. If any existing cover becomes rotten or defective, it shall be removed and replaced with a stone, iron, or cement cover at the expense of the owner.

The walls of such grease trap, if of brick, shall be eight (8) inches thick and laid in Portland Cement mortar and plastered outside and inside with a half-inch coat of Portland Cement mortar consisting of one part cement and two parts clean sharp sand. The bottom shall be at least eight (8) inches thick and of either brick laid in cement mortar, or Portland cement concrete. The brick used shall be a hard burned vitrified brick.

Grease traps shall be made water tight. No retempered cement shall be used.

The bottom of grease traps shall be at least two (2) feet below the invert of the outlet to the sewer.

The invert of the inlet to the grease trap shall be not less than two and one-half (2 1/2) feet above the finished bottom of the grease trap.

SECTION 68. SAND TRAPS. All liquid wastes from barns, stables, work shops, garages, washracks or drainracks, shall be intercepted before entering the sewer by a sand trap or catch basin not less than twenty-four (24) inches in diameter and forty-eight (48) inches in depth, built of the same construction as provided for under grease traps or may be a cast-iron catch basin provided with bolted air tight cover. The outlets of sand traps to have quarter bend with seal not less than ten (10) inches, with accessible strainer cover.

SECTION 69. FLOOR DRAINS. Floor drains must be of a "P" or "S" trap pattern with back water valve with strainer attached, when placed in a basement. When more than six (6) feet from house drain, it shall be provided with adequate vent pipe.

SECTION 70. BACK-WATER VALVES. Back-water valves shall have all bearing parts or balls of noncorrodible metal and so constructed as to insure a positive mechanical seal and remain closed except when discharging wastes.

PART IX

WATER SUPPLY AND DISTRIBUTION

SECTION 71. WATER SERVICE. The water-service pipe of any building shall be of sufficient size to permit a continuous ample flow of water on all floors at a given time.

SECTION 72. WATER CLOSETS. Every closet or group of water closets within a building shall be flushed from a separate tank or cistern, or by means of a suitable flushing device.

SECTION 73. SIZE OF WATER-SUPPLY PIPES. The minimum size of water-service pipes from the curb to the dwelling shall be one-half (1/2) inch, and to fixtures as follows:

	Inch
Sill cocks	1/2
Hot water boilers	1/2
Laundry trays	1/2
Sinks	1/2
Lavatories	3/8
Bath tubs	1/2
Water-closet tanks	3/8

SECTION 74. WATER SUPPLY CONTROL. There shall be a brass curb cock in each service pipe under the exclusive control of the Water Department, said curb cock to be placed in the pipe on the outer side of the sidewalk or at the alley line, and no person not a direct employee of the said Water Department shall open or close or otherwise interfere with said curb cock except in cases of emergency or with special permission of the Water Department. All such curb cocks shall have stops with circular water ways of the same diameter as the pipe in which they are placed and must have "T" heads and be in all respects equal to sample in the office of the Superintendent of Water and Sewer Systems.

Each service pipe must be furnished with a stop cock and waste below the action of the frost, so situated that the water can be conveniently shut off and drained from the pipes to prevent freezing. There shall also be a stop cock in every cellar or basement served, below the action of the frost, to enable consumers to turn the water off in case of accidents to the pipes on the premises and to drain the pipes and meters to prevent freezing.

SECTION 75. AUXILIARY VALVES. Accessible valves shall be provided for each supply to every water closet.

SECTION 76. WATER-SUPPLY PIPES AND FITTINGS, MATERIAL. All water-supply pipes for a plumbing system shall be of lead, galvanized wrought iron or steel, brass, copper tubing, or cast iron, with brass or galvanized cast-iron or galvanized malleable-iron fittings. No pipe or fittings that have been used for other purposes shall be used for distributing water.

SECTION 77. WATER SUPPLY, PROTECTION. All concealed water pipes, storage tanks, flushing cisters, and all exposed pipes or tanks subject to freezing temperatures shall be efficiently protected against freezing.

SECTION 78. RELIEF VALVES. Wherever a check valve is installed on the cold-water supply pipe between the street main and the hot-water tank there shall be installed on the hot-water distributing system a suitable relief valve.

SECTION 79. LEAKING PIPES A NUISANCE. Leaking water, sewer or gas pipes, whether on public or private property, shall be deemed a nuisance.

PART X

PLUMBING FIXTURES.

SECTION 80. WATER CLOSETS. All water closets shall be connected by means of brass, lead or iron properly fitted to the closet so that a tight joint will be insured. Cast iron soil and calked flanges shall be used only in concrete construction.

Outside hopper water closets must be separately trapped with a clean-out trap. The soil pipe from floor to hopper trap must be iron soil pipe. Hopper must be flushed with a seat attachment to valve by heavy iron chain; waste from valve must be tapped into house side of trap or soil pipe and connected to same by brass soldering nipple. The iron soil pipe from trap must extend outside of wall of vault at least twelve (12) inches when vault is used. Hoppers with flush tanks are preferable and should be used wherever possible where frost-proof closet is installed.

Under no conditions will hopper toilets be permitted to connect with the sewer system, the main line of which is located in the alley running north and south between Sixth and Seventh Street and between Pitkin and Hill Avenues in the City of Grand Junction.

Whenever installed adjoining any residence or alley line, same shall be vented with a two (2) inch galvanized pipe, subject to the approval of the Plumbing Inspector.

In no case shall any hopper or frost-proof closet be installed in any compartment having connection with a building used for human habitation or occupancy, nor in any other location in the City of Grand Junction, unless written permission be first secured from a plumbing inspector.

SECTION 81. FIXTURES PROHIBITED. Fixed wooden wash trays or sinks shall not be installed in any building designed or used

for human habitation. No new copper lined wooden bath tubs shall be installed and an old fixture of this class taken out shall not be re-connected. Pan and valve plunger, offset washout and other water-closets having invisible seals or unventilated space, or walls not thoroughly washed at each flush shall not be used. Long hopper closets or similar appliances shall not hereafter be installed. No dry closet or chemical closet shall be installed in a dwelling.

SECTION 82. CHEMICAL & DRY CLOSETS. Chemical and dry closets are prohibited in all buildings which are used for domestic, educational, amusement or manufacturing purposes.

SECTION 83. PUBLIC URINALS. All public urinals shall be supplied with flush tanks or suitable and effective flushing devices, flush to be connected to urinal, properly trapped and vented. The use of galvanized sheet iron is prohibited in the construction of a urinal.

SECTION 84. BUBBLER WASTE - DRINKING FOUNTAINS. Waste pipes from bubblers may discharge into an open fixture, trapped funnel or floor drain. Such waste pipes, however, must be trapped to preclude their use as a local vent for cellar, etc.

When bubblers or drinking fountains are connected directly to soil, waste or drain pipes, they shall be trapped and vented properly and Durham system of continuous venting may be used.

SECTION 85. DENTAL CUSPIDORS. Dental cuspidors when connected to a waste pipe must be effectively trapped and vented.

The length of the horizontal waste pipe between the vent pipe and trap must not exceed fifteen (15) feet. The total fall of the horizontal waste pipe between trap and vent shall not exceed the inside diameter of said waste pipe.

SECTION 86. FIXTURES REPLACED. When an old or defective fixture is removed to be replaced by a new one, and no other fixture or piping is to be added or remodeled, it will not be necessary to reconstruct the soil, waste or vent piping to make it conform to this ordinance unless found to be in a dangerous condition.

PART XI

VENTILATION OF ROOMS & FIXTURES

SECTION 87. LOCATION OF FIXTURES. No water closets, slop sinks, hospital equipment rooms or urinals, or any other trapped plumbing fixture shall be located in any room or apartment which does not contain a window in an external wall or is not otherwise provided with proper ventilation.

SECTION 88. GAS WATER HEATERS. No gas water heater shall be installed, or if installed, shall be permitted to remain in any bath room, bed room, or toilet room of less than fifteen hundred (1500) cubic feet of air capacity, unless such room shall be equipped with a permanently open ventilator of not less than 12 x 14 inches dimension.

All gas heaters shall be vented as provided in the Building Ordinance.

SECTION 89. VENTILATING PIPE, HOW CONNECTED. Ventilation pipes from fixtures and toilet rooms shall be separate and distinct and have no connection whatever with the other ventilating ducts or pipes in the building.

PART XII

SOIL, WASTE AND VENT PIPES

SECTION 90. MATERIAL. All main or branch soil, waste, and vent pipes within a building shall be of cast iron, galvanized steel, or wrought iron, lead, brass, or copper, except that no galvanized steel or wrought iron pipe be used for underground soil or waste pipe.

The above described materials including lead pipes, weight known as "extra light" may be used for ventilation.

SECTION 91. SOIL AND WASTE STACKS. Every building in which plumbing fixtures are installed shall have a soil or waste stack, or stacks, extending full size through the roof. Soil and waste pipes shall be as direct as possible and free from sharp bends and turns. The required size of a soil or waste stack shall be determined by the Plumbing Inspector in accordance with the best practice.

No water closet shall discharge into a stack less than three (3) inches in diameter.

All soil pipe receiving the discharge from more than one water closet shall be constructed of cast iron soil pipe and fittings not less than four (4) inches in diameter.

SECTION 92. VENTS, SIZE OF. The required size of main vents or vent stacks shall be determined from the size of the soil or waste stack vented, the total number of fixtures drained into it, and the developed length of the vent as shown on table below

TABLE SHOWING KINDS OF FIXTURES, NUMBER OF FIXTURES, SIZES OF TRAPS, DIAMETER OF SOIL, WASTE AND VENT PIPES

Kind of fixtures	SOIL AND WASTE		VENT		
	No. of fixtures allowed	Sizes of Soil and Waste	No. of fixtures allowed	Sizes of back vents	Sizes of traps required
Closets	1	3"	-----	2"	2 1/2" to 4
	12	4"	-----	3"	
	13-50	5"	-----	3 1/2"	
	51-100	6"	-----	4"	
	101 or more	8"	-----	6"	
Slop sink with trap combined	2	2"	1	1 1/2"	2" to 4"
	6	3"	6	2"	
	7-15	4"	7-10	2 1/2	
	16-36	5"	11-20	3"	
	37-64	6"	21	3 1/2"	
Sinks, bath tubs, laundry trays, ordinary slop sinks, small single urinals, and showers	2	1 1/2"	2	1 1/2"	1 1/2" or 2"
	3-6	2"	3-6	2"	
	7-12	2 1/2"	7-12	2 1/2	
	13-25	3"	13-25	3"	
	26-30	3 1/2"	26-50	3 1/2	
	31-100	4"	51-100	4"	

SOIL AND WASTE			VENTS		
Kind of fixtures	No. of fixtures allowed	Sizes of Soil and Waste	No. of fixtures allowed	Sizes of back vents	Sizes of traps required
Wash Basins, cuspidors, bubblers, refrigerators	4 5-8 9-25 26 or more	1 1/4" 1 1/2" 2" 3"	4 5-8 9-25 26 or more	1 1/4" 1 1/2" 2" 3"	1 1/4" or larger
Floor Drains	1 2-4 5-8 9-36	2" 3" 4" 6"	----- ----- ----- -----	----- ----- ----- -----	1 1/2" to 6"
Bar Conn.	----- ----- -----	1 1/2" to 3"	----- ----- -----	1 1/2" to 2"	1 1/2" or larger
Long trough pedestal, combined trap and porcelain stall urinals	1 1-4 4-10 10-25 25	2" 3" 4" 5" 6"	2-4 ----- 4-12 12-30 30	2" ----- 2 1/2" 3" 4"	2" to 4"

SECTION 93. SOIL AND VENT STACKS, FIXTURE CONNECTIONS. All soil and waste stacks and branches shall be provided with correctly faced inlets for fixture connections. All waste and vent pipes shall be reamed to the full size of pipe.

SECTION 94. TERMINALS. Vent pipes must not terminate in or lead through chimney flues, but must be carried up inside of the building and supported the same as soil pipes.

The roof terminal of any stack or vent, if within twenty (20) feet of any door, window, scuttle, or air shaft, shall extend at least three (3) feet above the same.

SECTION 95. BACK AIR VENTS. All water-closet bends must be back air vented with not less than two-inch pipe when over six feet from the stack or house drains, and when situated twenty (20) or more feet from the stack or house drain, soil pipe must be continued full size to the roof.

All other fixtures shall be back vented with pipe, the same size as the waste. Water-closet vent pipes must be increased according to number of fixtures at least one-fourth (1/4) of an inch for each additional fixture.

In small buildings and ordinary dwelling houses, the back air vents may be connected to soil pipes not less than one (1) foot above highest fixture. In no case shall back-air vents be connected to soil pipes in buildings three or more stories high, but shall be run separately through roof.

SECTION 96. TRAP VENTS. Trap vents from two or more fixtures must be connected at least twelve (12) inches above highest fixtures.

SECTION 97. WASTE LINES IN OFFICE BUILDINGS. The horizontal waste lines in office buildings and apartments where there are more than three stacks shall be increased to five (5) inches; for seven or more stacks, soil line shall be six (6) inches.

SECTION 98. VENT PIPE GRADES AND CONNECTIONS. All vent and branch vent pipes shall be free from drops and sags and be so graded and connected as to drip back to the soil or waste pipe by gravity. Where vent pipes connect to horizontal soil or waste pipe, forty-five-degree "ells" shall be used at all times where practical.

SECTION 99. CIRCUIT AND LOOP VENTS. In office buildings or business blocks of three stories or more, and where two or more water closets constitute a battery located on different floors, and discharging into the same vertical stack, the loop system of ventilation may be employed, subject to the increase in size of vent pipes otherwise provided in this ordinance.

PART XIII

HOUSE DRAINS AND SEWERS

SECTION 100. ONE DRAIN TO EACH BUILDING. The drainage and plumbing system of each new building and of new work installed in existing buildings shall be separate from and independent of that of any other building, except as provided below, and every building shall have an independent connection with a public or private sewer when available.

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

SECTION 101. OLD HOUSE DRAINS. Old house drains may be used in connection with new buildings or new plumbing only when they are found on examination or test to conform to the requirements of this ordinance governing new sewers or drains. If found defective, the necessary changes must be made to make it conform to the requirements of this ordinance.

SECTION 102. MATERIAL IN HOUSE DRAIN. That portion of the house drains inside of the walls underneath the buildings, and three (3) feet outside area of foundation wall, shall be constructed of what is known to Commerce as cast-iron soil pipe and fittings.

SECTION 103. EJECTORS, WHEN REQUIRED. In all buildings in which the whole or part of the house drainage and plumbing system thereof lies below the crown level of the main sewer, sewage or house wastes shall be lifted by approved artificial means and discharged into house sewer.

SECTION 104. EJECTORS VENTED. The soil or vent pipe leading to an ejector or other appliance for raising sewage or other waste matter to the street sewer shall, where a water closet or closets are installed, be provided with a vent pipe not less than four (4) inches in diameter, and where fixtures other than water closets are installed, the waste vent pipe shall be the same diameter as the waste pipe.

SECTION 105. SUMPS AND RECEIVING TANKS. All sub house drains shall discharge into an air-tight sump or receiving tank, so located as to receive the sewage by gravity, from which sump or receiving tank the sewage shall be lifted and discharged into the house sewer by pumps, ejectors, or any equally efficient

method. Such sumps shall be either automatically discharged or be of sufficient capacity to receive the house sewage and wastes for not less than twenty-four (24) hours.

PART XIV

STORM WATER DRAINS.

SECTION 106. RAINWATER LEADERS. Rainwater leaders shall not be connected with the sanitary sewer system, but may be connected with sewer when authorized in writing by the Superintendent of the Department of Water and Sewers in districts having combined sewers.

Rainwater leaders, when within a building and connected with a sewer system, shall be extra heavy cast-iron soil pipe, the same to have a trap entering the sewer outside of building.

SECTION 107. AREA AND COURT DRAINS. All roofs and paved areas, yards, courts, court yards, may be drained into sewers in districts having combined sewerage system. No such connections will be permitted to any sanitary system for sewage only. When drains used for this purpose are connected to the combined sewer system, their contents shall be discharged into a yard catch basin, an adequate basement floor drain, or deep seal trap, so located that it is readily accessible for cleaning and is protected from frost. The surface opening of the drain to catch basins must be provided with an adequate strainer, and where necessary, with a back flow valve.

SECTION 108. SUBSOIL, FOUNDATION, CLEAR WATER, AND ABSORPTION TILE DRAINS. Where subsoil drains are placed under the cellar floor or used to encircle the outer walls of a building, the same shall be made of open-jointed drain tile or earthenware pipe, not less than four (4) inches in diameter, and shall be properly trapped and protected against back pressure by an automatic back-pressure valve accessibly located before entering the house sewer or drain. They may discharge through a cellar drain.

SECTION 109. SUBSOIL RECEIVER. The discharge of such drain tile from footings of buildings shall be collected in a sub-soil receiver or trap of adequate capacity, having a water-tight cover securely bolted or screwed on. Said cover shall be at least two (2) inches above basement floor. Such discharge charge shall be lifted by some automatic device and discharged into sewer or drainage system.

SECTION 110. CISTERN OVERFLOW. Overflow from cisterns shall not connect directly with any house sewer, but shall discharge into an open fixture, catch basin or floor drain.

No such overflow shall discharge into any sewer system used for sanitary sewer only.

SECTION 111. ELEVATOR CONNECTIONS. All hydraulic elevators, lifts and motors in order to prevent back pressure in any sewer drain, soil or waste pipe, shall discharge into a tank of adequate capacity. Such tanks shall be provided with adequate deep-seal trap or inverted bends, and where necessary, with back-water valve.

PART XV

REFRIGERATOR, SAFE, AND SPECIAL WASTES

SECTION 112. REFRIGERATORS. Waste pipes from refrigerators or other receptacle in which provisions are stored, shall not be connected directly with the drainage system, but shall be arranged to waste into open sink or tray in open sight below refrigerator. This sink or tray may be connected with the drainage system when properly trapped and vented, and supplied with running water.

SECTION 113. SEDIMENT. No sediment from boilers or drain tubs, stop or waste cocks, shall be connected directly with any waste pipe or sewer. Drips from safes under water closets and other fixtures, or from tanks or cisterns, shall in no case be connected directly to the drainage system, but shall run to some place in open sight.

SECTION 114. WASTES FROM LAUNDRIES & SIMILAR ESTABLISHMENTS. Waste pipes in dye houses, breweries, bottling works, creameries, laundries and similar establishments where much water is used, may discharge directly onto a non-absorbent floor, provided with an adequate number of floor drains, which drains must be connected to the house sewer with cast-iron pipe.

SECTION 115. BAR WASTES. Bar, soda fountain and similar wastes may be installed in accordance with one of the above methods under instructions from the Plumbing Inspector.

The trap, waste and vent pipe may be located at either side of the bar at any convenient point.

SECTION 116. OVERFLOW PIPES. The discharge from waste pipes from water motors, overflow pipes from water supply tanks, expansion tanks and drip pans shall be provided for in the same manner as for refrigerator wastes.

PART XVI

MAINTENANCE AND REPAIRS

SECTION 117. DEFECTIVE FIXTURES OR PIPES. No foul or leaking waste, soil, vent or drain pipe, nor any defective plumbing fixtures shall be constructed or allowed to remain in any occupied or inhabited building. Any such pipes or defective plumbing fixtures shall be condemned by the Plumbing Inspector, and when so condemned, shall not thereafter be used.

SECTION 118. OLD MATERIALS RE-USED. All fixtures, soil, waste and vent pipes removed from an old building, if found to be in good condition, may be used in the same building or may be used in another building, provided the owner of the building in which they are installed gives his consent.

SECTION 119. RECONSTRUCTION. When old and defective plumbing is to be remodeled, additional fixtures installed or the whole plumbing system moved to another part of the building, then the remodeled system shall be made to conform reasonably to this ordinance and the Durham system may be used in case of finished walls and ceilings.

PART XVII

PENALTY AND REPEAL

SECTION 120. PENALTY. Any person or corporation who shall violate any of the provisions of this ordinance shall, upon conviction thereof, be fined not less than ten (\$10.00) dollars nor more than one hundred (\$100.00) dollars, and each and every day's continuance of any violation of the provisions of this ordinance shall constitute and be deemed a separate offense.

If a master plumber be convicted of a violation of any of the provisions of this ordinance, in addition to the above penalty his license may be revoked.

SECTION 121. REPEAL. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

Passed and adopted this 1st day of April, A. D. 1931.

/s/ Fred A. Rogers
President of the Council

ATTEST:

/s/ Helen C. Tomlinson
City Clerk

I HEREBY CERTIFY THAT the foregoing ordinance, being ordinance No. 484, was introduced, read and ordered published by the City Council of the City of Grand Junction, Colorado, at a regular meeting of said body held on the 4th day of March, A. D. 1931 and that the same was published in The Daily Sentinel, a newspaper published and in general circulation in said City at least ten days before its final passage.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of said City, this 2nd day of April, A. D. 1931.

/s/ Helen C. Tomlinson
City Clerk

1st publication March 6th, 1931
Last publication April 2nd, 1931