

LEAD INDUSTRIES ASSOCIATION

420 MADISON AVENUE

NEW YORK 17, N. Y.

METALLIC LEAD PRODUCTS DIVISION

June 16, 1950

H. L. P. S. TULLY, JR., JR.

SUBJECT: NATIONAL PLUMBING

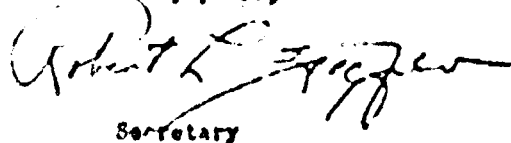
To Members of the Metallic Lead Products Division:

Considerable interest has been shown by many city and county plumbing code committees in the national plumbing codes, one sponsored jointly by the U.S. Department of Commerce and the Housing and Home Finance Agency, and the other by the American Standards Association. Both of these codes are national in character and as a result, their material requirements are very broad as are some of their regulatory sections.

To assist local plumbing code committees contemplating the adoption of either of these codes, the Association has prepared a series of suggested amendments, copies of which are attached, that will undoubtedly be of considerable help to these committees. We feel that they will be helpful because they not only include suggestions dealing directly with material requirements but include suggestions dealing with the regulatory and definition sections as well. The suggestions dealing with material requirements will, if adopted, provide for a lead and cast-iron soil pipe drainage and vent system. The Association is placing these amendments in the hands of the proper people in any city in which it learns that adoption of the national codes is under consideration. Inasmuch as the New York State Health Department adopted the American Standards Association Code as minimum requirements for communities in New York State, the Association supplied every known plumbing inspection department of the State with a copy of these suggested amendments.

If, to your knowledge, any city, county or state plumbing code committee is contemplating the adoption of either of these national plumbing codes, it would be well to provide them with a copy of the suggested amendments that apply. Extra copies are available for this purpose and will be sent to you upon request.

Sincerely yours,



Secretary



SUGGESTED AMENDMENTS
TO THE
REPORT OF THE UNIFORM PLUMBING CODE COMMITTEE

ISSUED JOINTLY BY
U. S. DEPARTMENT OF COMMERCE
AND
HOUSING AND HOME FINANCE AGENCY
TO PROVIDE FOR A
LEAD AND CAST IRON SOIL PIPE DRAINAGE
AND VENT SYSTEM

Attic. An "attic" is a portion of a building situated partly or wholly in the roof space. An attic which is used only as a portion of a single or two-family dwelling shall not be counted as a story, unless there are more than (2) rooms suitable for living purposes on this floor. For the purpose of this paragraph, rooms of one hundred sixty (160) square feet or more will be regarded as two (2) or more rooms, based on each eighty (80) square feet being considered one (1) room. Any attic which is occupied by a separate family shall be counted as a story.

Basement. A "basement" is that portion of a building partly below grade but so located that the vertical distance from the grade to the floor is greater than the vertical distance from the grade to the ceiling. Provided, however, that if the vertical distance from the grade to the ceiling is five (5) feet or more, such cellar shall be counted as a story. If any portion of a building is in that part the equivalent of a basement or cellar, the provisions of this code relative to basements and cellars shall apply to such portion of the building.

Backflow Connection. A backflow connection or condition is any arrangement whereby reverse flow can occur. (It is recognized that other terms have been used, including interconnection, back-siphonage, and gravity flow but the term backflow connection is the one used in this code for the condition, as defined.)

Backflow Preventer. A backflow preventer (sometimes called vacuum breaker) is a device for installation in a water supply pipe to prevent reverse flow of water into the water-supply system from the connections on its outlet end.

Building Subdrain. A building (house) subdrain is that portion of a drainage system which is beneath the sewer piping and therefore cannot drain by gravity into the building sewer.

Building Trap. A running trap is a device or assembly of fittings installed in the building drain to prevent circulation of air between the drainage system of the building and the building sewer, also known as a house trap.

Cellar. A "cellar" is that portion of a building partly below grade but so located that the vertical distance from the grade to the floor is greater than the vertical distance from the grade to the ceiling. Provided, however, that if the vertical distance from the grade to the ceiling is five (5) feet or more, such cellar shall be counted as a story. If any portion of a building is in that part the equivalent of a basement or cellar, the provisions of this code relative to basements and cellars shall apply to such portion of the building.

Diameter. Unless specifically stated, the term diameter means the nominal line passing through the center of a circle terminated by the curve and dividing the figure symmetrically into two equal parts.

Durham System. A term used to describe coil or waste systems where all piping is of threaded pipe, tubing, or other such rigid construction using recessed drainage fittings to correspond to the piping.

Fixture Drain. A fixture drain is the piping from the trap of a fixture to the junction of that piping with any other waste pipe.

Fixture Unit. A fixture unit is a design factor for drainage piping so chosen that the load-producing values of the plumbing fixtures can be expressed approximately as multiples of that factor. For the purposes of this code this value is assumed to be 7.5 G.P.M.

Flush Valve. A valve for directing limited quantities of water to start and accelerate drainage of water closets and similar fixtures.

Individual Vent. An individual vent shall mean the pipe installed between the waste or soil branch to a point above the fixture to the vent system, to prevent trap siphonage and back pressure, by maintaining equal atmospheric pressure at all times on both sides of the trap seal while its fixture or adjacent fixtures are being operated.

Industrial Waste. Industrial waste is liquid waste resulting from the processes employed in establishments of industry.

Main Sewer. The main or public sewer is the public piping receiving sewage in a street, alley, or other premises under the jurisdiction of the City of....

Offset. An offset in a line of piping is a combination of fittings or piping bends which brings one section of the pipe out of line with but into a line parallel with another section.

Plumber, Apprentice. An apprentice plumber is a person who is registered as such, and who is undergoing an apprenticeship or course of training (not exceeding five years) for the purpose of learning the trade of plumbing. An apprentice as herein defined, shall perform no work regulated by this code or amendments thereto, except as an assistant, under the direct supervision of, and in the immediate presence of a licensed master plumber or a certified journeyman plumber.

Plumber, Journeyman. A journeyman Plumber is a person who supervises, installs, alters and/or repairs plumbing and drainage systems or part thereof, as an employee, but does not furnish material or supplies, and who is registered and the legal possessor of a Plumber's Certificate of Competency, as provided for in this code.

Plumbing Fixtures. Plumbing fixtures are receptacles which receive water, liquid, or water-borne wastes and discharge them into a drainage system. Water heaters and water softeners shall be classed as plumbing fixtures.

Plumber, Master. A Master Plumber is hereby defined to mean a person duly certified as such and authorized to engage in the installation of plumbing, through contract, or otherwise, and also in planning engineering, superintending, installation, maintenance, and repair with respect to plumbing in all its branches, and as such master plumber is authorized to employ journeyman plumbers and plumbers' apprentices and other persons necessary for the proper installation of plumbing work in accordance with the plumbing regulations and provisions of this code.

Plumbing. "Plumbing means the science of creating and maintaining sanitary conditions in buildings, camps, or other mode of dwelling, where people live, work, play, assemble or travel, by providing permanent means for a supply of safe, pure, wholesome and potable water, with ample volume and suitable, temperatures for drinking, cooking, washing, bathing, swimming, cleansing, fire-fighting and mechanical and manufacturing purposes; and to cleanse all waste receptacles and similar means for reception, and the quick and thorough removal from the premises of all fluid and partial fluid wastes and other impurities incidental to human life and occupation; and is accomplished by means of all labor and material used in and for the introduction and maintenance or the extension of a supply of water through a pipe or pipes or any building, lot premises, establishment, camp or vehicle of travel; and the installation, connection or repair of any system of drainage whereby foul matters, waste, rain or surface water, gas, odors, fluid or vapor is discharged through a pipe or pipes from any building, lot, premises, establishment, camp or vehicle of travel, into any main, public or private, sewer, drain, septic tank, disposal field, pit, box, filter bed, leaching well, or other receptacle, or into any natural or artificial body of water, water course, upon private or public property: The installation of any fixture or appurtenances thereof used for cooking, washing, drinking, bathing, swimming, cleansing, fire-fighting, mechanical or manufacturing purposes; the ventilation of any building sewer, fixture or other appurtenances thereof used for cooking, washing, drinking, bathing, swimming, cleansing, fire-fighting, mechanical or manufacturing purposes; the ventilation of any building sewer, fixture or other appurtenance connected therewith and the connection of any of these pipes, fixtures and appurtenances to any public utility, public or private, within, beneath, or above, such system or systems."

(The foregoing was submitted and approved for publication by the A. S. S. E. delegates assembled at the convention held at St. Louis, Mo. August 15, 1944)

Soil System. The soil system shall be that portion of the plumbing piping within the building which receives and carries fecal matter.

Storm Drain. A building (house) storm drain is a system of piping in a building used for conveying rain water, ground water, subsurface water, condensate, cooling water, or other similar discharge to a building storm sewer, or to a combined building sewer.

Storm Sewer. A storm sewer is a system of piping which carries off surface or storm water from streets, roofs, or other areas, but not including liquid industrial waste.

Vent Pipe. A vent pipe is any pipe or system of pipes providing a free circulation of air to any trap, branch, or main of a drainage system, in order to prevent trap siphonage or back pressure.

Vent Pipe Flashing. A vent pipe flashing is watertight flashing located at the point where the pipe passes through the roof, deck or wall.

Yoke Vent. A yoke vent is a pipe connecting upward from a soil or waste stack to a vent stack for the purpose of preventing pressure changes in the stacks, also referred to as a relief vent.

Tees and Crosses. Tees and crosses shall not be used in horizontal soil or drainage lines.

Plumbing System. The terms "Plumbing System" and "Plumbing Installation" include the water supply pipe, building drain and gas vent pipe and their several connections in the building to the public or private water supply, sewer or gas mains and all pipes, fixtures, vents, branches, or devices, including rain leaders and storm branches connected thereto.

Prefabricated Buildings. A prefabricated building is one having walls, partitions, floors, ceilings, and/or roof composed of sections or panels varying in size which have been fabricated in a factory prior to erection of the building foundation. This is in contrast to the conventional built building which is constructed on the site.

Private Use. "Private Use" shall mean a toilet room or bathroom which is specifically intended for the use of an individual or family and such visitors as they may permit to use such toilet or bathroom.

Public Use. The term "Public Use" as applied to toilet rooms and bathrooms shall mean such rooms used by employees, occupants, visitors, or patrons, in or about any premises; furthermore, the term "public use" shall apply to toilet rooms or bathrooms which may be kept locked but several occupants or employees on the premises possess keys for and have access to the toilet or bathrooms.

Roof Drain. A roof drain is a receptacle installed to receive water collecting on the surface of a roof and to discharge it into the leader (downspout).

Roughing In. "Roughing in" shall be the installation of all parts of plumbing system which can be completed prior to the installation of the fixtures. This includes drainage, water supply, vent piping, and the necessary fixture backing.

3.2.1. **Sheet Lead**—All sheet lead shall comply with the requirements of the Federal Specifications for sheet lead Q.C.-L-201 and shall weigh not less than 4 pounds per sq. ft. for shower or safe pans and not less than 3 lbs. per sq. ft. for vent pipe flashings.

3.4.2. **Specific Usage**—Each chapter of the code indicates specifically the type of material permitted for the various parts of the plumbing system. Table 3.5 provides the specifications for each of these materials.

Materials listed in this chapter will conform to the requirements of this code, when used in accordance with the limitations imposed in other chapters of this code, and shall be considered acceptable only for the different parts of the plumbing installation for which they are permitted.

4.2.3. **Wiped Joints**—Joints in lead pipe or fittings or between lead pipe or fittings and brass pipes, ferrules, solder nipples, bushing or traps, shall be full regulation wiped joints or lead welded joints. Wiped joints shall have an exposed surface of the solder to each side of the joint not less than three quarters of an inch and be at least as thick as the material being joined.

All wall or floor flange wiped joints shall be made by using a lead ring or flange placed behind the joint at wall or floor.

4.2.8. Burned Lead Joints—Lead "burned" (welded) joints shall be lapped and the lead shall be faced together to form a uniform weld at least one and one half times as thick as the lead being joined.

4.3.10. Water Closet, Pedestal Urinal, and Trap Standard Service Sink—The connection between the water closet and other closets, floor outlet service sinks, pedestal urinals, and cast-iron trap standard fixtures, shall be made by means of brass or hard lead floor flanges soldered or lead welded to the lead bend or at least six inches of lead pipe. The connection shall be bolted to the fixture by means of two brass bolts with an approved gasket, washer, setting compound or white lead putty between the fixture and the connection. No commercial putty shall be used. The floor flange shall be set on an approved firm base.

The lead connection shall be an independent connection for fixture only. All other waste pipes shall discharge into a separate fitting.

4.3.10.1 Other Fixture Drain Connections—Lead pipes shall be used for all plumbing fixtures as drain and vent connection, and extend through the finished floor or wall. Fixture trap connections shall be solidly made to the drain pipe by flange welded joints. All lead branches and connections shall have a length of at least six inches in order to relieve the fixture connection from vibration and shall be of at least the weight known as "D" or "XL" lead pipe.

5.2.4. Drum Traps—Lead drum traps shall have at least 1/8 inch wall thickness and be 3 inch or 4 inch in diameter. The outlet to be connected into trap at lowest point to form a 2 inch seal and brought upward at an angle of at least forty-five degrees, to proper height and continue with uniform fall to the fixture drain. The trap screw to be one size less than trap diameter.

5.5.2. Distance of Cleanouts—Cleanouts in horizontal drainage lines of 4 inches nominal diameter or less shall not be more than 50 feet apart and not more than 100 feet apart for larger size pipes. Cleanouts shall be installed at each change of direction of the building drain greater than 45 degree angle.

On all sink wastes a flush cleanout shall be installed in waste pipe for the purpose of rodding pipe in either direction. Cleanouts in basement or cellar shall be placed at least three feet above the floor.

6.1.2. Alternate Materials—Sinks, laboratories and special fixtures may also be lined with lead or other corrosion resisting materials especially suited to the use for which the fixtures are intended.

6.2.2. Securing Fixtures—All floor outlet fixtures shall be rigidly secured to floor by screws or bolts. Wall hung fixtures shall be rigidly supported by approved metal hangers or bolts grounded to floor.

- 6.9.1. Laboratory traps shall be provided with waste outlets not less than 1½ inches. They may have stoppers or may be provided with stoppers. When stoppers are used, they shall be so installed that the bottom edge of opening in the plug, shall be below the bottom of overflow channel to prevent trapping of water. All laboratory traps shall be at least 1½ inch, P traps, of cast brass bodies or 17 gauge brass tubing or I.H. lead.
- 6.10.1. Shower Compartments--All shower compartments, except those built directly on the curb or those having cast iron enameled receptors, shall have a lead shower pan well protected with asphaltum paint and tar paper, and said pan shall come up on all sides at least two inches above finished floor level. All shower traps shall have 2 in. trap seal and be so constructed that the lead pan may be securely fastened to the trap at the seepage entrance making a watertight joint where pan and trap are connected together. Shower receptacles shall be provided with waste outlet not less than 2 inches and with strainer.
- 6.12.1. Each compartment of a laundry tub shall be provided with a waste outlet not less than 1½ inches and with stoppers. Single laundry tubs shall be provided with 1½ inch P trap of cast brass bodies, 17 gauge brass tubing, I.H. lead I.H. lead drum traps. Where sets of two or three laundry tubs are connected to one trap on a continuous waste I.H. lead drum traps shall be used with trap screw accessible for clearing.
- 6.13.1. Bath tubs shall be provided with a waste outlet not less than 1½ inches. All traps for bath tubs or similar fixtures shall be I.H. lead P traps or I.H. lead drum traps as specified in paragraph 5.2.4.
- 6.14.1. Drinking fountains shall meet the requirements established by A.S.A. Z-4.2-1942. Drinking fountain traps shall be 1½ inch of cast brass, 17 gauge brass tubing or I.H. lead, except when cast integral with vitreous fixture.
- 7.2.2. Harmful Wastes--Acid or alkaline wastes harmful to normal drainage piping materials shall be neutralized or otherwise rendered harmless before discharge to the drainage system. All waste and vent pipes, fittings, traps and connections from such fixtures to the neutralizing device shall be of (a) weight lead or acid resisting cast iron, especially suited for such purposes.
- 8.5.1. Water Service--The water-service pipe from the street main to the water distribution system for the building shall be of sufficient size to furnish an adequate flow of water to meet the requirements of the building at peak demand, and in no case shall be less than ¾ inches nominal diameter.

All service pipe 2 in. or less in diameter shall be lead and all larger services shall be cast iron. All services shall extend from the main to inside the building. All lead service pipe shall have a gooseneck formed integrally in them at the main. Such pipe shall not be buried in or covered by any ground or substance containing sharp stones, glass, cinders, ashes or any soil that might be injurious to such pipe, unless such pipe is amply protected against injury therefrom.

Caution: If flush valves or other devices requiring high rate of flow of water are used, the water service pipe must be designed to supply this flow.

- 9.1.2. Above Ground Piping Within Building—All soil and waste piping for drainage system within a building shall be of cast iron soil pipe, lead, brass or copper pipe of iron pipe size and thickness, except that in fireproof buildings of more than three stories in height Durham Drainage system may be used. Durham work shall not be mixed with any other class of construction of piping or used in any residential building. Fixture connections such as are specified in Chapters 2, 4, and 6, shall be used.
- 9.1.3. Underground Piping Within Buildings—All drains, when underground, shall be of heavy cast iron soil pipe, D wt. lead pipe and I.H. lead traps and bands.
- 9.1.5. Sewers in Filled Ground—Sewer or drain installed in filled ground shall be of extra heavy cast iron soil pipe supported by approved concrete pads or footings.
- 10.2.5. Extension Through Roof—Extensions of vent pipes through a roof shall be terminated at least 6 inches above it and shall be flashed with sheet lead weighing at least 3 lbs per sq. ft. Sleeve pattern of either one or two piece construction dressed tightly to walls of vent pipe and turned down at least one inch on inside of pipe shall be used. The base shall extend at least six inches in all directions from pipe. In sections of the country subjected to snow accumulation vent extensions shall be high enough to clear any possible accumulation of snow. Where the roof is to be used for any purpose other than weather protection, the extensions shall be run at least 6 feet above the roof. Where vents are extended more than two feet above the roof, hub pattern sheet lead flashings shall be installed.

AMERICAN STANDARD PLUMBING CODE

(Minimum Requirements for Plumbing)

AMERICAN STANDARDS ASSOCIATION

Sponsor Organizations:

The American Public Health Association
The American Society of Mechanical Engineers

Suggested Amendments to
Provide for a Lead and
Cast Iron Soil Pipe
Drainage and Vent System

Section 1 Definitions

1.2 Definitions of terms.

After definition of "Area Drain" insert the following:

Attic. An "attic" is a portion of a building situated partly or wholly in the roof space. An attic which is used only as a portion of a single or two family dwelling shall not be counted as a story, unless there are more than (2) rooms suitable for living purposes on this floor. For the purpose of this paragraph, rooms of one hundred sixty (160) square feet or more will be regarded as two (2) or more rooms, based on each eighty (80) square feet being considered one (1) room. Any attic which is occupied by a separate family shall be counted as a story.

After line "Jack Vent" insert the following:

Basement. A "basement" is that portion of a building partly below grade but so located that the vertical distance from the grade to the floor is greater than the vertical distance from the grade to the ceiling. Provided, however, that if the vertical distance from the grade to the ceiling is five (5) feet or more, such cellar shall be counted as a story. If any portion of a building is in that part the equivalent of a basement or cellar, the provision of this code relative to basements and cellars shall apply to such portion of the building.

After definition "Building Trap" insert the following:

Cellar. A "cellar" is that portion of a building partly below grade but so located that the vertical distance from the grade to the floor is greater than the vertical distance from the grade to the ceiling. Provided, however, that if the vertical distance from the grade to the ceiling is five (5) feet or more, such cellar shall be counted as a story. If any portion of a building is in that part the equivalent of a basement or cellar, the provisions of this code relative to basements and cellars shall apply to such portion of the building.

After definition "Dual Vent" insert the following:

Durham System. A term used to describe soil or waste systems where all piping is of threaded pipe, tubing, or other such rigid construction using recessed drainage fittings to correspond to the piping.

"Journeyman Plumber" change to read "Journeyman Plumber see Plumber Journeyman."

Delete definitions "Plumber" and "Plumber Journeyman" and insert the three following definitions:

Plumber, Apprentice. An apprentice plumber is a person who is registered as such, and who is undergoing an apprenticeship or course of training (not exceeding five years) for the purpose

learning the trade of plumbing. An apprentice as herein defined, shall perform no work regulated by this code or amendments thereto, except as an assistant, under the direct supervision of, and in the immediate presence of a licensed master plumber or a certified journeyman plumber.

Plumber, Journeyman. A journeyman Plumber is a person who supervises, installs, alters and/or repairs plumbing and drainage systems or part thereof, as an employee, but does not furnish material or supplies, and who is registered and the legal possessor of a Plumber's Certificate of Competency, as provided for in this code.

Plumber, Master. A Master Plumber is hereby defined to mean a person duly certified as such and authorized to engage in the installation of plumbing, through contract, or otherwise, and also in planning engineering, superintending, installation, maintenance, and repair with respect to plumbing in all its branches, and as such master plumber is authorized to employ journeyman plumbers and plumbers' apprentices and other persons necessary for the proper installation of plumbing work in accordance with the plumbing regulations and provisions of this code.

Change definition "Plumbing" to read as follows:

Plumbing. "Plumbing means the science of creating and maintaining sanitary conditions in buildings, camps, or other mode of dwelling, where people live, work, play, assemble or travel, by providing means for a supply of safe, pure, wholesome and potable water, with ample volume and suitable temperatures for drinking, cooking, washing, bathing, swimming, cleansing, fire-fighting and mechanical and manufacturing purposes; and to cleanse all waste receptacles and similar means for reception, and the quick and thorough removal from the premises of all fluid and partial fluid wastes and other impurities incidental to human life and occupation; and is accomplished by means of all labor and material used in and for the introduction and maintenance or the extension of a supply of water through a pipe or pipes of any building, lot, premises, establishment, camp or vehicle of travel; and the installation, connection or repair of any system of drainage whereby foul matters, waste, rain or surplus water, gas, odors, fluid or vapor is discharged through a pipe or pipes from any building, lot, premises, establishment, camp or vehicle of travel, into any main, public or private, sewer, drain, septic tank, disposal field, pit, box, filter bed, leaching well, or other receptacle, or into any natural or artificial body of water, water course, upon private or public property; The installation of any fixture or appurtenances thereof used for cooking, washing, drinking, bathing, swimming, cleansing, fire-fighting, mechanical or manufacturing purposes; the ventilation of any building sewer, fixture or other appurtenances thereof used for cooking, washing, drinking, bathing, swimming, cleansing, fire-fighting, mechanical or manufacturing purposes; the ventilation of any building sewer, fixture or other appurtenance connected therewith; and the connection of any of these pipes, fixtures and appurtenances to any public utility, public or private, within, beneath, or above, such system or systems."

After definition "Potable Water" insert the following 3 definitions:
Prefabricated Buildings. A prefabricated building is one having walls, partitions, floors, ceilings, and/or roof composed of sections or panels varying in size which have been fabricated in a factory prior to erection of the building foundation. This is in contrast to the conventional built building which is constructed on the site.

Private Use. "Private use" shall mean a toilet room or bathroom which is specifically intended for the use of an individual or family and such visitors as they may permit to use such toilet or bathroom.

Public Use. The term "public use" as applied to toilet rooms and bathrooms shall mean such rooms used by employees, occupants, visitors, or patrons, in or about any premises; furthermore, the term "public use" shall apply to toilet rooms or bathrooms which may be kept locked but several occupants or employees on the premises possess keys for and have access to the toilet or bathrooms.

After definition "Roof Drain" insert the following:

Roughing In. "Roughing in" shall be the installation of all parts of plumbing system which can be completed prior to the installation of the fixtures. This includes drainage, water supply, vent piping, and the necessary fixture backing.

After line "Vent Pipe" insert the following:

Vent Pipe Flashing. A vent pipe flashing is watertight flashing located at the point where the pipe passes through the roof, deck or wall.

Section 3

Materials - Quality and Weight.

3.1.2 "Specifications for Materials."

Change to read as follows:

3.1.2. Specifications for Materials. Standard specifications for materials for plumbing installations are listed in table 3.4. Products conforming to any of the specifications listed for a given material shall be considered acceptable only for the different parts of the plumbing installation for which they are permitted.

3.2.1. "Sheet Lead."

Change to read as follows:

3.2.1. Sheet Lead. All sheet lead shall comply with the requirements of the Federal Specifications for Sheet Lead QQ-L-201 and shall weigh not less than 4 lbs. per sq. ft. for shower pans and not less than 3 lbs. per sq. ft. for vent pipe flashings.

Section 4

Joints and Connections

4.2.) "Wipod Joints."

Add the following sentence to this paragraph:

All wall or floor flange wipod joints shall be made by using a lead ring or flange placed behind the joint at wall or floor.

4.3.9 "Water Closet, Pedestal Urinal, and Trap Standard Service Sink."

Change to read as follows:

4.3.9 Water Closet, Pedestal Urinal, and Trap Standard Service Sink—The connection between drainage pipes and water closets, floor outlet service sinks, pedestal urinals, and bathroom trap standard fixtures, shall be made by means of brass or hard lead floor flanges soldered or lead welded to the lead bend or at least six inches of lead pipe. The connection shall be bolted to the fixture by means of red brass bolts with an approved gasket, washer, setting compound or white lead putty between the fixture and the connection. No commercial putty shall be used. The floor flange shall be set on an approved firm base.

The lead connection shall be an independent connection for fixture only. All other waste pipes shall discharge into a separate fitting.

4.3.9.A Other Fixture Drain Connections—Lead pipes shall be used for all plumbing fixtures as drain and vent connection, and extend through the finished floor or wall. Fixture trap connections shall be solidly made to the drain pipe by flange wipod joints. All lead branches and connections shall have a length of at least six inches in order to relieve the fixture connection from vibration and shall be of at least the weight known as "B" or "XL" lead pipe.

Section 5

Traps, Interceptors, and Clean Outs

After paragraph 5.3.4 "Building (House) Traps" insert the following paragraph:

5.3.5 Drain Traps—Lead drain traps shall have at least 1/8 inch wall thickness and be 3 inch or 4 inch in diameter. The outlet to be connected into trap at lowest point to form a 2 inch seal and brought upward at an angle of at least forty-five degrees, to proper height and continue with uniform fall to the fixture drain. The trap screw to be one size less than trap diameter.

5.5.2 "Distance Apart."

Change to read as follows:

5.5.2. Distance of Cleanouts—Cleanouts in horizontal drainage lines of 4 inches nominal diameter or less shall not be more than 50 feet apart and not more than 100 feet apart for larger size pipes. Cleanouts shall be installed at each change of direction of the building drain greater than 45 degree angle.

On all sink wastes a flush cleanout shall be installed in waste pipe for the purpose of making pipe in either direction. Cleanouts in basement or cellar shall be placed at least three feet above the floor.

Section 6

Hangers and Supports.

6.1.1 "Security."

Change to read as follows:

6.1.2 Vertical Pipes Support. Vertical piping shall be secured at sufficiently close intervals to keep the pipe in alignment and carry the weight of the pipe and contents but in no case less than at every other story height. Lead pipes shall be supported with racks, flanges or otherwise at intervals not to exceed four feet.

6.2.1 "Horizontal Piping"

Change to read as follows:

6.2.2 Horizontal Pipes Support. Horizontal piping shall be supported at points sufficiently close to keep it in alignment and prevent sagging but in no case more than 5'0" intervals for cast iron soil pipe and not exceeding ten feet for other piping. Pipes in the ground shall be laid on a firm bed for their entire length. All lead pipes shall be supported by strips or otherwise for their entire length.

Section 7

Plumbing Fixtures

Add the following sentence to paragraph 7.10.1:

All lavatory traps shall be at least 1½ inch, P traps, of cast brass bodies or 17 gauge brass tubing or L.H. lead.

7.11 "Shower Receptacles."

Change to Shower Compartments.

7.11.1 Change to read as follows:

7.11.1 All shower compartments, except those built directly on the earth or those having cast iron enameled receptors, shall have a lead shower pan well protected with asphaltum paint and tar paper, and said pan shall turn up on all sides at least two inches above finished floor level. All shower traps shall have 2 in. trap seal and be so constructed that the lead pan may be securely fastened to the trap at the receipt entrance making a watertight joint where pan and trap are connected together. Shower receptacles shall be provided with waste outlet not less than 2 inches and with strainer.

Add the following sentence to paragraph 7.12.1:

All kitchen sink traps shall be at least 1½ inch, P traps, of cast brass bodies or 17 gauge brass tubing or L.H. lead.

Change paragraph 7.13.1 to read as follows:

- 7.13.1 Waste Outlet. Each compartment of a laundry tub shall be provided with a waste outlet not less than $1\frac{1}{2}$ inches and with stoppers. Single laundry tubs shall be provided with $1\frac{1}{2}$ inch P traps of cast brass bodies, 17 gauge brass tubing, I.H. lead or I.H. lead drain traps. Where sets of two or three laundry tubs are connected to one trap on a continuous waste I.H. lead drain traps shall be used with trap screw accessible for cleaning.

Add the following sentence to paragraph 7.14.1:

All traps for bath tubs or similar fixtures shall be I.H. lead P traps or I.H. lead drain traps as specified in paragraph 5.2.4.

Add the following sentence to paragraph 7.15.1.

Drinking fountain traps shall be $1\frac{1}{2}$ inch of cast brass, 17 gauge brass tubing or I.H. lead, except when cast integral with vitreous fixture.

Section 8

Water Supply and Distribution

8.4.1 "Water Service."

Change to read as follows:

- 8.4.1 Water Service.—The water-service pipe from the street main to the water distribution system for the building shall be of sufficient size to furnish an adequate flow of water to meet the requirements of the building at peak demand, and in no case shall be less than $3/4$ inches nominal diameter.

All service pipe 2 in. or less in diameter shall be lead and all larger services shall be cast iron. All services shall extend from the main to inside the building. All lead service pipe shall have a gooseneck formed integrally in them at the main. Such pipe shall not be buried in or covered by any ground or substance containing sharp stones, glass, cinders, ashes or any soil that might be injurious to such pipe, unless such pipe is amply protected against injury therefrom.

Cautions: If flush valves or other devices requiring high rate of flow of water are used, the water service pipe must be designed to supply this flow.

Note. Very valuable data concerning "Water Supply and Distribution" can be obtained from Chapter 83 "Water Supply and Distribution Systems", Municipal Code of Chicago Illinois relating to Plumbing and Chicago Plumbing Testing Laboratory Report compiled September 1, 1948 by Department of Public Works, Bureau of Engineering, Water Pipe Extension Division, 100 City Hall Building.

Section 9

Soil and Waste Pipe

9.1.1 "Piping Within Building".

Change to read as follows:

9.1.1 Above Ground Piping Within Buildings—All soil and waste piping for drainage systems within a building shall be of cast iron soil pipe, lead, brass or copper pipe of iron pipe size and thickness, except that in fireproof buildings of more than three stories in height Durban Drainage system may be used. Durban work shall not be mixed with any other class of construction or piping or used in any residential building. Fixture connections such as are specified in Chapters 2, 4, and 6, shall be used.

9.1.2 "Underground Building Drain"

Change to read as follows:

9.1.2 Underground Piping Within Buildings—All drains, when underground, shall be of extra-heavy cast iron soil pipe, D wt. lead pipe and I.H. lead traps and bonds to comply with the specifications as given in Section 3, Table 3.4.

9.1.3 "Building Sewer."

Change to read as follows:

9.1.3 Building Sewer. The building sewer shall be of cast iron soil pipe or vitrified clay to comply with the specifications as given in Section 3, table 3.4.

After paragraph 9.1.3 add the following two paragraphs:

9.1.4 Sewers in Filled Ground—Sewer or drain installed in filled ground shall be of extra heavy cast iron soil pipe supported by approved concrete pads or footings.

9.1.5 Harmful Wastes—Acid or alkaline wastes harmful to normal drainage piping materials shall be neutralized or otherwise rendered harmless before discharge to the drainage system. All waste and vent pipes, fittings, traps and connections from such fixtures to the neutralizing device shall be of (x) weight lead or acid resisting cast iron, especially suited for such purposes.

Section 10

Storm Drains

10.2.1 "Inside Leaders."

Delete the words "cement lined ferrous pipe."

10.2.3 "Underground Drains."

Change to read as follows:

10.2.3 Underground Drains. Building storm drains when underground shall be of cast iron soil pipe to comply with specifications as given in Table 3.4.

10.2.4 Building Storm Sewer,

Change to read as follows:

- 10.216 Building Storm Sewer. The building storm sewer shall be of cast iron soil pipe, vitrified clay or heavy concrete pipe to comply with the specifications as given in Table 3.4.

Section II

Vents and Venting

11.1 Material

Change paragraph 11.1.1 to read as follows:

- 11.1.1 Vent pipes shall be of cast iron, lead, galvanized wrought iron, galvanized steel or brass pipe to comply with the specifications as given in table 3.4.

11.2.5 "Extensions Through Roof."

Change to read as follows:

- 11.2.5 Extension Through Roof.—Extensions of vent pipes through a roof shall be terminated at least 6 inches above it and shall be flashed with sheet lead weighing at least 3 lbs. per sq. ft. sleeve pattern of either one or two piece construction dressed tightly to walls of vent pipe and turned down at least one inch on inside of pipe shall be used. The base shall extend at least six inches in all directions from pipe. In sections of the country subjected to snow accumulation vent extensions shall be high enough to clear any possible accumulation of snow. Where the roof is to be used for any purpose other than weather protection, the extensions shall be run at least 6 feet above the roof. Where vents are extended more than two feet above the roof, hub pattern sheet lead flashings shall be installed.

11.2.5 "Distance of Trap From Vent."

Note. The developed maximum length in the fixture drain from the trap weir to the vent fitting shown in the table of this paragraph was determined from tests made at U. S. Bureau of Standards Hydraulic Laboratory in Washington D.C. However if these distances are greater than the established practice they can be reduced accordingly.

11.4.1 Jet Vent.

Unless this is an established practice in the locality omit paragraph.

11.5 Circuit and Loop Vents.

Unless this is an established practice in the locality paragraph 11.5.1 should be deleted and individual venting required. This also applies to paragraph 11.5.2 and paragraph 11.5.3

Section 13

Inspection and Tests

This section will need amending to correspond to the established practice in the locality .

Appendix A

The requirements of this part of the code will need certain amendments to conform with established laws and practices in the locality.