VILLAGE OF GURNEE

ORDINANCE NO. 2000-8

AN ORDINANCE AUTHORIZING THE VILLAGE PRESIDENT AND VILLAGE CLERK TO EXECUTE AN ORDINANCE ADOPTING THE STATE OF ILLINOIS PLUMBING CODE, WITH MODIFICATIONS AND PROVIDING PENALTIES FOR VIOLATIONS

Adopted by the President and Board of Trustees of the Village of Gurnee, Lake County, Illinois, this 24th day of January, 2000

Published in pamphlet form by the authority of the President and Board of Trustees of the Village of Gurnee, Lake County, Illinois this 24th day of January, 2000.

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WHEREAS, at least three (3) copies of the State of Illinois Plumbing Code, December 1998 Edition, published in book form by the State of Illinois, have been on file in the office of the Village Clerk of the Village of Gurnee, Illinois, for public use, inspection, and examination continuously for more than thirty (30) days prior to the date hereof, and copies thereof will hereafter be kept on file in said office for such public use, inspection, and examination; and whereas prior to the aforesaid thirty (30) day prior public notice was given in the Gurnee Review, a weekly newspaper published in this municipality and having a general circulation therein, that at least three (3) copies of said State of Illinois Plumbing Code would be so on file during said thirty (30) day period, as well as subsequent thereto, and that the Corporate Authorities of the municipality would give consideration to and might adopt all or any part or parts of said State of Illinois Plumbing Code, by reference thereto without further printing, at any time after the lapse of thirty (30) days or more subsequent to the aforesaid publication of said public notice, all as shown by the certificate of publication on file in the office of said Village Clerk:

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF GURNEE, ILLINOIS, IN THE EXERCISE OF ITS HOME RULE POWERS, AS FOLLOWS:

SECTION 1: FINDINGS OF FACT. The Corporate Authorities of the Village of Gurnee hereby find as facts all of the matter herein above recited in the “whereas” clause hereof.

SECTION 2: ADOPTION OF THE STATE OF ILLINOIS PLUMBING CODE, DECEMBER 1998 EDITION. The regulations, conditions, definitions, and stipulations concerning the construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of plumbing systems in the Village of Gurnee; providing for the issuance of permits and collection of fees therefore; and that Ordinance No. 72-24 of the Village of Gurnee and all other Ordinances and parts of the Ordinances in conflict therewith are hereby repealed.

SECTION 3: MODIFICATIONS, SUPPLEMENTS, AND EXCEPTIONS: That the following Sections of the State of Illinois Plumbing Code, December 1998 Edition, are revised as follows:

SECTION **REVISION**

"Section 890.110 General Regulations

890.110(b) At the end of this sub-section, add the following:

3) Permits. Before any plumbing installation commences, the Plumbing Contractor shall make a permit application and proceed with the work after said permit is issued.

4) Permits are required and shall be obtained for any of the following: all new installations; remodeling; fixture relocation; and alterations to any part of the plumbing system (included are: water heating and air conditioning equipment; flood control and pumping systems; irrigation systems; all backflow preventers; swimming pool/spa; fountains and decorative pool installations; and sewer and water services - new or replacement).

Section 890.120 Definitions

890.120 For this section, add and replace as follows:

ADD: "Administrative Authority": The Administrative Authority is the individual official, board, department, or agency established and authorized by the Village of Gurnee, or other political subdivision created by law to administer and enforce the provisions of the plumbing code as adopted or amended.

ADD: "Acid Waste": Liquid waste containing acids that must be neutralized before further transportation or treatment can take place.

ADD: "Adjacent": Same as abutting.

ADD: "Air Chamber": A pipe/cap assembly to absorb hydraulic shock.

REPLACE WITH: "Air Gap": An air gap shall be provided on waste piping connections requiring backflow protection. See Indirect Waste.

ADD: "Anchors": A reliable, rigid support for securing pipe, fixtures, and equipment to walls, ceilings, floors, or any other structural members. See Supports.

ADD: "Angle of Repose": The greatest angle above the horizontal plane at which material will lie without sliding.

ADD: "Anti-Scald Shower Valves":Shall be designed to prevent hot water entering cold water lines. See Press Balancing Valves, Tempering Valves.

Anti-Siphon Ball Cock TO THE END OF THE DEFINITION ADD THE FOLLOWING: Anti-Siphon Ball Cock or other reservoirs.

ADD: "Apprentice Plumber": A person properly registered by the State, engaged in new plumbing installations, repairs, or remodeling. See Illinois Plumbing License Law.

ADD: "Appurtenance": A device which is an adjunct to the pipes, fixtures, and appliances of a plumbing system, which adds no additional requirement or load to the system and which contributes to the maintenance, servicing, or safety of the system, such as a backwater valve.

SECTION REVISION

(Section 890.120 Definitions Continued:)

REPLACE WITH: "Back Pressure": Back pressure is an opposing pressure which causes or tends to cause liquid or air to flow in the direction opposite of the normal direction of flow in a closed conduit.

ADD: "Backflow Preventer with Intermediate Atmospheric Vent (IAV)": A small back pressure and back-siphonage backflow preventer designed to operate under continuous pressure, including back pressure.

ADD: "Baffle'': A device used to deflect or regulate the flow of air, air-gas mixtures, flue gases or liquids, and grease trap retention.

Ball Cock TO THE END OF THE DEFINITION ADD THE FOLLOWING: See anti-siphon ball cock.

REPLACE WITH: "Battery of Fixtures": A battery of fixtures is any group of two or more similar adjacent fixtures.

ADD: "Booster Water Heaters": A heater that increases the temperature of hot water (i.e., for final rinse supply of commercial dish washers).

ADD: "Bronze Fittings & Valves": Used in potable and DWV systems, shall be of lead-free construction.

ADD: 'British Thermal Unit (BTU):"The quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.

ADD: "Building": A building is a structure built, erected, and framed in component structural parts designed for the housing, work, recreation, shelter, enclosure, or support of persons, animals, or property of any kind.

ADD: "Building Storm Sewer": A sewer which is used for conveying rain water, surface water, ground water, subsurface water, site drainage, condensate, cooling water, or other similar liquid waste (excluding sewage) from the building storm drain to the storm sewer or other approved point of discharge.

REPLACE WITH: "Building Trap": **Not permitted for use in Gurnee, Illinois.**

ADD: "By Pass": A piping arrangement around an appurtenance, (i.e. water meter, P.R.V., etc.).

ADD: "Certified Tester": A person qualified to make inspections, test, and repair cross connection control devices; and who has his competency to the applicable regulatory agency(s). This is required by the Illinois Environmental Protection Agency within 35 Ill. Adm. Code 608.

ADD: "Check Valve": An appurtenance to prevent backflow in piping systems, vertically or horizontal.

ADD: "Chemical Wastes": Chemical wastes are free from sanitary waste. They can be derived from industrial processes, laboratories, schools, photo labs, etc. Disposal of said wastes to be approved by the Administrative Authority.

SECTION REVISION

(Section 890.120 Definitions Continued:)

ADD: "Chlorination": 1. To treat, or cause to combine with chlorine or chlorine compounds. 2. To apply chlorine (to water or sewage) for purposes of sterilization, oxidation of organic matter, or retardation of putrefaction.

REPLACE WITH: "Circuit Vent": See Section 890.1520.

ADD: "Circulating Pipe": A pipe that is used to maintain a desired temperature at its point of use on heated water systems, to prevent stagnation of areas in piping dead ended, (i.e., domestic supplied fire suppression systems).

ADD: "Clean Outs": An accessible opening placed in a drainage line to provide a convenient place for inserting cleaning equipment to remove blockages.

Closed Water System TO THE END OF THE DEFINITION ADD THE FOLLOWING: See Thermal Expansion.

ADD: "Cock": A valve used as a means of controlling the rate of flow passing through it.

ADD: "Color Coding": Non potable pressure piping shall be painted/identified as such.

REPLACE WITH: "Combination Waste and Vent System": A combination waste and vent system is a system of waste piping embodying the horizontal wet venting of one or more floor drains by means of a common waste and vent pipe adequately sized to provide free movement of air above the flow line of the drain. **Not permitted, see Section 890.1590.**

ADD: "Combustion": The act or process of burning.

ADD: "Common Waste": A common waste is a drain from a fixture containing multiple compartments connected to a single trap.

ADD: "Compression Fittings": Shall be installed in only readily accessible areas. Shall not be used for volatile gases.

ADD: "Conductors": A pipe inside the building which conveys storm water or liquids from the roof to a storm drain or sewer. See "Downspout" or "Leader."

ADD: "Contaminate": To render water unfit for use by the introduction of an undesirable substance.

ADD: "Contractor": A person or firm licensed, bonded, and insured, engaged in plumbing work. See "Plumbing Contractor."

ADD: "Corporation Cock": A valve installed in a water main to which a building supply (service) pipe is connected.

ADD: "Corrosion":The gradual deterioration or destruction of a substance or material by chemical or electro-chemical action.

SECTION REVISION

(Section 890.120 Definitions Continued:)

ADD: "Corrosion Control": 1. In water correction, the prevention of the discharge of the metallic ions of a conduit from going into solution by increasing the pH-value of the water, removing the free oxygen from the water, and controlling the carbonate balance. 2. The sequestration of metallic ions and the formation of protective films on metal surfaces by chemical treatment.

ADD: "Crown Weir": The highest part of the inside portion of the bottom surface at the crown of a trap.

ADD: "Curb Box": A device, usually consisting of a long piece of pipe or tube-like casing placed over a curb cock, through which a key is inserted to permit the operation of the curb cock.

ADD: "Curb Cock": A valve placed in water service pipe, usually at a point near the street curb.

ADD: "DCV": Double check valve.

ADD: "Demineralization": The removal of water of those dissolved mineral constituents which cause it to be unsatisfactory for domestic or industrial use.

ADD: "Disinfection": A process of destroying disease germs or other harmful microorganisms (but not ordinary bacteria spores) by means of an agent that frees from infection, usually a chemical agent.

ADD: "Downspout": Downspout is the vertical portion of a rain water pipe. A pipe leading downward; a pipe to carry off rain water from a roof. See "Leader;" "Conductors."

ADD: "Drain Tile":Subsurface drainage of ground waters surrounding areas of building requiring protection. The drainage may be elevated by a sump pump, or gravity to suitable disposal as per Village of Gurnee Engineering Department requirements.

ADD: "Dry Vent": A vent that serves portions of a plumbing system that does not carry water or waterborne wastes.

ADD: "Dual Vent":See "Common Vent."

ADD: "Durham System": Durham system is a soil or waste system where all piping is of threaded pipe, using recessed drainage fittings.

ADD: "Ejector Pits & Pumps": A pit and pump used to elevate sanitary wastes.

ADD: "EPA": Environmental Protection Agency.

ADD: "Existing Work": Existing work is a plumbing system or any part thereof which has been installed prior to the effective date of this code. For local government units that have adopted a local plumbing ordinance and plumbing code, the definition of "existing work" would be existing work in a plumbing system or any part thereof which has been installed under authorization of a previously issued permit. Violations in "existing work" shall be corrected to the present code standards.

ADD: "Expansion Joints": An appurtenance compensating for expansion and contraction in potable and drainage piping systems.

SECTION REVISION

(Section 890.120 Definitions Continued:)

Extracted Mechanical Joint TO THE END OF THE DEFINITION ADD THE FOLLOWING: See Section 890.370(c).

ADD: "Fire Hydrants": A fire hose connection unit provided for Fire Department use only.

ADD: "Fire Suppression Systems": Industrial, commercial, residential requirements, see Section 890.1130(d).

ADD: "Flashing": An appurtenance used to provide a waterproofing seal between a pipe and the structure. (i.e., a roof vent, V.T.R.). See "Safing," "Safe Pans."

Float Valve TO THE END OF THE DEFINITION ADD THE FOLLOWING: See "Anti-Siphon Ballcock," "Ballcock."

Flooded TO THE END OF THE DEFINITION ADD THE FOLLOWING: To fill an empty piping system.

ADD: "Free Circulation of Air": A plumbing system so designed and installed to keep the air within the system in free circulation and movement and to prevent, with a margin of safety, unequal air pressure of such forces which might blow, siphon, or affect trap seals, or retard the discharge from plumbing fixtures or permit sewer air to escape into a building.

ADD: "Frostproof/Pollution Proof Yard Hydrants": A hydrant with an integral chamber to contain water, as opposed to existing types that can allow ground water contamination of potable water supply.

ADD: "Frostproof Sillcock": A hose bibb with the control mechanism within the heated portion of the structure.

ADD: "Fuel Gas Piping": A piping system to deliver gas from its service to the building, to equipment, and appliances.

ADD: "GPM": Gallons per minute.

ADD: "Grease Trap": See "Grease Interceptor."

ADD: "Ground Water": Water that is standing in, or flowing through the ground; seepage water.

Group of Fixtures TO THE END OF THE DEFINITION ADD THE FOLLOWING: See "Battery of Fixtures."

ADD: "Hand Held Hose Units": An accessory on a hose utilized for showering, massage, bathing, or shampoo bowls or other purposes. Said units shall be back-flow/siphonage protected.

ADD: "Hard Water": A condition caused by elements dissolved in solution. Calcium and magnesium are primarily responsible for water hardness.

ADD: "Head": The difference in elevation between two points in a body of fluid with the resulting pressure of the fluid at the lower point expressible as the height or pressure of the fluid.

ADD: "Holding Tank": A vessel to retain liquids and/or wastes.

ADD: “Hydrostatic Testing”: A pressure test using a pump to increase pressure beyond normal operating line pressures.

ADD: "Individual Sewage Disposal System (Private Sewage Disposal System)”: This means any sewage handling or treatment facility receiving domestic sewage from less than fifteen (15) people or population equivalent and having a ground surface discharge or any sewage handling or treatment facility receiving domestic sewage and having no ground surface discharge. Refer to Private Sewage Disposal Licensing (225 ILCS 225/1 et. seq. {1996}) and Code (77 Ill. Adm. Code 905), Illinois Department of Public Health.

ADD: "Industrial Wastes”: Industrial wastes are liquid wastes resulting from the processes employed in industrial establishments and are free of human and animal waste.

ADD: "Instantaneous Water Heaters”: A high output unit utilized in areas of high demand.

ADD: "Irrigation Systems:”:A piping system to supply water to lawns and plant life, shrubbery, etc.

ADD: "Island Fixture Vent”: A vent in which the vent pipe rises as near as possible to or above the highest water level in the fixture vented and then turns down before connecting to the stack or main vent. See Sec. 890.1600.

ADD: “Joint”: A joint is the juncture of two pipes, a pipe and a fitting, or two fittings.

ADD: “Journeyman Plumber”: A person engaged in the plumbing trade having fulfilled the licensing requirements of the State of Illinois License Law.

ADD: “Laboratory Faucets”: Specialized valves that hoses may be attached to.

ADD: "Leader”: See "Downspout;" "Conductor."

ADD: "May”: The word "may" is a permissive term.

ADD: “Methane Gas”: A colorless, odorless, flammable gaseous hydrocarbon (CH_4) that is a product of decomposition of organic matter. Found in sanitary systems.

ADD: “Mound Sewerage Treatment System”: A private sewerage treatment system which uses evaporation as its principal dispersal of the effluent, as per Lake County Health Department requirements.

ADD: “Negative Pressure”: Pressure less than atmospheric pressure.

ADD: “Neutralizing Basin”:A pit or chamber designed to retain wastes for dilution purposes.

ADD: “Notching”: The act of sawing or drilling a notch in framing members to install piping.

ADD: “Notch Plates (trade name)”: A steel plate designed to be secured to framing members for the protection of water/waste/vent piping.

SECTION **REVISION**

(Section 890.120 Definitions Continued:)

ADD: "Nuisance": The word "nuisance" embraces public nuisance as known at common law or in equity jurisprudence; whatever is dangerous to human life or detrimental to health; whatever building, structure, or premises is not sufficiently ventilated, sewered, drained, cleaned, or lighted, in reference to its intended or actual use; and whatever renders the air or human food or drink or water supply unwholesome, are also severally, in contemplation of this Code, nuisances.

ADD: "OS & Y": Outside screw and yoke.

ADD: "PPM": Parts per million--a ratio, usually used to describe impurities within water, air, etc.

ADD: "Pathogenic": Capable of causing disease, containing bacteria or viruses.

ADD: "Pipefitting:":The installation of piping other than that which is defined as plumbing.

ADD: "Plumber": See "Journeyman Plumber" or "Apprentice Plumber."

ADD: "Plumbing": Plumbing is the practice, materials, and fixtures used in the installation, maintenance, extension, and alteration of all piping, fixtures, appliances, and appurtenances in connection with any of the following: sanitary drainage or storm drainage facilities; the venting system and the public or private water-supply systems within or adjacent to any building, structure, or conveyance; also the practice and materials used in the installation, maintenance, extend point of public disposal or other acceptable terminal. Plumbing does not mean or include, and nothing in this Code shall be held or construed to have any application to the trade of drilling water wells, which constitute the sources of private water supplies, or the business or manufacturing or selling plumbing fixtures, appliances, equipment or hardware; nor does it mean or include minor repairs which do not require changes in the piping to or from plumbing fixtures or involve the removal, replacement, installation, or reinstallation of any pipe or plumbing fixtures, where used for personal or domestic use.

ADD: "Plumbing Contractor": A person duly licensed under the Illinois Plumbing License Law or a firm, company, or corporation, an officer of which is licensed under the Illinois Plumbing License Law and has on file in the office of the Director of Building and Zoning all bonds and insurance certificates required by the Village of Gurnee.

ADD: "Plumbing Appliance": A unit whose operation and/or control may be dependent upon one or more energized components, such as motors, controls, heating elements, or pressure or temperature sensing elements. Such fixtures may operate automatically through one or more of the following actions: a time cycle, a temperature range, pressure range, a measured volume or weight, or the fixture may be manually adjusted or controlled by the user or operator. An adjunct, usually mechanical, and similar to a plumbing fixture except that it is designed for a specific purpose and not generally indispensable in the operation of the plumbing system.

ADD: "Plumbing System": The plumbing system includes the water supply and distribution pipes; plumbing fixtures and traps; soil, waste and vent pipes; building drains and building sewers including their respective connections, devices, and appurtenances within the property lines of the premises; and water-treating or water-using equipment, and installed for personal or domestic use and purposes.

SECTION REVISION

(Section 890.120 Definitions Continued:)

ADD: "Point of Use Water Heating Devices": An appurtenance to heat potable water at or near the fixture.

ADD: "Pollution": The result of making impure or unclean.

ADD: "Pool (Swimming)": According to Section 7-27 of the Swimming Pool and Bathing Beach Act, (210 ILCS 125/1 et. seq. {1996}), a swimming pool means any artificial basin of water which has been modified, improved, constructed, or installed for the purpose of public swimming, and includes pools for community use, pools at apartments having five (5) or more living units, clubs, camps, schools, institutions, park and recreational areas, motels, hotels, and other commercial establishments. The Swimming Pool and Bathing Beach Act does not apply to pools at private residences intended only for use of the owner and guests. The physical connection between the potable water supply line and the swimming pool shall be made by an Illinois licensed plumber or an Illinois licensed apprentice plumber under the supervision of a licensed plumber. Water closets, showers, lavatories, and drinking fountains installed in a swimming pool complex must be installed by a licensed plumber or a licensed apprentice plumber under the supervision of a licensed plumber.

ADD: "Pressure Balancing Bathing Valves": A unit designed to equalize hot and cold water pressures, and delivering constant temperature water.

ADD: "Pressure Testing": A test to bring a piping system above atmospheric pressure. See "Static," "Hydrostatic," and "Smoke Testing."

ADD: "Private Sewage Treatment System": A private sewage treatment system is to be approved and installed as per Lake County Health Department standards.

ADD: "Process Piping": Piping other than potable water supplies, sanitary, storm, and other clear water wastes, and venting systems. Found generally in industrial installations.

ADD: "Proper" or "Properly": Means to be accurate or meeting the standard of competence for the given situation and properties of the materials involved based upon the standards and manufacturer's recommendations.

ADD: "Purification": The removal, by natural or artificial methods, of objectionable matter from water.

ADD: "Putrefaction": The process of decay during which organic matter is decomposed under anaerobic conditions.

ADD: "RPZ": Reduced pressure zone backflow preventer.

ADD: "Radon Gas Control": Piping and systems connected to the building plumbing system shall be installed by a State of Illinois licensed plumber, or apprentice under a licensed plumber's supervision. Example - venting system from a sump pit.

ADD: "Retrofit": To replace an existing appurtenance fixture with similar unit.

ADD: "Roof Drain": A drain installed to receive water that has been collected on the surface of a roof and discharged into a leader or conductor.

ADD: "Saddles": A clamp device secured over a hole drilled into the pipe. See Section 890.370(d).

SECTION REVISION

(Section 890.120 Definitions Continued:)

ADD: "Safe Pan": A safe pan is a pan or other collector placed beneath a pipe or fixture to prevent leakage from escaping onto the floor, ceiling, or walls. Safe pans are especially important in food preparation and food storage areas that have overhead exposed drainage piping.

ADD: "Safe Waste": See "Indirect Waste."

ADD: "Sampling Manhole": See North Shore Sanitary District requirements. It is installed at the connection of building sewer to building drain for sampling of effluents as required.

ADD: "Sanitary Sewer": A sewer into which building sewers are connected which carries sewage excluding storm, surface, and ground water.

ADD: "Sanitary Waste": The liquids and suspended materials coming from plumbing fixtures.

ADD: "Semi-Private Water System": Means a water supply which is not a public water system, yet which serves a segment of the public other than an owner-occupied single family dwelling. Illinois Groundwater Protection Act (415 ILCS 55/9 {1996}).

ADD: "Service-Connection": The point of delivery of water to a premises.

ADD: "Service Pipe": The water-supply pipe from the water main or source of supply to the building served.

ADD: "Sewer Gas": The mixture of vapors, odors, and gases found in a sewer.

ADD: "Shall": The word "shall" is a mandatory term.

ADD: "Slip Joint": A slip joint is a connection in which one pipe slides into another. The joint is made tight with an approved gasket and threaded retainer.

ADD: "Smoke Test": A test using pressurized smoke for leak detection.

ADD: "Soft Water": Water that lathers easily and that does not contain excessive amounts of calcium or magnesium.

Soil Pipe TO THE END OF THE DEFINITION ADD THE FOLLOWING: A term used to describe cast iron bell and spigot pipe.

ADD: "Solar Heating": For spatial and water heating/tempering purposes. A collection/storage system to utilize solar rays for the purpose of heating liquids.

ADD: "Spatial Heating": The use of domestic water heating devices for space heating, subject to approval of the Administrative Authority.

ADD: "Spring Line": Considered to be the lower 1/3 of a sewer or drain line.

ADD: "Static Pressure": The pressure within a system under no flow conditions--at rest.

SECTION **REVISION**

(Section 890.120 Definitions Continued:)

ADD: "Storm Water Waste": A clear water waste, free of human waste or other contaminated wastes.

ADD: "Sub-Soil Drainage": Sub-soil drainage is liquid waste such as run-off water, seepage water, or clear water waste, free of fecal matter and grey water.

ADD: "Temporary Water Meters": Temporary water meters shall be utilized as per Village of Gurnee Water Department requirements.

ADD: "Tempering Valve": A temperature reducing valve adjustable to control needed temperature demands.

ADD: "Test Tee": A tee fitting located at the base of a plumbing system or stack used to insert test plugs for blocking openings during testing procedures.

ADD: "Test Plug": A device inserted into a pipe or fitting and expanded to form a temporary closure during test procedures.

ADD: "Thermal Expansion": Water expansion caused by heating. In closed water systems, an expansion tank shall be installed on cold water supply after control valve.

ADD: "Thermal Waste": Waste water that has been heated and may require cooling before discharging.

ADD: "Turbidity": In water, cloudiness caused by suspended solids.

ADD: "Velocity (liquids)": The rate at which liquids move through a piping system, usually measured in feet per second.

ADD "Venturi": A constriction in a pipe forming a throat reducing pressure and increasing velocities (i.e., used is aspirators).

ADD: "Water Closet": A fixture designed to dispose of fecal matter.

ADD: "Water Treatment Devices": Private use devices for treating potable water to remove impurities, odors, bad taste, etc., shall be installed and serviced by a licensed plumber only.

ADD: "Weir": A device used to form a barrier to keep water at a designated level, such as in a plumbing trap to provide a seal in the trap.

ADD: "Well Point": A pointed device driven into the ground to tap an underground source of water. Used in de-watering excavations, trenches, etc.

ADD: "Zone": A partial section of a piping system.

Section 890.140 Repairs and Alterations

890.140(a)(2) At the end of this sub-section, add the following:

d) Reference Section 890.110 b)4) regarding permit requirements.

SECTION **REVISION**

Section 890.150 Workmanship

890.150(b) At the end of this sub-section, add the following sub-parts:

1) Corrections may be required to uncover structural problems found as a result of wall and floor material removal during remodeling, and/or repair work. Corrections will be the responsibility of the owner or agent.

2) Cutting, Drilling, or Notching: No structural member shall be weakened or impaired by cutting, notching, or otherwise, except to the extent permitted by the Administrative Authority. Joists, beams, studs, and other framing members shall be reinforced prior to the installation of piping. Reference the Village of Gurnee Building Code for requirements.

3) Firestopping of annular spaces of pipe penetrations shall be as per the Village of Gurnee Building Code and N.F.P.A. requirements. Said requirements apply to all types of buildings - residential, commercial, and industrial. Consult the Administrative Authority regarding requirements.

Section 890.160 Used Plumbing Material, Equipment, Fixtures

890.160(b) At the end of this sub-section, add the following sub-section:

c) Equipment and fixtures utilized for commercial food preparation or industrial purposes shall have N.S.F. approval and meet the requirements of the Lake County Health Department.

Section 890.170 Sewer and/or Water Required

890.170(d) At the end of this sub-section, add the following sub-sections:

e) Industrial Wastes. Wastes detrimental to the public sewer system or detrimental to the functioning of the sewage treatment plant shall be treated and disposed of as directed by the Administrative Authority or other authority having jurisdiction.

f) Sampling Manhole. Shall be installed ten (10) feet from building on sanitary building sewer as per Village of Gurnee Engineering Department requirements and the North Shore Sanitary District.

Section 890.180 Sewer and Water Pipe Installation

890.180(d) At the end of this sub-section, add the following: The method being tamped oakum and caulked with lead. The neoprene mechanical expansive type, silicone caulking, or other material found equally effective and approved as such by the Administrative Authority. See Illustration BB and CC, Appendix B.

SECTION	REVISION

(Section 890.180 Sewer & Water Pipe Installation Continued:)

890.180(e) Change to read as follows: Parallel. No piping shall be laid parallel to building footings closer than three (3) feet, except with the approval of the Administrative Authority when space is not available. When parallel piping is laid deeper than the building footings, the horizontal distance from the footing shall be equal to, or greater than the vertical distance below the footing.

890.180(f) At the end of this sub-section add the following sub-sections:

g) Perpendicular. The undercut or tunnel shall be backfilled with gravel fill only, to the original grade of excavation.

h) Tunneling and Driving. Tunneling may be done in yards, courts, or driveways of any building site. When pipes are driven, the drive pile shall be at least one size larger than the pipe to be laid. Moling is acceptable. The J.U.L.I.E. company must be contacted prior to any dig start.

i) Open Trenches. All excavations required to be made for the installation of a building drainage system, or any part thereof within the walls of a building, shall be open trench work and shall be kept open until the piping has been inspected, tested, and accepted. Piping covered before the inspection shall be made visible to the Inspector.

j) Water service pipes, or any underground water pipes shall not be run or laid in the same trench as the building sewer or drainage piping. See Section 890.1150.

k) Safety Precautions. All local rules and regulations pertaining to safety and protection of workmen, other persons in the vicinity, and neighboring property shall be observed where trenching, blasting, or other hazardous operation are being conducted.

l) No open cuts shall be made in public roadways, as per Village of Gurnee Engineering Department requirements.

m) Water service piping shall be installed below the recorded frost penetration, at or below the minimum depth prescribed by the authority having jurisdiction.

890 Appendix B Illustrations for Subpart A

Illustration A
Air Gap Drawing #1 Add the following after the number “#1”: Also called Break Tank.

Illustration C
Battery of Fixtures Add the following after the word “Fixtures”: Circuit venting is prohibited.

Illustration G
Building Sub-Drain Add the following under “Referenced”: See Appendix J, Illustration K, for pit requirements and 890.1360(b) Design.

SECTION	REVISION
(890 Appendix B Illustrations for Subpart A Continued:)	
Illustration H Circuit Vent	Omit this Illustration and add the following notation: See Section 890.1520 Circuit and Loop Venting.
Illustration I Common Vent	Add the following notation: Illustrations as shown are not as per Village of Gurnee requirements. See Section 890.1460.
Illustration J Continuous Vents	Add the following notation: This is the preferred method.
Illustration R Quarter Bend	Delete side inlet 1/4 bend.
Illustration S Relief Vent	Delete Sketch “D”.
Illustration V Stack Vent	Delete as shown and add the following notation: See Section 890.1470 and Appendix A Table I.
Illustration X Vent Stack	Add the following notation: Shown inaccurately. The shower waste shall be re-vented.
Illustration Y Wet Vent	Delete as shown and add the following notation: The bath tub and shower shall be vented.
Illustration BB Sleeves	Add new Illustration BB Sleeves.
Illustration CC Sleeves	Add new Illustration CC Sleeves.

SECTION 890 APPENDIX B

ILLUSTRATION BB · SLEEVES

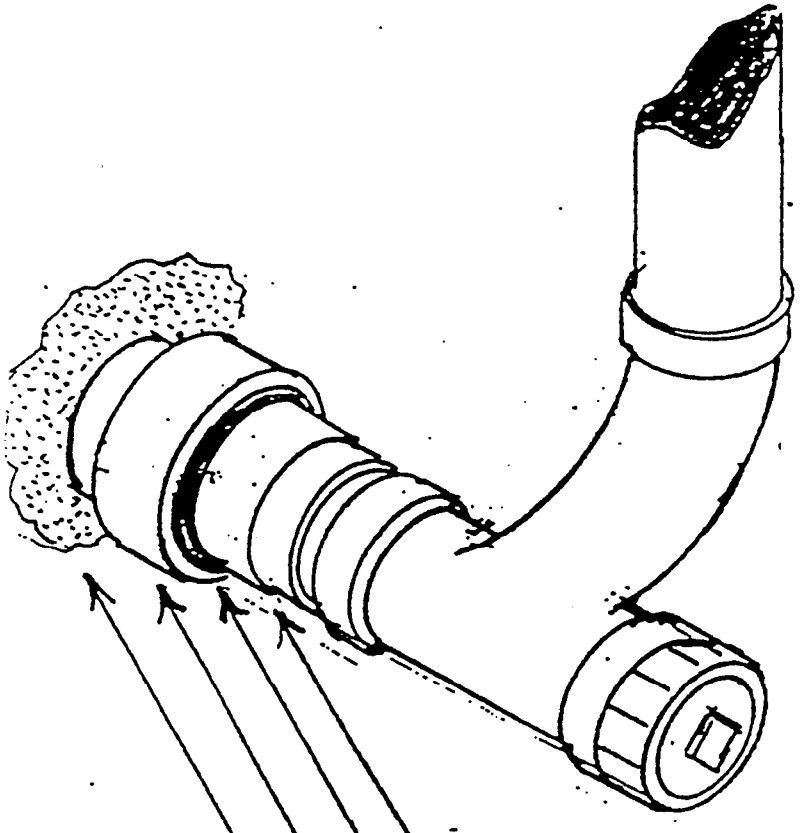
(Reference Section 890.180(d)}
{Reference Section 890.420(a)(4)}

and

SECTION 890 APPEND!X D

ILLUSTRATION I

Approved Building Drain to Building Sewer Connection Thru Wall



Sized Based on D.F.U. Load (may be horizontal or vertical

Combination Fittings Only

Full Line Size Cleanout

Proper Adaption Fitting

Caulked Lead and Oakum Joint

THRU FOUNDATION WALL INSTALATION OF BUILDING SEWER SHALL BE OF CLASS 52 DUCTILE IRON

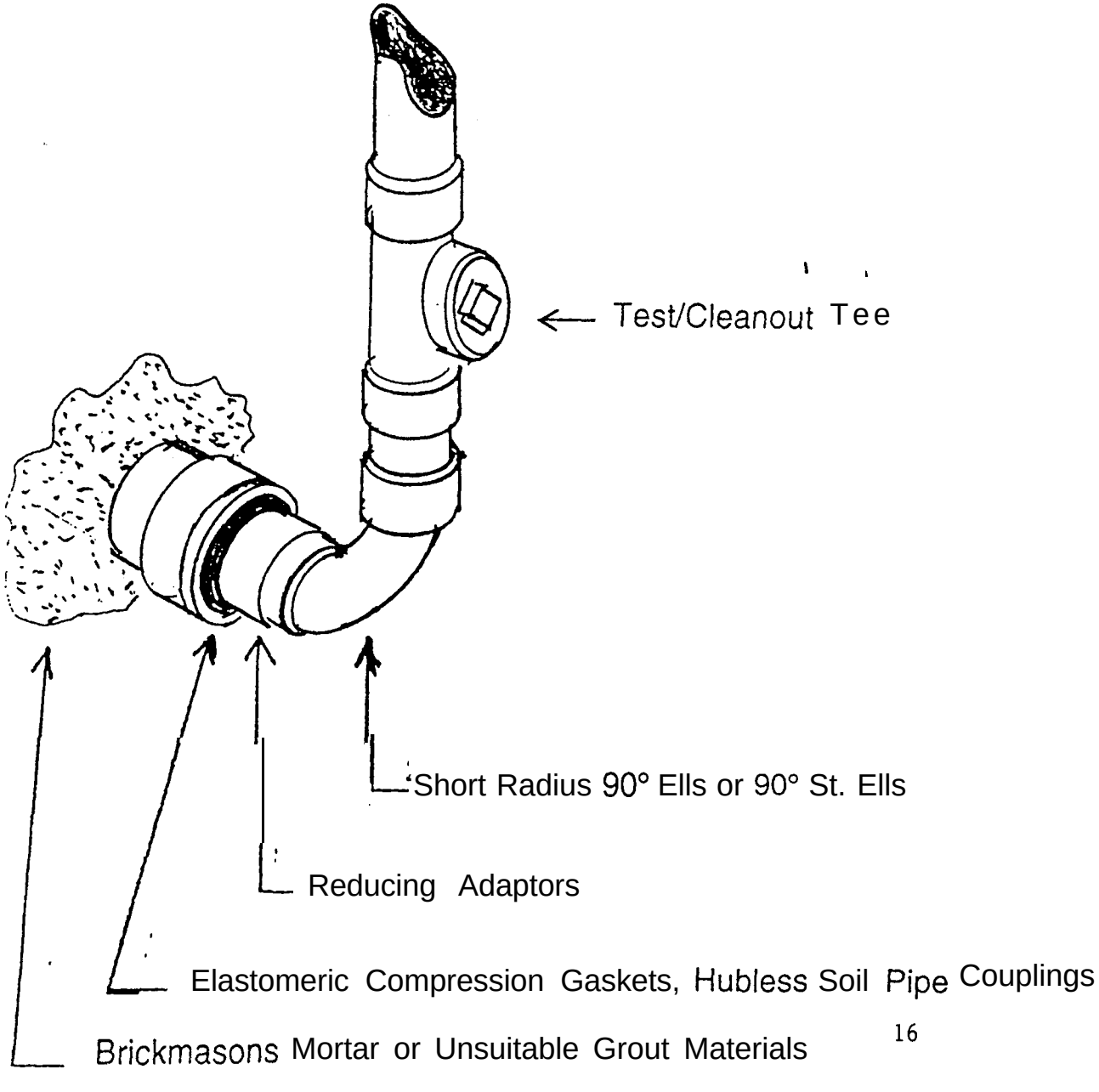
Annular Space Grouted Securely

SECTION 890 APPENDIX 6

ILLUSTRATION CC - SLEEVES

{Reference Section 890.180(d)}
{Reference Section 890.420(a)(4)}

Prohibited Connections at Building Drain/Sewer Connections Thru Wall



SECTION REVISION

Section 890. 210 Materials

890.210(b) At the end of this sub-section, add the following sub-section:

c) Materials Prohibited within the Village of Gurnee:

1) CPVC-CCPVC - water pipe and fittings for potable water supply systems. This includes socket weld, polyfusion, or mechanical joints.

2) Poly Butylene Tubing - water pipe and fittings for potable water supply systems. This includes socket weld, polyfusion, or mechanical joints.

3) Non-Metallic Supply Riser Tubes - including braided stainless steel covered neoprene.

4) Fixture Angle Stops - push-on type and non-metallic.

5) Flexible Connectors - used on water heater piping for potable water.

6) Spun Air Chambers.

7) Mechanical Air Chamber/Shock Absorbers - refer to Water section.

8) Cellular/Foam Core PVC - DWV.

9) Double Hub Soil Pipe Fittings.

10) Unshielded Flexible Couplings - Sewers and DWV.

11) Corrugated Stainless Steel Tubing and Fittings for Gas Installations - see Village of Gurnee Building Code requirements.

12) All plastic materials for storm, sanitary, process, and domestic water in any application pertaining to commercial, warehouse, and industrial systems.

Section 890. 320 Types of Joints

890.320(a) At the end of this sub-section, add the following: No foreign substances/additives shall be introduced to joint prior to pouring of lead (i.e., wax, paste, fluxes, etc.) cracked, split, or otherwise defective bells or pipes shall be replaced. When pouring a lead joint vertically on a hub badly out of level, a running rope shall be used to assure a continuous monolithic pour. PVC adapters shall be caulked after cooling properly.

SECTION	REVISION
(Section 890. 320 Types of Joints Continued:)	
890.320(c)	Change to read as follows: Wiped Joints. Joints in lead pipe or fittings, in water supply, or drainage systems are prohibited. Connections to existing lead water services, alterations to existing lead DWV, or commercial drainage system, shall be by written permission of the Administrative Authority only.
890.320 (d)	At the end of this sub-section, add the following: Tubing shall be reamed to eliminate erosion, cavitation, frictional loss, and noise to the system. Soft tubing shall be sized with an appropriate sizing tool to facilitate consistent fit of tubing to fittings. Bronze fittings shall be of lead-free composition.
890.320(h)	Change to read as follows: Brazed Joints. Brazed joints shall be made by first cleaning the surface to be joined down to the base metal, applying flux approved for such joints and for the filler metal to be used, and making the joints by heating to a temperature sufficient to melt the approved brazing filler metal on contact (see Section 890.330(b).) The use of branch extrusion devices is prohibited.
890.320(i)	Change to read as follows: Cement Mortar Joints: Cement mortar joints are prohibited.
890.320(k)	Delete without substitution.
890.320(l)(2)	Change to read as follows: Plastic Pipe and Fitting Restrictions. CPVC or any polymer pipe or fittings shall not be used on potable water piping systems. This includes plastic fixture supply riser tubes.
890.320(l)(2)(A)	At the end of this sub-part, add the following: For use on potable well water services into the building only. The compression tank shall be located directly at service entry. If this is not feasible, the line shall be of iron or copper within the building to the tank.
890.320(l)(2)(B)	At the end of this sub-part, add the following sub-parts: I. Expansion couplings, such as the O-ring type, will be used as determined by the Administrative Authority and/or manufacturer's recommendations for multi-story buildings. II. Defective materials and workmanship shall be corrected and re-tested. III. A.B.S. plastic pipe and fittings shall not be used.
890.320(l)(2)(C)	At the end of this sub-part, add the following: Use on water well services only {see 890.320(l)(2)(A)}.
890.320(n)	At the end of this sub-section, add the following: Hangering, support, and restraint shall be as per C.I.S.P.I. requirements.

SECTION	REVISION

(Section 890. 320 Types of Joints Continued:)

890.320(o)(2) At the end of this sub-section, add the following sub-part:

3) Compression fittings (brass) shall be used only in accessible applications.

Section 890.330 Special Joints

890.330(a) At the end of this sub-section, add the following: Dielectric unions shall be used at all dissimilar material connections, (i.e., water heaters, copper to galvanized piping, etc.). A brass valve will not be accepted as a dielectric break or converter.

890.330(c) Change to read as follows: Slip Joints. In drainage and water piping, slip joints may be used on the inlet side of the trap or in the trap seal. Slip joints shall not be used in any inaccessible piping. Push-on angle stop valves are prohibited. Compression, threaded, or sweat shall be used.

890.330(e) Change to read as follows: Compression Type Couplings. (1) Joints on any part of a water service shall be flared only. (2) Compression fittings shall only be used on stops and equipment connections downstream of a stop.

890.330(g)(1)(D) At the end of this sub-part, add the following sub-part:

E) For use on well water service piping only.

890.330(g)(2)(C) At the end of this sub-part, add the following: Shall be used for underground installations only.

Section 890. 340 Use of Joints

890.340(e) At the end of this sub-section, add the following: By approval of the Administrative Authority only.

890.340(g)(2) At the end of this sub-part, add the following sub-part:

3) The use of Cellular Core PVC ASTM.F 891 (1990) is prohibited. Solid Core PVC ASTM.D 2665 (1988) shall be used. See Appendix A Table A.

Section 890.350 Unions

890.350(a) Delete the words “and outlet” from the first paragraph.

890.350(b) Change to read as follows:

b) Water Supply System: Unions in the water supply system shall be metal to metal with ground seats. Unions between copper pipe/tubing and dissimilar metals shall be made with a dielectric type union.

SECTION	REVISION

Section 890.360 Water Closet and Pedestal Urinal

890.360 At the end of this section, add the following: The use of commercial putty or plaster is prohibited. Closet collars shall be used on all floor mounted closets, bidets, etc. PVC or copper DWV collars shall be secured to the firm flooring with corrosion resistant screws or bolts.

Section 890.370 Prohibited Joints and Connections in Drainage Systems

890.370 Add the following sub-sections:

a) Heel and side inlet ells are not acceptable in waste installations. Heel and side inlet ells are permitted in vent installations.

b) Cottage fittings, tees, wyes, combinations, or the small branch inlet shall be used for a dry vent only.

c) Copper waste and water extraction/extrusion tools that form branch openings in tubing shall not be used. Fittings shall be used for any branch opening.

d) The use of saddles of any type is prohibited in building interior DWV systems. Drainage or vent lines shall have the necessary branch fitting placed into the line.

e) The use of saddles of any type is prohibited in building interior potable supply. This includes self-tapping associated with humidifiers, ice makers, and other water supplied appliances. A fitting and valve shall be installed for any water line branch.

f) Tapping saddles for water main and service installations as per Village of Gurnee Engineering Department specs.

Section 890. 380 Increasers and Reducers

890.380 Add the following sub-sections:

a) VTR increasers shall be assembled using proper reducing fittings. The use of a coupling glued to the interior of the increaser pipe is prohibited.

b) Bushings shall not be used on gas pipe installations. Use reducing couplings 90°, ells, or tees only.

890 Appendix C Illustrations for Subpart C

Illustration A
Caulked Joints Add the following notation: This Illustration is outdated.

SECTION	REVISION

Section 890. 410 Traps

890.410(c)	Delete the period at the end of the second sentence and add: ", including shower drains."
890.410(d)	At the end of this sub-section, add the following: Flexible PVC and neoprene traps shall not be used.
890.410(e)	Change to read as follows: Drum Traps. Drum traps are prohibited.
890.410(f)(3)	Change to read as follows: Trap primers are prohibited.
890.410(g)(3)	At the end of this sub-section, add the following: Said bath traps shall be protected from freezing in overhang projections or other locations.
890.410(i)	At the end of this sub-section, add the following: Floor drain "P" trap risers shall not exceed twenty-four (24) inches in height.
890.410(j)	Change to read as follows: Building (House)Traps: No trap shall be installed at the base of a soil or waste stack, or in a building drain or building sewer.
890.410(l)	At the end of the sub-section add the following sub-sections:

m) Slip Joints. Slip joints may be used only on the inlet side of the trap and in the trap seal, in exposed locations.

n) Visible Ground Joint Connections. Visible ground joint connections may be used on the inlet side of the trap, in the trap seal, and on the outlet side of the trap in exposed locations.

Section 890. 420 Pipe Cleanouts

890.420(a)(2) At the end of this sub-part, add the following sub-parts:

A) Access panels or covering plates provided by the plumbing contractor to be installed in fire rated assemblies shall meet said required rating, subject to the Village of Gurnee Fire Department approval.

B) The end of cleanout plugs shall be within one (1) inch of finish wall or floor.

C) Cleanout plugs shall be sized accordingly, be of compatible material, and shall be I.P.T. only.

D) Countersunk heads shall be used where raised heads may cause a hazard, or for concealment behind finished surfaces. Reversal of standard plugs into the test tee is prohibited.

890.420(a)(3) At the end of the sub-part, add the following: Place said cleanouts at an elevation above and look it out so as not to require removal of any fixture or object to readily access it.

SECTION	REVISION
(Section 890. 420 Pipe Cleanouts Continued:)	
890.420(a)(4)	At the end of the sub-part, add the following: Cleanouts penetrating an exterior basement wall shall be a full line size combination Y and 1/8 bend with the cleanout allowing a straight path to access the building sewer for rodding purposes.
890.420(h)	At the end of the sub-section, add the following: Cleanouts shall not be used as a floor drain or receive pumped ground water during construction.
Section 890. 430 Cleanout Equivalent	
890.430	At the end of the section, add the following sentence: Branch waste lines serving a battery of any type fixture shall have an end of line cleanout.
890.430	At the end of this section, add the following sub-section: a) Exception: Residential kitchen sinks shall be provided with a two (2) inch fitting cleanout (i.e., using a double wye with one opening for cleanout).
Section 890. 440 Acid-Proof Traps	
890.440	At the end of the section, add the following: Glass or silica iron shall be installed per manufacturer's specifications.
890 Appendix D Illustrations for Subpart D	
Illustration A Fixture Traps	Delete and add the following notation: See Section 890.410(a) regarding residential/commercial applications.
Illustration C Types of Traps	Delete Drum Trap.

SECTION	REVISION

Section 890.510 Grease Interceptor Requirements

890.510(a)(2)	At the end of this sub-part, add the following sub-parts:
	A) Approval: The size, type, and location of each interceptor or separator shall be approved by the Plumbing Inspector and no wastes other than those requiring treatment or separation shall be discharged into any interceptor.
	B) Interceptors installed without approval by the Administrative Authority shall be removed by order of the Plumbing Inspector.
890.510(a)(3)	At the end of this sub-part, add the following sub-part:
	A) Grease Lines to Exterior Grease Interceptors. Said lines shall convey only grease bearing wastes and be separate from any sanitary discharge.
890.510(a)(4)	At the end of this sub-part, add the following: Multiple food service units connected to a common grease line to an exterior grease trap may require individual interceptors (i.e., food courts in malls).
890.510(a)(5)	At the end of this sub-part, add the following sub-parts:
	A) Maintenance of Exterior Grease Traps. The use of ladders or the removal of bulky equipment in order to service interceptors shall constitute a violation of accessibility.
	B) Interior above or below floor interceptors/separators shall be installed with sufficient space above them for screen/baffle removal and access for interior cleaning without removal of piping/fixtures or other obstructions.
	C) Cleaning. Interceptors shall be maintained in efficient operating condition by periodic removal of accumulated grease.
	D) Any interceptor, separator, or grease trap found to have been modified in any manner by removal of baffle, screens, or partitions shall be restored to its original conditions, or completely replaced.
890.510(a)(6)	At the end of this sub-part, add the following sub-part:
	A) Exterior grease traps shall be provided with its own vent.
890.510(b)	At the end of this sub-section, add the following sub-section:
	c) Residential Units. A grease interceptor is not required for individual dwelling units or any private living quarters.

SECTION	REVISION

Section 890. 520 Gasoline, Oil and Flammable Liquids

890.520(a)(3) At the end of this sub-part, add the following sentence: Venting of oil/fuel separators shall be a separate system, to the atmosphere through the roof, with no connection to a sanitary vent system.

890.520(a)(4) Change to read as follows: The inlet of the interceptor or the first basin shall be trapped, and all floor drains trapped and vented.

890.520(e) At the end of this sub-section, add the following sub-part:

1) Plaster, precious metals, or other solid interceptors shall be approved by the Administrative Authority. This includes small traps at fixture outlets.

890.520(e) At the end of this sub-section, add the following sub-section:

f) Double trapping is prohibited.

Section 890. 530 Sand, Bottle and Slaughter Houses

890.530 Delete and substitute with the following sub-sections:

a) Bottling Establishments: Bottling Plants. Bottling plants shall discharge their process wastes into an interceptor which will provide for the separation of broken glass or other solids before discharging liquid wastes into the drainage system.

b) Slaughter Houses. Separators. Slaughtering-room drains shall be equipped with separators which shall prevent the discharge into the drainage system of feathers, entrails, and other materials likely to clog the drainage system.

1) Slaughtering or dressing room floor drains shall be equipped with separators.

Section 890. 550 Backwater Valves - Sanitary System and Storm System

890.550(a) At the end of the of this sub-section, add the following: A single backwater valve may be installed in the building main drain where it leaves the building.

Section 890. 550 Backwater Valves - Sanitary System and Storm System Continued:

890.550(e) After this sub-section, add the following sub-section:

f) A combination gate and check valve shall be used with a cleanout to the downstream side said valve assembly. Pits and depressions at the assembly are prohibited. The proper top extensions for the device shall be installed. The concrete floor patch shall be replaced to the surrounding existing finish floor level.

SECTION	REVISION

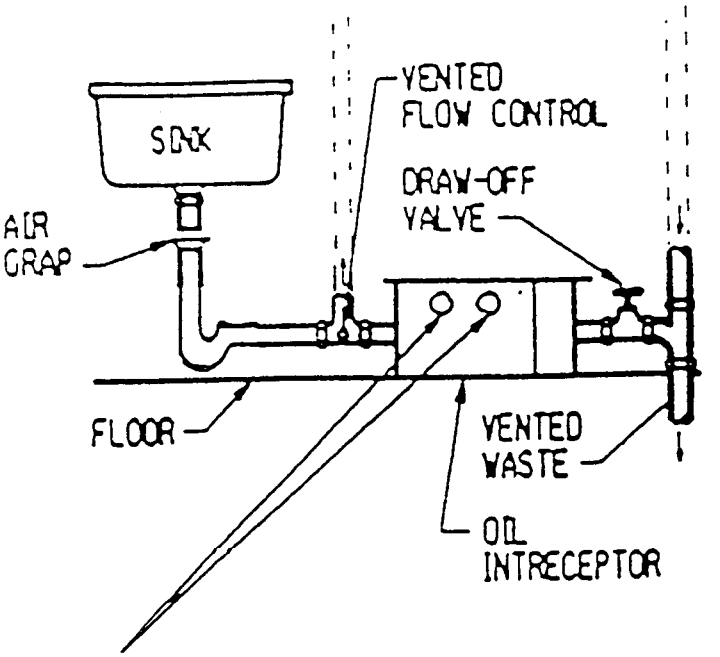
890 Appendix E Illustrations for Subpart E

890 Appendix E Illustration C	Add the following: See Revised Illustration C.
890 Appendix E Illustration F	Add the following: See Revised Illustration F.

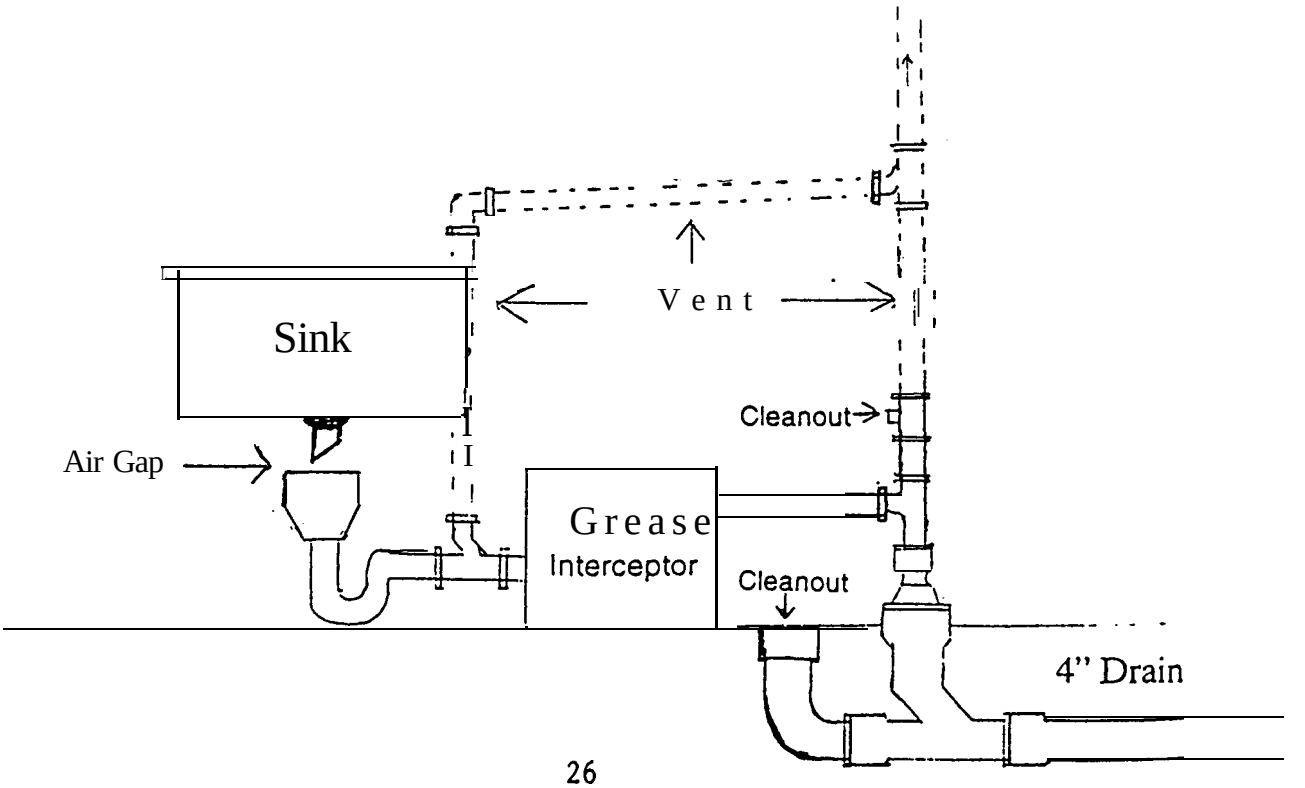
Section 890.Appendix E Illustrations for Subpart E

ILLUSTRATION C Interceptor/Separator Vents

(Referenced in Section 890.510(a)(5))



Two (2) vents, one (1) terminating 12" above the other to assure optimum recirculation and guard against clogging of a single vent.

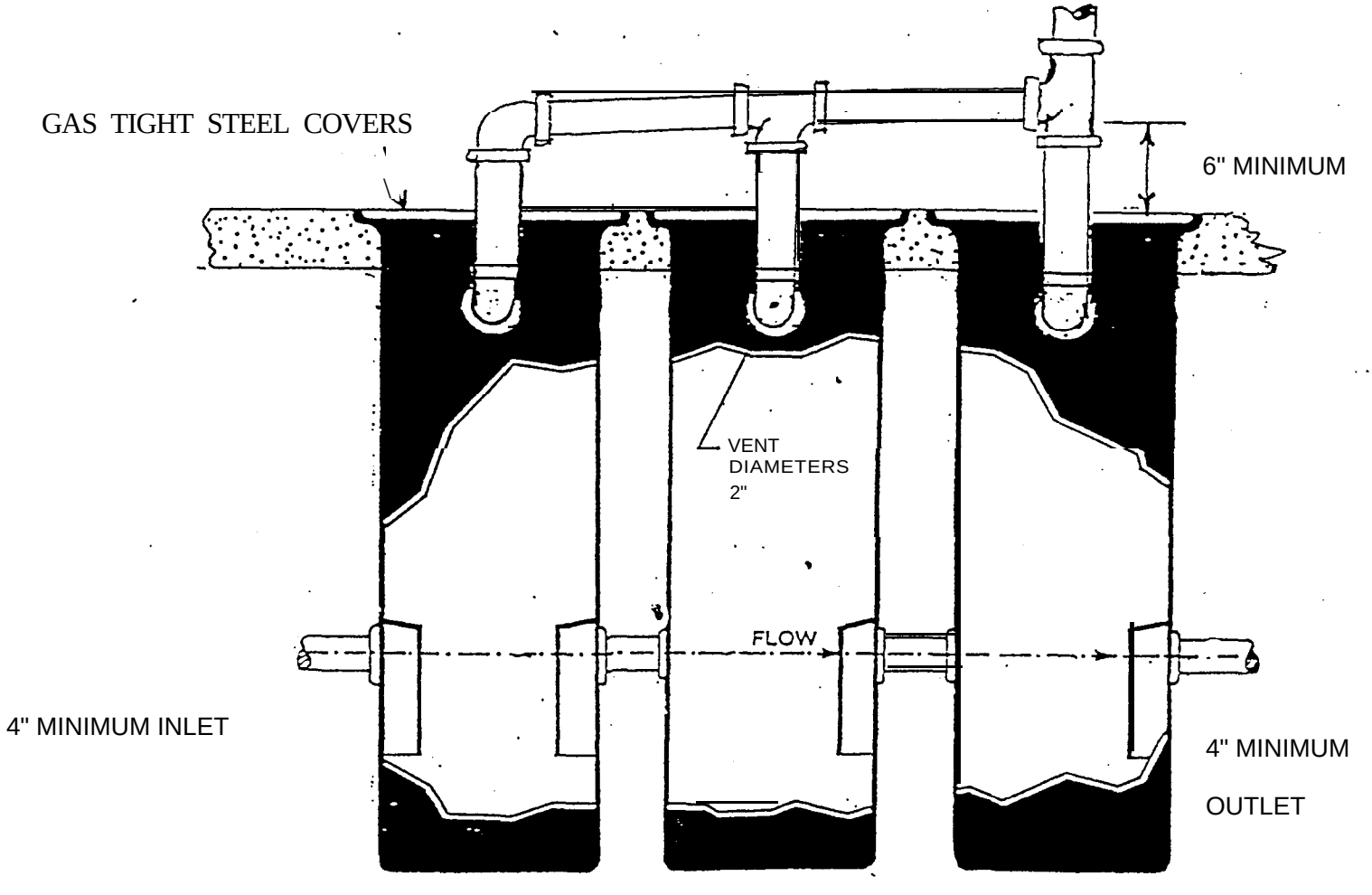


SECTION APPENDIX E E

ILLUSTRATION F

GAS & OIL INTERCEPTORS

VENT SEPARATELY TO ATMOSPHERE



SIZING AS PER SECTION 890.520(c) (1) and (2)

Section 890. 630 Installation

890.630(d) At the end of this sub-section, add the following sub-part:

1) Joints. Where fixture comes in contact with wall and floors, the joint shall be watertight.

890.630(f) At the end of this sub-section, add the following sub-parts:

1) Convenience-Accessibility-and Maintained in Sanitary Condition. Plumbing fixtures installed for the use of the public shall be installed so that such fixture is convenient, accessible, and maintained in a sanitary condition.

2) Location. No water closet or urinals shall be located in any room or apartment which does not contain a window placed in an external wall of the building or is not provided with a system of ventilation.

3) Minimum Clearances. Minimum clearances for access to water closets shall be 16" center line to sidewall or other obstruction, 30" from front of bowl to wall or other obstruction.

Section 890. 680 Lavatories

890.680(d) At the end of this sub-section, add the following sub-section:

e) P Traps and Hot Water Supplies. P Traps and hot water supplies shall be insulated on handicapped fixtures.

Section 890. 690 Shower Receptors and Compartments

890.690(b) At the end of this sub-section, add the following: Bidets, shampoo bowls, therapeutic fixtures, etc., shall meet this requirement.

890.690(e) At the end of this sub-section, add the following sub-sections:

f) Lead-oakum caulked joints shall not be made directly to Schedule 40 PVC pipe. Use of a proper adapter PVC, and such Schedule 40 galvanized nipple with one thread removed in lead joint shall be permitted.

g) Compressive neoprene shower waste connections may be used.

h) Shower supply valves shall be rigidly anchored and escutchions caulked preventing seepage behind unit.

i) Shower head connecting fittings shall be secured by screws through mounting holes of a drop-ear ell fitting to a suitable framing member.

j) Hot and cold water shall be piped to proper openings of mixing valve body. Reversal of valve handles or unit assy. is prohibited, piping will be corrected in all cases.

SECTION **REVISION**

Section 890.700 Sinks

890.700(b) At the end of this sub-section, add the following sentence: All kitchen sink wastes shall be provided with a 2" cleanout in a double or single wye. See Appendix F, Illustration D (lower).

Section 890. 720 Drinking Fountains

890.720(f) Delete this sub-section without substitution.

Section 890. 730 Floor Drains

890.730 Add the following sub-sections:

a) Funnel drain accessories may be added to a floor drain strainer to receive open sighted drain lines. Air gap distances shall be as required.

b) Hub drains and floor sinks used to receive indirect wastes from dishwashers, etc., shall be a minimum of 1" above finish floor line, and shall not be used as a floor drain.

c) PVC, A.B.S., and resin floor drain bodies shall not be installed in concrete flooring.

d) Slab on grade, all washroom, and mechanical equipment room floor drains shall be 4" minimum.

e) A floor drain shall be provided for any RPZ relief valve discharge and water heater relief valve discharges. Also adjacent to laundry equipment on slab on grade installations and janitorial mop basins.

f) Trap primers are prohibited.

Section 890. 750 Whirlpool Bathtubs

890.750(b) At the end of this sub-section, add the following sub-sections:

c) The P Trap and water lines shall be installed to prevent freeze-ups. See Village of Gurnee Building Code for insulation requirements.

d) A usable access panel shall be provided for pump/motor service in an accessible location, not requiring cutting of wall, floor, ceiling, exterior, or overhang materials.

e) Backflow prevention and anti-scald requirements shall apply to tub filler/diverter with spray hoses to tubs.

f) Traps shall be the same size as the waste and overflow assembly. P Traps shall be used, with provision for rodding and cleaning. Also, they shall be protected from freezing - a heat run to supply warmed air may be required. The overflow shall be fastened to the tub by means other than the face place.

SECTION **REVISION**

Section 890. 770 Dishwashing Machines

890.770(b) At the end of this sub-section, add the following sub-part:

1) Water supplies required for chemicals, rinse agents, etc., shall be protected with the required backflow protection permanently installed on it.

890.770(d) At the end of this sub-section, add the following sub-sections:

e) Dishwashers shall not discharge to a grease interceptor. See Section 890.510.

f) Dishwashers for commercial use shall be NSF approved.

Section 890. 790 Laundry Trays and Drains

890.790(b) At the end of this sub-section, add the following sub-section:

c) Automatic washer P Traps shall not be installed in any exterior or firewall assembly. Included are any garage walls. See Village of Gurnee Building Code requirement for false wall requirements.

Section 890.800 Special Fixtures and/or Items Designed for a Particular Purpose

890.800 At the end of this section, add the following sub-sections:

a) Water and Drain Connections. Baptisteries, ornamental lily pools, aquariums, ornamental fountain basins, and similar construction when provided with water supplies shall be protected from back-siphonage as required. Included are items/fixtures used in hospitals, medical and dental clinic laboratories, mortuaries, food product preparation, processing, manufacturing facilities, and any industrial/commercial application using potable water.

b) Approval. Specialties requiring water or waste connections shall be submitted for approval of the Administrative Authority.

890 Appendix F Illustrations for Subpart F

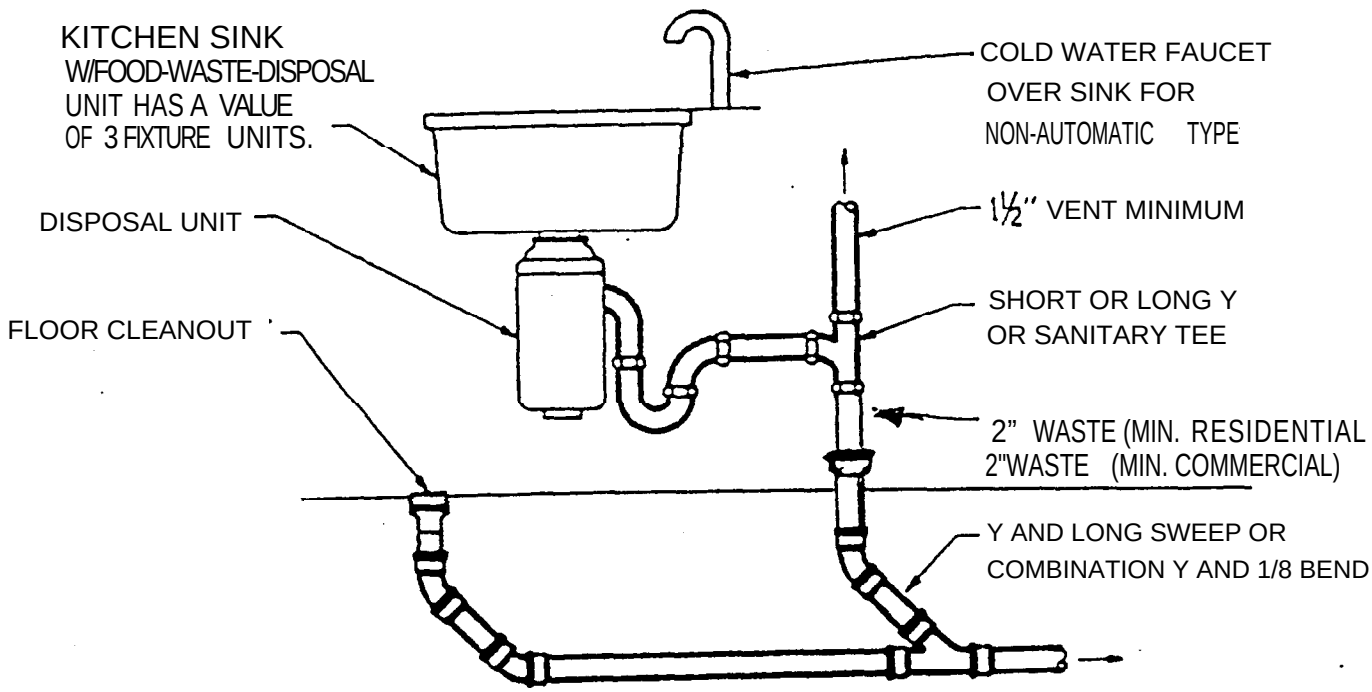
890. Appendix F
Illustration C Add the following: See Revised Illustration C.

890. Appendix F
Illustration D Add the following: See Revised Illustration D.

Section 890.Appendix F Illustrations for Subpart F

ILLUSTRATION C Commercial-Type Grinder # 1

(Referenced in Section 890.710(b))

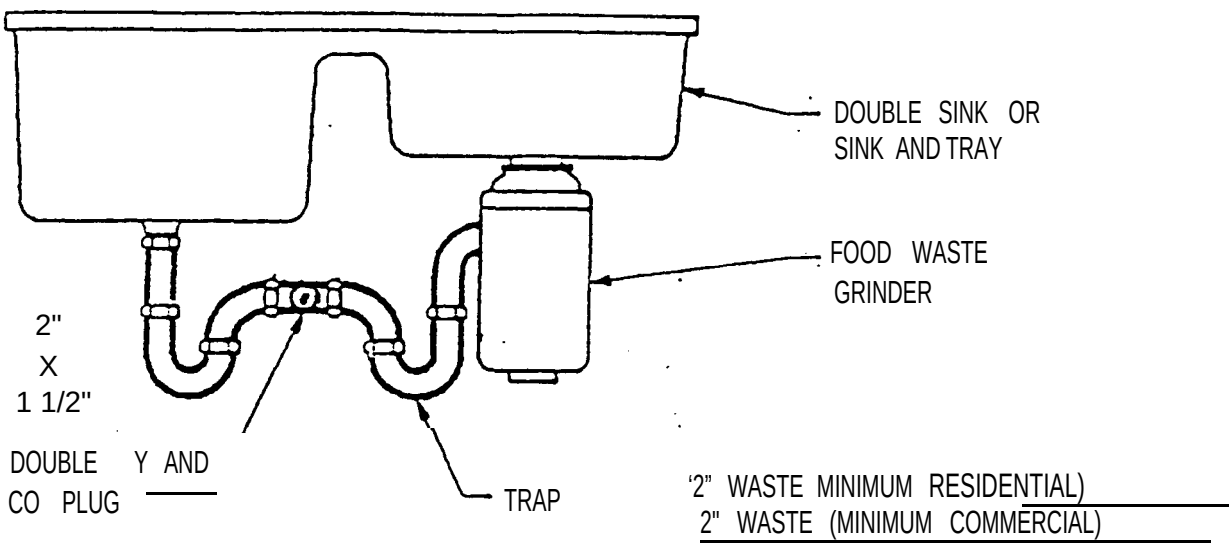


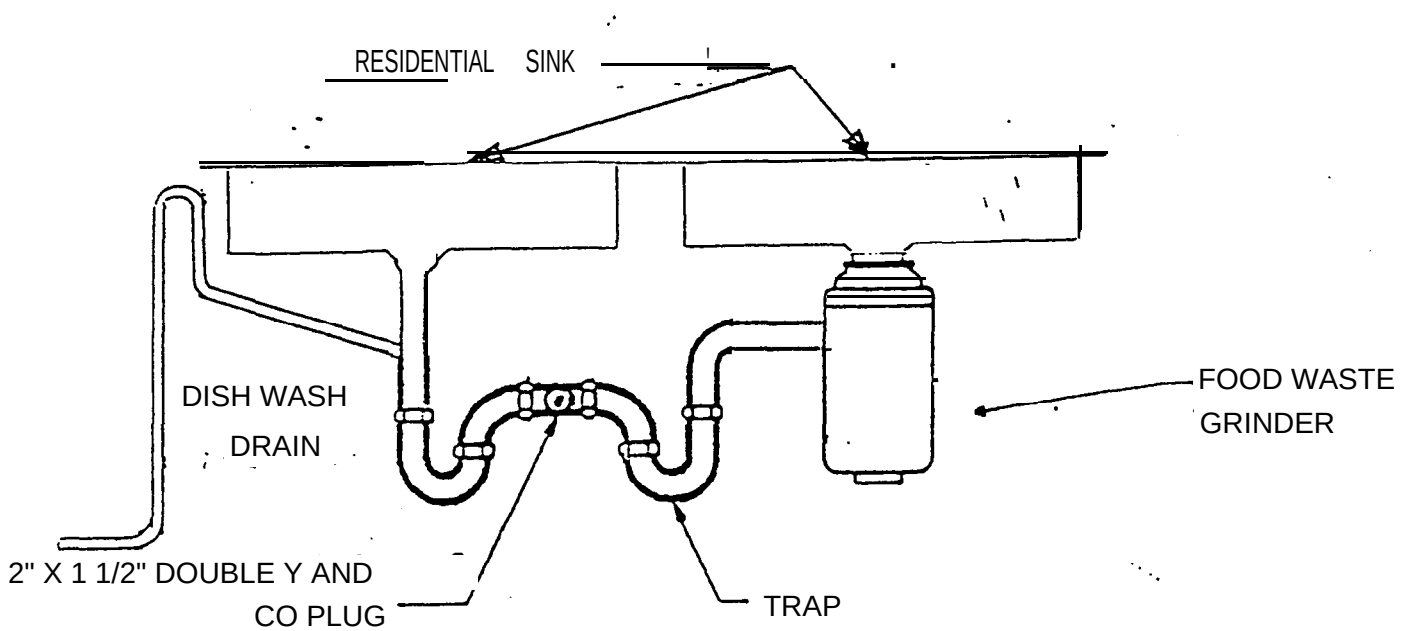
ELECTRIC SWITCH MAY BE INSTALLED AT WALL
FRONT OF CABINET, OR OTHER CONVENIENT LOCATION.

Section 890.Appendix F Illustrations for Subpart F

ILLUSTRATION D Commercial-Type Grinder #2

(Referenced in Section 890.7 1 O(b))





SECTION **REVISION**

Section 890. 920 Vertical Piping

890.920(e) Delete this sub-section without substitution.

890.920(f) Delete the last sentence of this sub-section without substitution.

890.920(f) At the end of this sub-section, add the following sub-section:

g) Chemical Waste and Vent Piping. Chemical DWV with resistance coil sealed joints, fusion, socket jointed filled with epoxy materials, glass, silica iron, or any other special material shall be supported as per manufacturer's installation instructions.

Section 890.930 Horizontal Piping

890.930(b) Delete the words "compression gasket" from this sub-section without substitution. (Said gaskets are for underground use only.)

890.930(e) Delete this sub-section without substitution.

890.930(f) Delete the last sentence of this sub-section without substitution.

890.930(f) At the end of this sub-section, add the following sub-section:

g) Strains and Stresses

1) Buried Piping. Piping in the ground shall be laid on a firm bed for its entire length, except where support is otherwise provided which is adequate in the judgment of the Department.

2) Blocking under pipe of bells is prohibited and shall be removed before backfilling*. Glass, silica iron, and other special waste lines, as per manufacturer's instructions. PVC underground is prohibited. See Appendix G Illustration D.

3) Copper water piping in metal stud partitions horizontally run shall use rigid split plastic isolators placed in stud hole made with proper size stud punch.

4) No copper tubing shall contact metal partitions. Pipe clamps may be secured to studs provided pipe is isolated with tape or isolating material.

5) Copper tubing with ends hammered flat may be used as a secondary support, (i.e., air chamber, etc.). It shall not be used as a primary support/hanger for waste, drain, vent, or water line main or branch lines.

6) Copper water piping passing through slabs shall be fully wrapped with closed cell pipe covering a minimum of 1/2" thick.

SECTION **REVISION**

(Section 890.930 Horizontal Piping Continued:)

7) Attachment. Hanger and anchors shall be securely attached to the building's construction, all nuts fully tightened on mechanical supports, expansive anchors fully embedded in concrete or masonry, wire pipe driven fully home in wood structural members. The use of double nuts, lock washers, or other protection shall be used in areas of vibration or expansion stresses. Hangering from pipe to pipe, pipe to duct, or pipe to equipment is prohibited.

Section 890.1010 Indirect Waste Piping

890.1010(a) Change this sub-section to read as follows, and add the following sub-section:

a) Food and Beverage Handling. Commercial dishwashing machines, dishwashing sinks, pot washing sinks, pre-rinse sinks, silverware sinks, bar sinks, soda fountain sinks, vegetable sinks, potato peelers, ice machines, steam tables, steam cookers, and other similar fixtures shall have their drain lines indirectly discharged to a proper receptor. All indirect waste shall discharge to a vented trap location as close as possible to the fixture and in the same room. See Appendix H (revised drawings) Illustrations A, B, and D.

1) Direct Drainage Prohibited. Waste from the following shall not discharge directly into any building drain, soil, or waste pipe: a refrigerator; ice box; or other receptacle, appliance, device, or apparatus which is used for the storage, preparation, or processing of food or drink and which is not water connected; water sill; a swimming pool; a water treatment device; or a water operated device. Such fixture wastes shall discharge over an open drain of sufficient size to drain off freely without overflowing. There shall be an open interval of not less than two (2) inches between the discharge end of the waste and the flood level of the drain.

890.1010(d) Change this sub-section to read as follows:

d) Swimming Pools. Piping carrying backwash or other washwater from a swimming pool filter shall be installed as an indirect waste to the building drain or building sanitary waste system. Piping utilized to drain water from the pool proper, such as the main drain waste and gutter waste, shall be installed as an indirect waste to a sanitary sewer. Piping utilized for carrying wastewater from deck drains around a pool shall be installed as an indirect waste to the sanitary sewer when the deck drains toward the pool. Pools other than private are subject to the Illinois Department of Public Health swimming pool requirements.

890.1010(e) At the end of this sub-section, add the following sub-parts:

1) The discharge from relief valves shall drain through an indirect waste connection into a floor drain or a receptor, which shall be within six (6) feet of unit in the same room.

SECTION **REVISION**

(Section 890.1010 Indirect Waste Piping Continued:)

2) Thermally enhanced wastes, clear of sanitary, shall be cooled before introduction to the drainage system. Method of cooling shall be approved by the Administrative Authority.

Section 890.1060 Special Wastes and Chemical Wastes

890.1060(b) At the end of this sub-section, add the following sub-sections:

c) Dilution Tanks for Corrosive Wastes. No corrosive wastes which are equal or greater in corrosive action to five percent (5%) hydrochloric acid solution shall discharge into any soil or waste pipe, or any house drain or house sewer of standard materials and construction, without first discharging into a dilution tank or basin. Every dilution tank used for this purpose shall be constructed of earthenware or glass, wood, or other non-corrosive materials, and shall be provided with a standing waste and overflow or other approved means to insure dilution. A chamber shall be provided to retain a sufficient quantity of lime or other neutralizing material which shall be renewed as often as may be necessary to render the solution effective. Such dilution tank shall be provided with a controlled supply of water or neutralizing medium to make its contents non-injurious to ordinary waste pipe and joints. Some high-energy efficient heating plants require neutralizing of flue condensate.

d) Condensers and Sumps. No steam pipe shall connect to any part of a drainage or plumbing system, nor shall any water above 180 degrees Fahrenheit be discharged into any part of the drainage system. The drains from pressure tanks, boilers, relief valves, and other similar equipment shall be connected to the drainage system through an indirect waste. Boilers exceeding 15 psi shall discharge through a cooling chamber.

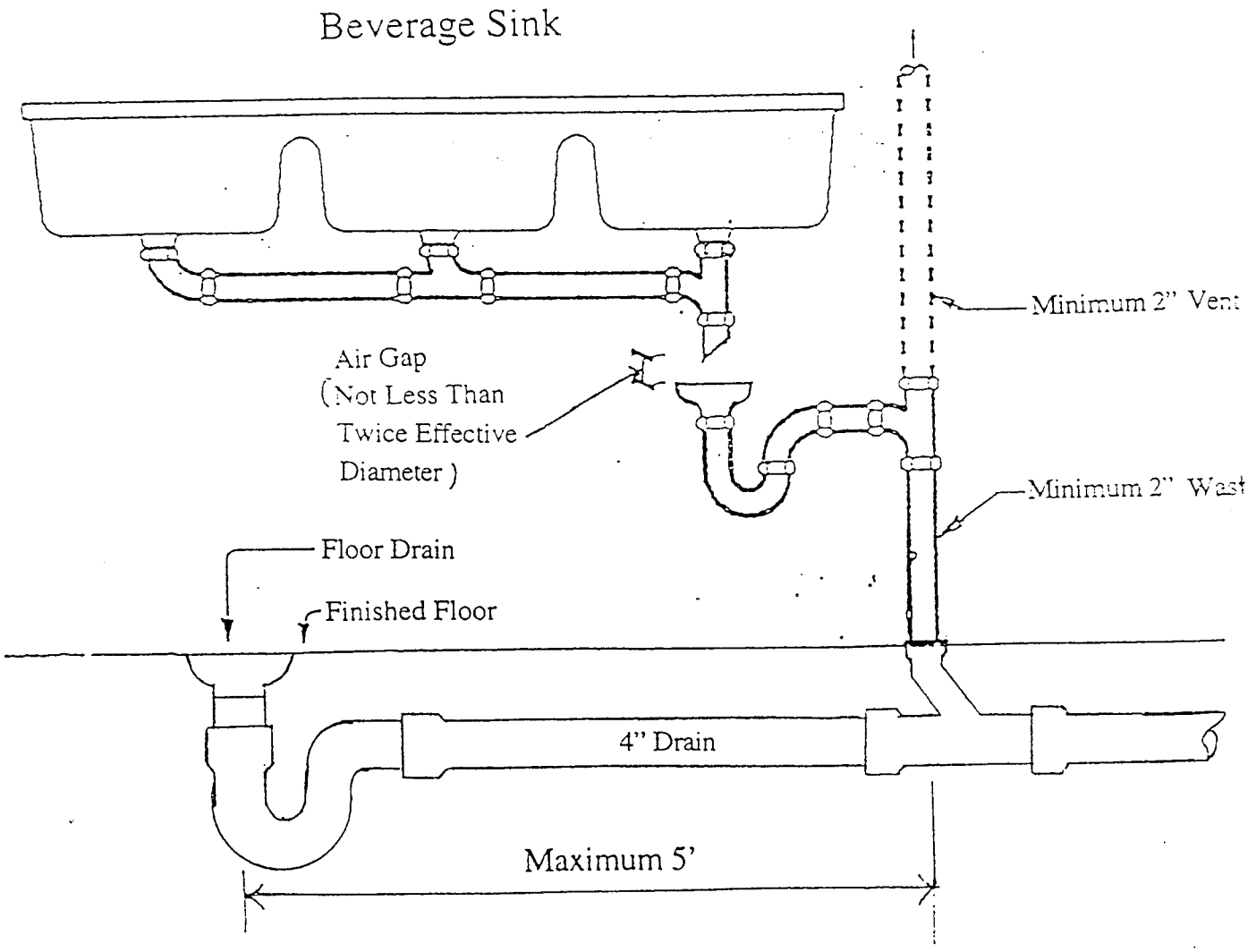
e) Volatile Wastes. Gasoline, benzene, naphtha, and other volatile, flammable, or explosive wastes shall not discharge into a house sewer, public sewer, or sewage treatment plant. Such wastes shall be intercepted in approved, vented triple basins and the volatile, flammable, or explosive elements removed. All such basins shall be of water and gas tight materials of durable construction.

SECTION	REVISION
Section 890.1130 Protection of Potable Water	
890.1130(b)	At the end of this sub-section, add the following sentence: A copy of the field test report shall be filed with the Village of Gurnee Building Department.
890.1130(c)	At the end of this sub-section, add the following sentence: Reference Village of Gurnee Cross Connection Control Ordinance No. 96-47.
890.1130(e)(5)	Delete Exception sentence without substitution.
890.1130(g)(1)	At the end of this sub-part, add the following: All devices shall be installed per manufacturer's installation instructions. They shall be installed as a rated assembly, not modified or altered in any manner.
890.1130(g)(6)	Delete Exception sentence without substitution.
890 Appendix H Illustrations for Subpart H	
890.Appendix H Illustration A	Add the following: See Revised Illustration A.
890.Appendix H Illustration B	Add the following: See Revised Illustration B.
890.Appendix H Illustration D	Add the following: See Revised Illustration D.

Section 890.Appendix H Illustrations for Subpart H

ILLUSTRATION A Indirect Waste Piping #1

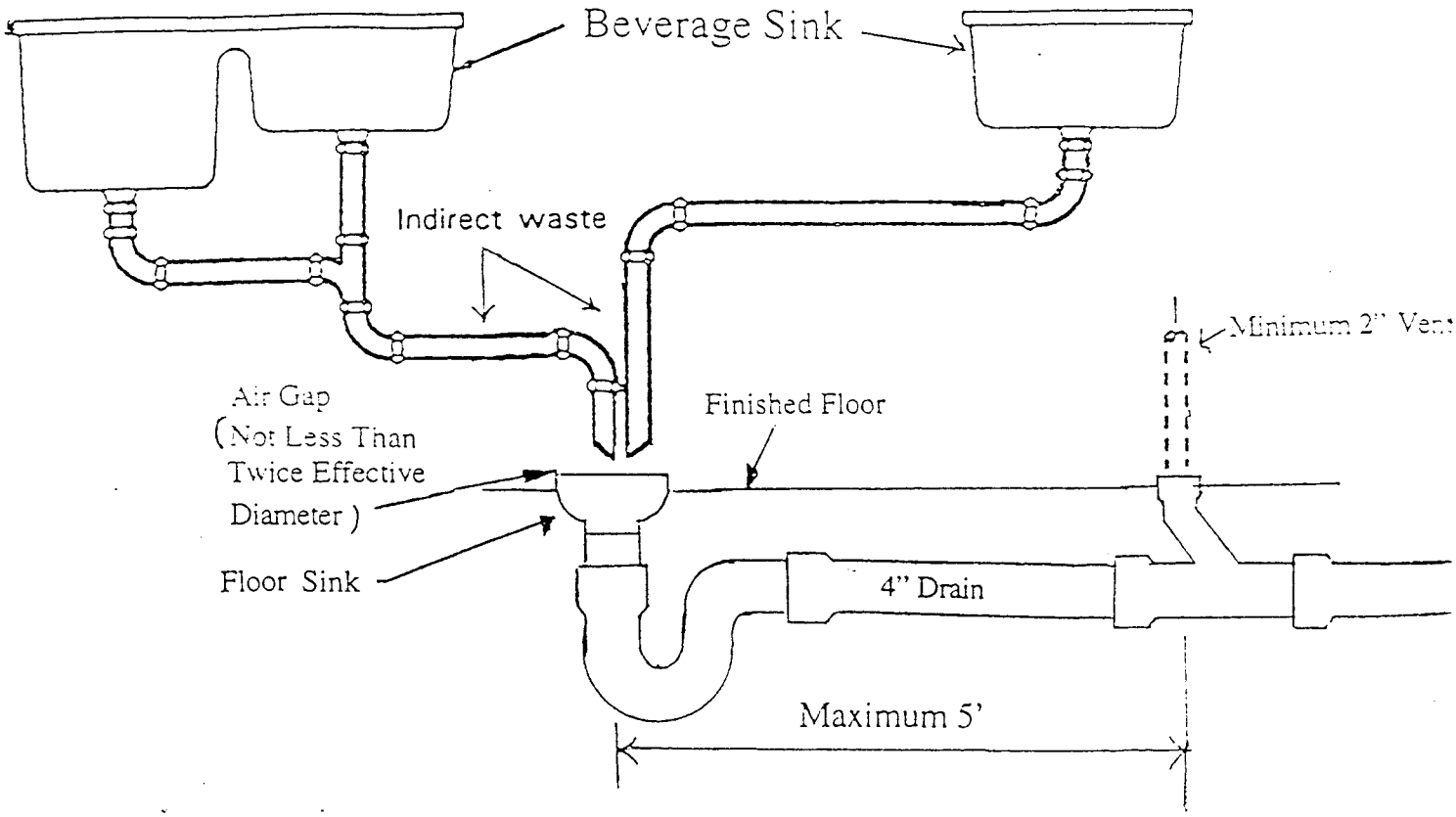
(Referenced in Section 890.1010(a))



Section 890.Appendix H Illustrations for Subpart H

ILLUSTRATION B Indirect Waste Piping #2

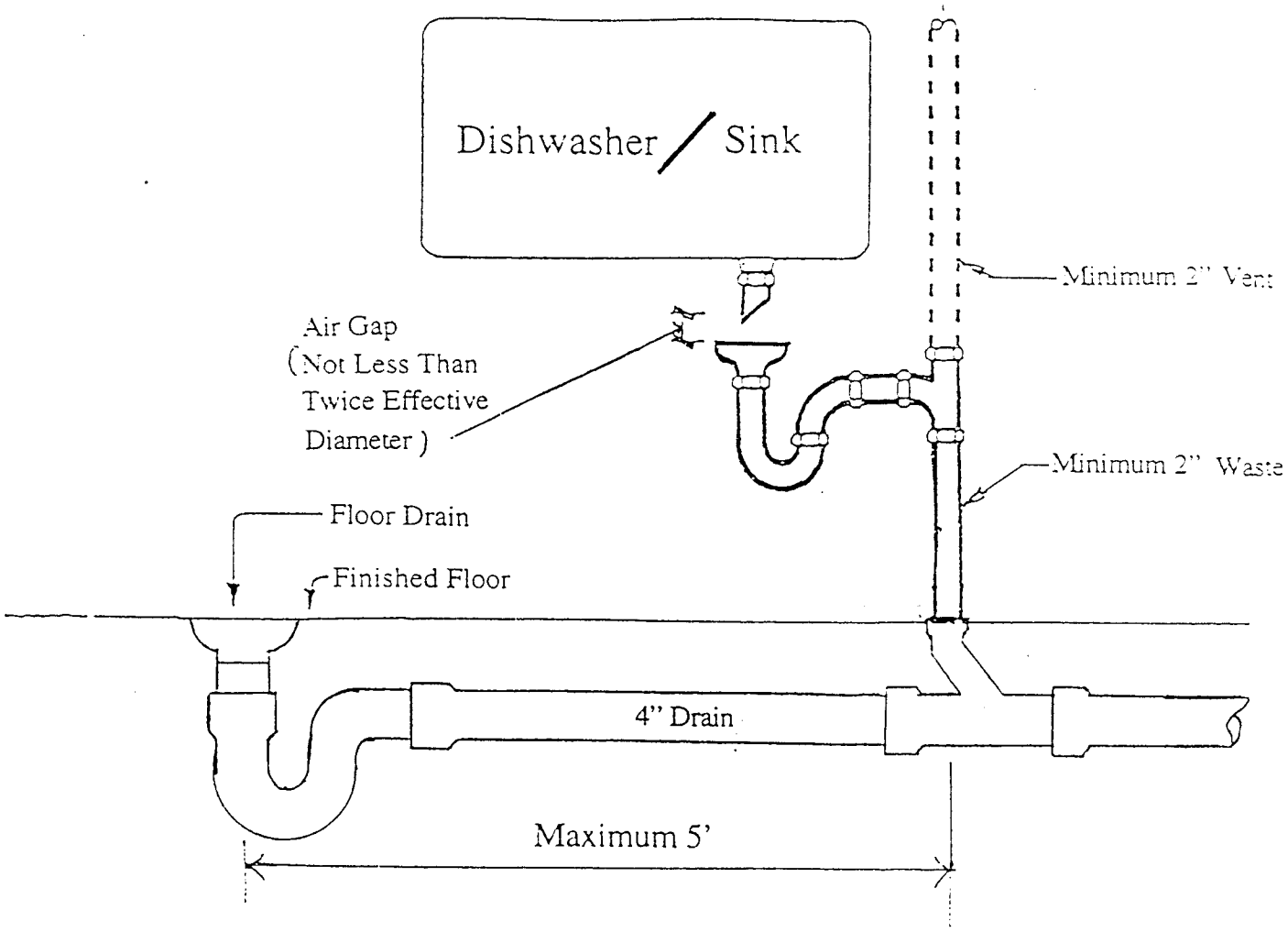
(Referenced in Section 890.1010(a))



Section 890.Appendix H Illustrations for Subpart H

ILLUSTRATION D Indirect Waste Piping #4

(Referenced in Section 890.1010(a))



SECTION	REVISION

Section 890.1140 Special Applications and Installation

890.1140(d)	At the end of this sub-section, add the following: A floor drain shall be provided at any RPZ location. The RPZ shall have an air gap fitting attached and the drain piped to the floor drain.
890.1140(f)	At the end of this sub-section, add the following: Water supplies for chemicals, disinfectants, or rinse agents shall have an in-line permanent backflow preventer installed.
890.1140(g)	At the end of this sub-section, add the following: Water supplies for chemicals, disinfectants, or rinse agents shall have an in-line permanent backflow preventer installed.
890.1140(h)(1)(B)	Change this sub-part to read as follows: Water operated aspirators used for dispensing detergent shall be protected against backflow and back siphonage by a reduced pressure principle backflow preventer assembly.

Section 890.1150 Water Service Pipe Installation

890.1150(a)(1)	At the end of this sub-part, add the following sentence: Appendix A Table A material approval is revised.
890.1150(a)(3)	Delete this sub-part and substitute with the following: Service Pipes - How Laid: All service pipes leading from the street mains into the building shall be laid in the ground to a depth of not less than five (5) feet below the established street grade, nor shall any service pipe be left with less than five (5) feet of cover. The depth of bury shall not exceed eight (8) feet for any water service. Curb cocks and ground valves shall be keyable with a standard length street key.
890.1150(a)(3)	At the end of this sub-part, add the following sub-parts:

4) Stop Cock in the Street - Kind - How Placed and Protected: Each and every water consumer shall have a Mueller, or equal, corporation stop with 1/4 or 1/8 bend and a Mueller pattern curb stop or equal for 1 inch and 1-1/4 inch service. For 1-1/2 inch and 2 inch service, a Mueller, or equal, with Minneapolis pattern should be used. All stop cocks shall be inserted into the service pipe within 2-feet from the outside edge of property line. Where sidewalks cover the entire parkway, the stop cock must be inserted into the service pipe within 2-feet inside the edge of curb. Each and every stop must be protected with a cast iron Buffalo stop cock box, Minneapolis pattern, at least 5-feet long and longer if the case requires and 2-1/2 inches internal diameter with the word “Water” cast on the cover, for 1-inch water service and 3-inch internal diameter for 1-1/2 inch water service or larger. The said stop box in all cases must be placed plumb and square over said stop cock and level with top of sidewalk or curb. Said box shall be supported on a solid foundation of brick, concrete, or concrete slab.

SECTION **REVISION**

(Section 890.1150 Water Service Pipe Installation Continued:)

5) Pipe for Street Service - Quality and Size: No pipe shall be used for the purpose of street service of a different material or size than herein specified, except by special permit from the Village Engineer. All service pipe 2 inches or less internal diameter shall be type K copper water tubing conforming to the requirements (copper water tubing) and all service pipe shall extend from Village water main to the water meter. See revised Appendix A Table A.

6) Copper piping 1-inch in diameter shall be installed in one piece without couplings or joints from the corporation stop at the water main to the curb stop. The minimum size service is 1-inch I.D.

   Copper piping 1-1/2 inches to 2 inches inclusive in diameter shall have a minimum length of 20 feet between couplings, shall be soft tempered type K.

7) The number of joints in the service pipe shall be kept to a minimum. Sweat joints in water services are prohibited.

8) Sections of copper tubing and fittings thereon shall only be connected by means of “flared” type joints using extra heavy three-part joint unions. A flared male adapter shall be used for connection to the main building shut-off at the water meter on copper services.

9) Service Pipe Inspection: The service pipe, on the house side of the curb cock, shall not be covered before it has been inspected and approved by the Plumbing Inspector or an authorized agent of the Village of Gurnee Engineering Department.

10) Water Meters: All water services being supplied from the water distribution system of the Village of Gurnee shall be provided with a Sensus water meter, or approved. All meters must be purchased from the Water Department of the Village of Gurnee and the type and size of such water meters shall be as determined by the Utility Foreman or Assistant of said Village. On all new construction, the meter shall be purchased at the same time and contemporaneously with the application for a permit for water service installation.

    Each and every water consumer shall have an independent water supply pipe and water meter, except a master water meter may be installed, which shall measure all the water supplied to a number of apartments, stores, or offices provided they are located in one building under one ownership.

11) A fine will be levied for illegal unmetered water usage. Continued illegal usage may result in the service shut-off or dug-up and disconnected at the street.
    A) Temporary water meters, regular and hydrant, are available for use from the Village of Gurnee Water Department.

    B) The water meter and remote reader shall be installed prior to the occupancy inspection.

(Section 890.1150 Water Service Pipe Installation Continued:)

12) The use of galvanized piping, fittings, and nipples before the water meter is prohibited.

13) There shall be a full port shut-off at each side of the water meter. A drain cock shall be provided after the water meter. The hose thread shall be protected with a siphon breaker.

14) A bypass shall be provided on all turbine and compound water meters. It shall be a minimum of one-half (1/2) the service size.

15) Meters, 3/4-inch and 1-inch are installed by the Village of Gurnee Water Department. The plumber shall provide proper connections and the needed spread shall be installed and ready for the meter set during rough-in stage.

    Meters 1-1/2 inch and larger will be installed by the plumber, including supports or bases.

16) A conduit shall be run from within 12 inches of the water meter to a location 3-feet from the front corner of the house on the side between 3 to 5-feet off of the ground. Contact the Village of Gurnee Water Department for requirements pertaining to commercial and industrial.

17) All meters shall be installed in the basement where a heated basement exists. All meters shall be located approximately 24 inches above the floor and 4-6 inches from the wall. The entire length of the service from the point of entry to the meter shall always be exposed.

18) All meters shall be set plumb, level, and secured to remain so. They must be in an accessible location, free from obstructions, so they can be easily read and serviced. They shall be protected by the customer from freezing or damage. Brass couplings, nipples, fittings, and unions shall be installed on the inlet and outlet side of the meter. On compound or turbine-type meters, flanged connections shall be made. Repair of damaged meters shall be paid for by customer.

19) Malleable water services shall be independent from each other and each provided with its own meter.

20) In residential districts where there is no basement, the water meter shall be located inside the home in a heated area (in an accessible location that can be easily serviced) and provided with a water meter, touchpad, or approved devices so that readings can be made from a register fastened to the outside of the residence.

    All meters installed in new residential single and duplexes must be equipped with a touchpad. The cost of the touchpad is included in the permit fee.

21) At no time shall water meters be installed in washrooms.

(Section 890.1150 Water Service Pipe Installation Continued:)

22) In business or manufacturing districts, the location of the meter shall be at the discretion of the Foreman of the Water Department.

23) Tapping and Cutting on a Water Main: All applicants for permits to connect water service pipes with any supply pipe must be made to the Building Department. Said water connection shall be of copper, type K tubing for 2-inch and under. Three and 4-inch diameter shall be ductile iron, and for 6-inch and over, ductile iron pipe. The water connection for 2-inch type K copper or under shall be of the Mueller "O" ring type or its approved equivalent, all furnished by a licensed plumber. Connections shall be made by a licensed plumber after a permit has been issued and paid for, as heretofore provided.

24) For all connections requiring a service three (3)-inches or larger in diameter, the connections shall be made with ductile iron fittings and all materials required therefore shall be furnished and installed by a licensed plumber. The fee shall be determined and set by Village Ordinance.

    For all connections requiring a water service three (3)-inches or larger, one of the following methods will be used.

    A) Cut-in a dry water main will be permitted if agreement can be reached by the water customer effected by a shut-off of water main. Water main valves will be operated by members of the Water Department only. The connection will be made with ductile iron fittings and all materials required therefore shall be furnished and installed by a licensed plumber.

    B) Cut-in on a water main under pressure will be required if it is not possible or convenient to valve off the section in which the cut is to be made. The connection shall be made with ductile iron Mueller or approved tapping sleeves and tapping valves. The cast iron cover on all vaults will be Neenah Foundry #R-1015 or approved equal.

SECTION **REVISION**

(Section 890.1150 Water Service Pipe Installation Continued:)

C) Permits shall be taken out before any cut-in on a water main is made. Twenty-four (24) hour notice of any cut-in must be given to the Superintendent of the Water Department. The location of all cutting-in tees, cutting-in valves, and shut-off valves on any water service or connection two (2) inches or over shall meet with the approval by the Plumbing Inspector or an authorized agent of the Village of Gurnee Engineering Department. All completed work on water services or connections two (2) inches and over shall be inspected and approved by the Plumbing Inspector or an authorized agent of the Village of Gurnee Engineering Department before back filling any part of the trench. No valves on any water main shall be operated by any person other than authorized employees of the Water or Engineering Departments.

890.1150(c) At the end of this section, add the following sentence: Provisions shall be made for drainage of all hydrants.

Section 890.1190 Water Supply Control Valves and Meter

890.1190(a) Delete this sub-section and replace with: See Section 890.1150(a)(13).

890.1190(b) Delete this sub-section and replace with: See Sections 890.1150(a)(17), 890.1150(a)(18), 890.1150(a)(19), 890.1150(a)(20), and 890.1150(a)(21).

890.1190(d) At the end of this sub-section, add the following sentence: Each unit shall have a main shut-off within the unit, location to be typical in all units, accessible and marked “main shut-off”.

Section 890.1200 Water Service Sizing

890.1200(a) Change this sub-section to read as follows: Water Service Pipe Sizing. The water service pipe from the street main (including the tap) to the water distribution system for the building shall be sized in accordance with Appendix A, Tables, M, N, O, P, and Q. Water service pipe and fittings shall be a minimum one (1) inch diameter. If flushometers or other devices requiring a high rate of water flow are used, the water service pipe shall be designed and installed to provide this additional flow.

890.1200(c) Change the last sentence of this sub-section to read as follows: A developed length of more than eighteen (18) inches shall be considered a dead end.

Section 890.1210 Design of a Building Water Distribution System

890.1210(b) Delete Exception paragraph without substitution.

890.1210(f) Change this sub-section to read as follows: Water Hammer. All building water supply systems shall be provided with pipe and cap air chambers. They shall be located at each water outlet or fixture supply termination, and the tops of all risers.

SECTION	REVISION
(Section 890.1210 Design of a Building Water Distribution System Continued:)	
890.1210(f)(1)	At the end of this sub-part, add the following sentence: All air chambers shall be 24 x I.D. of pipe serving the fixture supply.
890.1210(f)(2)	At the end of this sub-part, add the following sentence: See comments above in sub-section f).
Section 890.1220 Hot Water Supply and Distribution	
890.1220(a)(8)	Change this sub-part to read as follows: All water heating equipment shall have a properly sized temperature and pressure relief valve, based upon the energy input rating of the heater, shall be installed with the temperature sensing element immersed in the tank.
890.1220(a)(10)(A)	Delete this sub-part and substitute with the following: Reference 890.1220(a)(8).
Section 890.1230 Safety Devices	
890.1230(c)(2)	Delete the last sentence and change to read as follows: (See Appendix I: Illustrations O.)
890.1230(c)(3)	Delete Exception paragraph without substitution.
890.1230(d)(4)	Change this sub-part to read as follows: The discharge piping shall discharge indirectly into a floor drain, hub drain, service sink, sump or a trapped and vented P-trap. {See Sections 890.1010 and 890.1050(a), (b), and (c).} The trap must have a deep seal to protect against evaporation. (The use of a light grade oil in the trap will retard evaporation).
Section 890.1240 Miscellaneous	
890.1240	Change this section to sub-section a) and add the following sub-sections: a) Drain Cock. All storage tanks shall be equipped with drain cocks. b) Fire Suppression and Protection: 1) The licensed plumber for the project shall install the backflow protection for any fire suppression system, including all inlet piping to said valve. NO EXCEPTIONS. 2) In any building where a suppression system is not installed, the plumber shall provide a sprinkler head in front of and within 5-feet of any gas burning boiler, water heater, or furnace.

SECTION **REVISION**

(Section 890.1240 Miscellaneous Continued:)

3) The length of the branch supplying the head is restricted to a maximum length of 18 inches. Any run exceeding 18 inches shall be provided with a double check valve. Alternate, re-design piping to provide continuous flow past head when domestic water is drawn.

4) For residences, a 165° pendant sprinkler head shall be used.

5) Appliance locations and arrangements may require more than a single head in residences.

c) Irrigation, Lawn Sprinkler, Swimming Pools, or Any Other System Requiring Backflow Protection. Said device shall be installed by the licensed plumber.

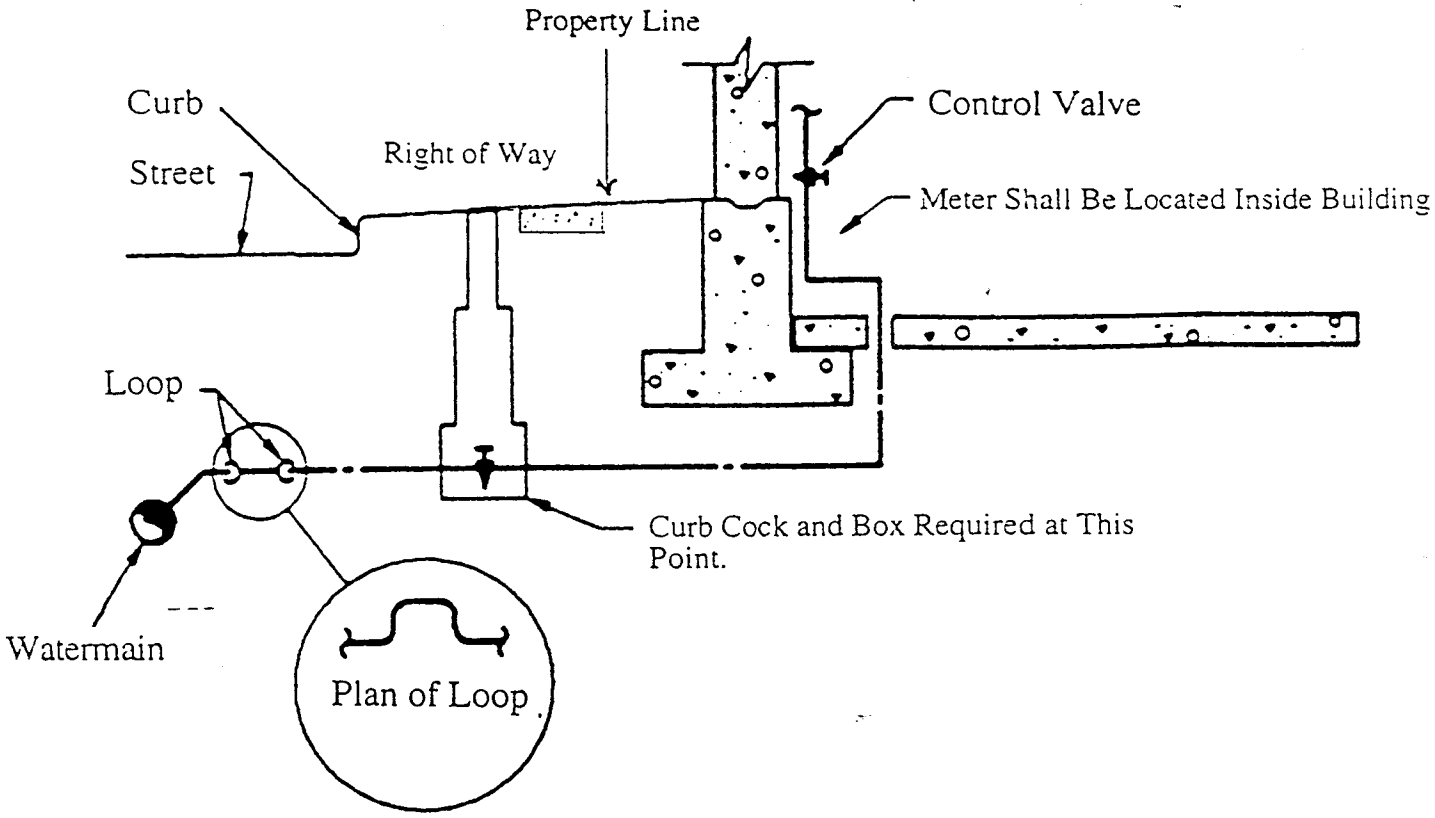
890 Appendix I Illustrations for Subpart I

890. Appendix I Illustration A	Add the following: Reference Village of Gurnee Cross-Control Connection Ordinances or Administrative Authority for assistance in the requirements and design of the system.
890.Appendix I Illustration H	Add the following: See Revised Illustration H.
890.Appendix I Illustration I	Delete without substitution.
890.Appendix I Illustration J	Add the following: See Revised Illustration J.
890.Appendix I Illustration L	Add the following: See revised Illustration L.
890.Appendix I Illustration M	Add the following: See Revised Illustration M.
890.Appendix I Illustration N	Delete without substitution.

Section 890.Appendix I Illustrations for Subpart I

ILLUSTRATION H Water Supply Control

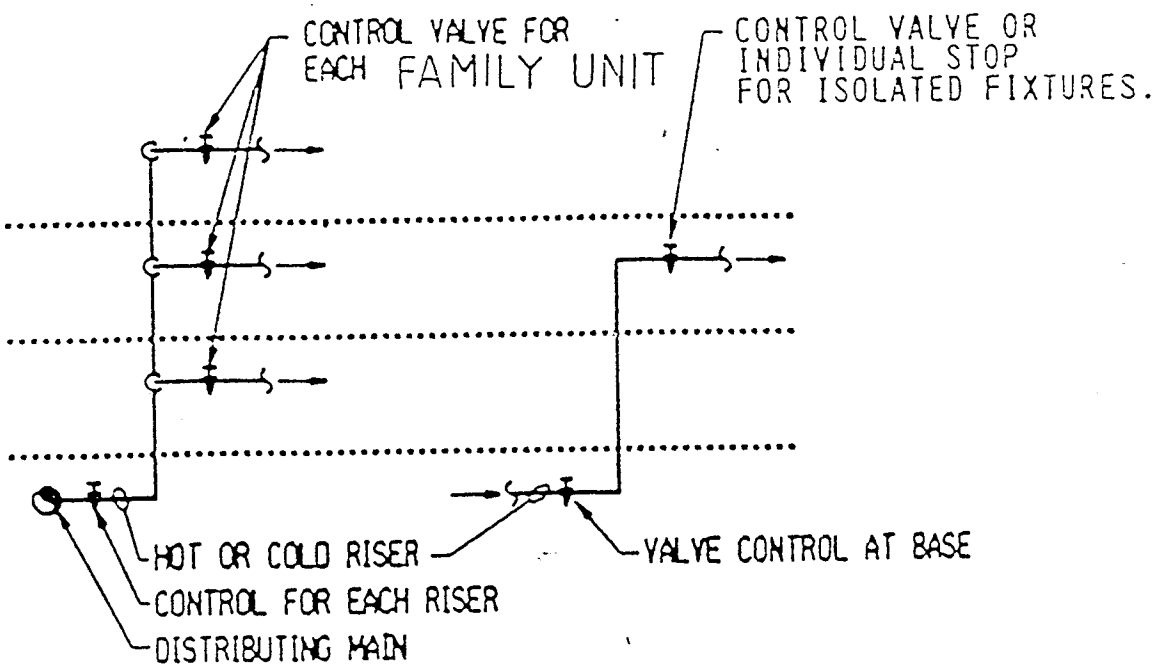
(Referenced in Section 890.1190(a) & (b))



Section 890.Appendix I Illustrations for Subpart I

ILLUSTRATION J Separate Controls for Each Family Unit

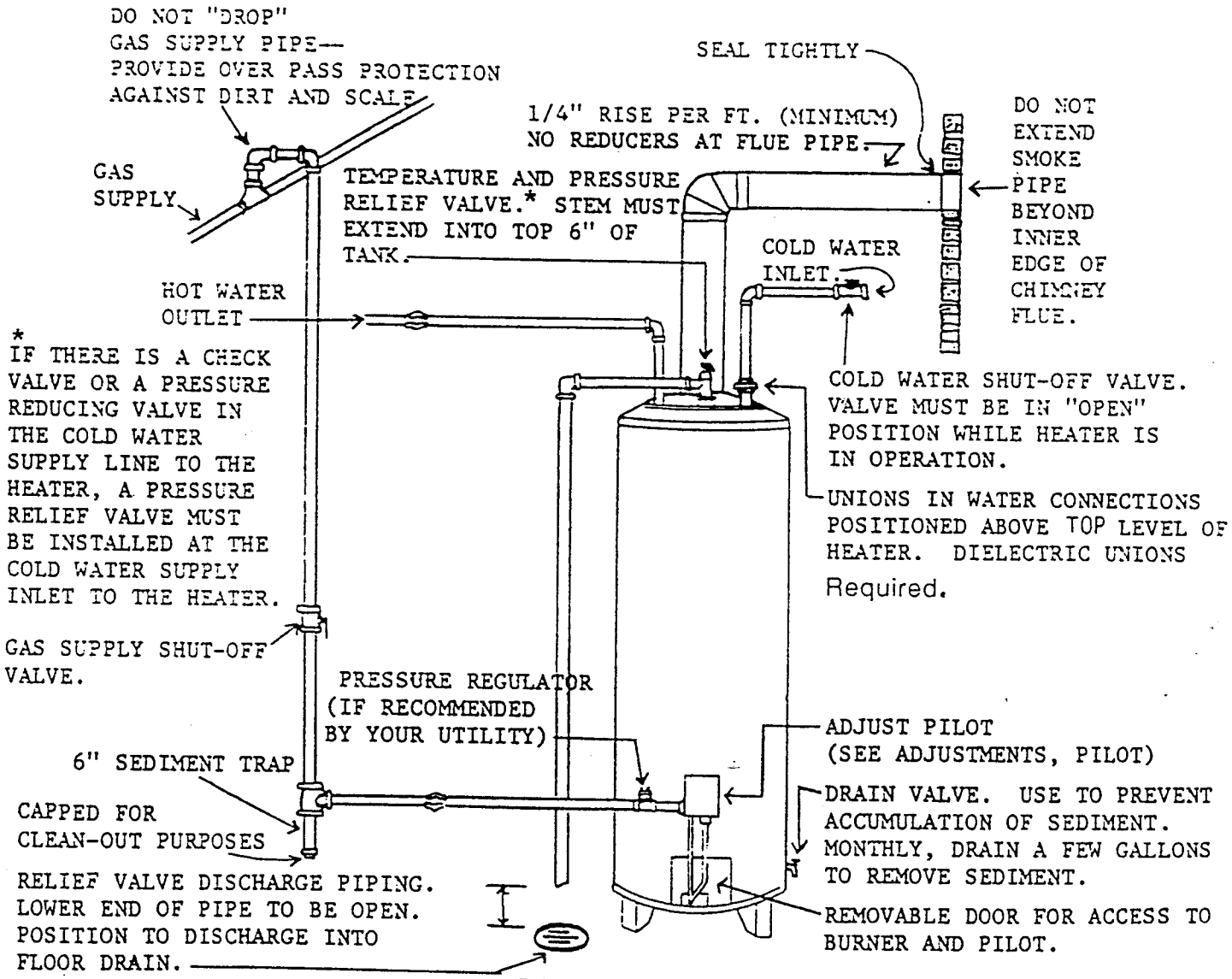
(Referenced in Section 890.1190(d))



Section 890.Appendix I Illustrations for Subpart I

ILLUSTRATION L Typical Gas Water Heater

(Referenced in Section 890.1220(a)(1))



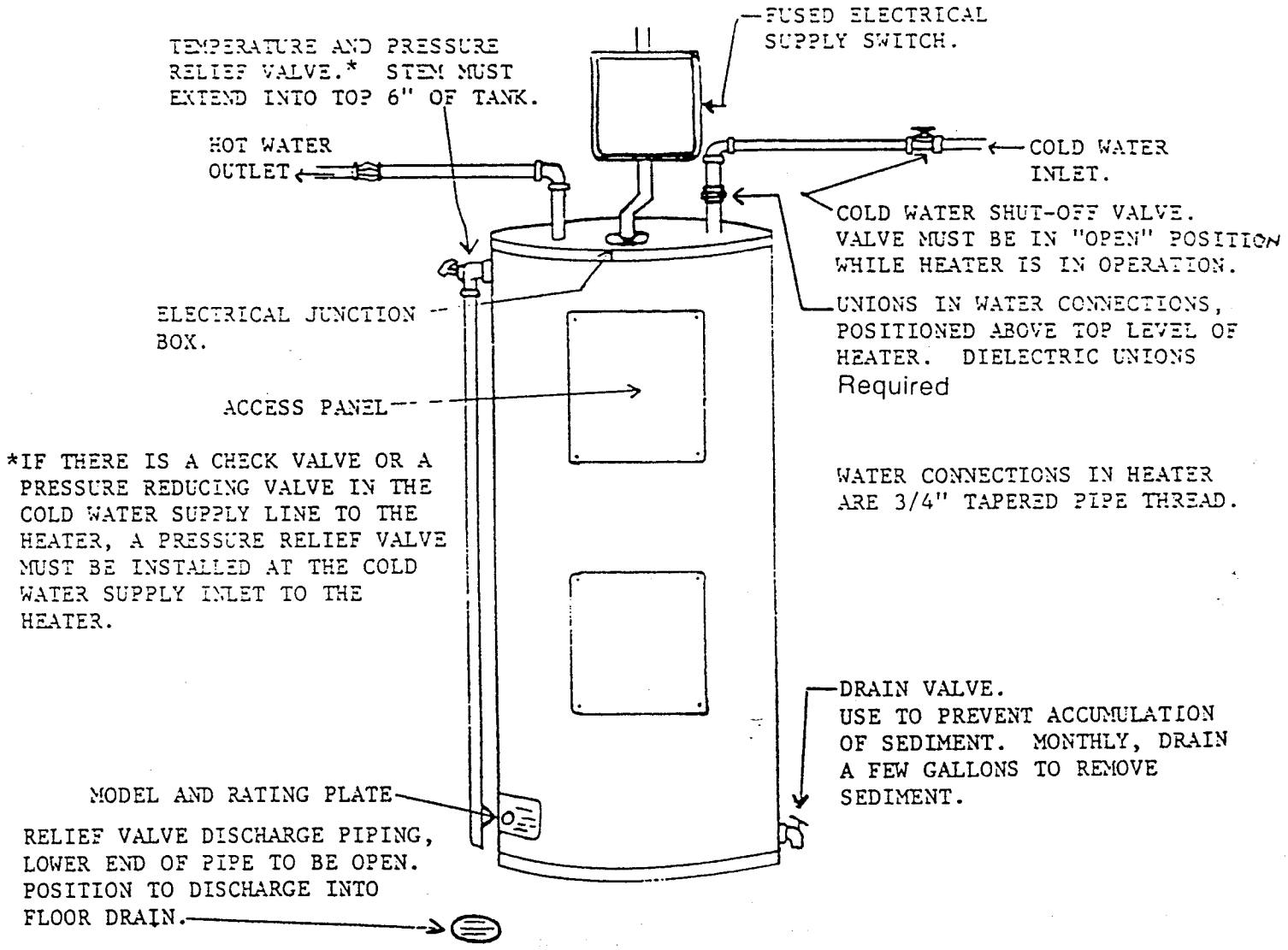
RECOMMENDED INSTALLATION

TYPICAL GAS WATER HEATER

Section 890.Appendix I Illustrations for Subpart I

ILLUSTRATION M Typical Electric Water Heater

(Referenced in Section 890.1220(a)(1))



RECOMMENDED INSTALLATION

TYPICAL ELECTRIC WATER HEATER

SECTION **REVISION**

Section 890.1310 Materials

890.1310(a) At the end of this sub-section add the following: See revised list Appendix A Table A.

Section 890.1320 Drainage System Installed

890.1320 (a) Change this sub-section to read as follows and add the following sub-parts:

a) Drain - Filled Ground. A building drain installed in filled ground shall be of cast iron.

1) All underground building drains shall be of cast iron soil pipe to five (5) feet outside the building wall minimum.

2) Every new main or branch soil waste and vent pipe within a building shall be of cast iron.

3) Vertical Riser Stubs - No galvanized steel, PVC, or copper pipe eighteen (18) inches or more in length shall be installed underground, unless installed inside a shaft or housing where the pipe is not in direct contact with the ground.

4) Liquid wastes of a temperature exceeding 160 degrees Fahrenheit shall not discharge into any drain or sewer. Wastes of a higher temperature shall not discharge directly into any drain or sewer. Wastes of a higher temperature shall be intercepted and cooled to 160 degrees Fahrenheit, or less. Inside blow-off basins shall be of cast iron and shall be trapped and vented to the outside of the building by means of a vent pipe through the roof.

5) See Section 890.1910 and 1920 - Inspection Requirements.

6) Plumbers shall see that sand, limestone screenings, or pea fill is covered over underground piping after the inspection is made.

7) Thru foundation wall installation of building sewer shall be of Class 52 ductile iron ASTM-A-377-1984.

890.1320(b) Change this sub-section to read as follows and add the following sub-parts:

b) Existing Drain and Sewer Installation: Existing drain, waste, vent, and sewer may be used in the renovation of the plumbing system of an existing structure if they are in serviceable condition and the materials conform with Appendix A, Table A, “Approved Building Drainage/Vent Pipe” and “Approved Materials for Building Sewer.” If the old work is found defective, the Administrative Authority shall notify the owner to make the necessary changes to conform with this Code.

SECTION	REVISION

(Section 890.1320 Drainage System Installed Continued;)

1) Independent System. The drainage and plumbing system of each new building and of new work installed in an existing building 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.

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

890.1320(i) Delete the Exception paragraph without substitution.

890.1320(j) At the end of this sub-section, add the following: Extrusion of branch inlets into copper DWV is prohibited.

890.1320(l) At the end of this sub-section, add the following: See Section 890.1520 Circuit and Loop Venting.

890.1320(m) Change this sub-section, to read as follows: Back-to-Back Fixtures. Back-to-back fixtures shall be installed with fittings that will prevent mixing of the discharge prior to a change in direction of flow of the discharge from each fixture, or shall be installed with fittings especially designed to eliminate throw-over or backflow of the discharge from one fixture to the other fixture in horizontal installations. For vertical wastes, crosses only shall be used. See Hydraulic Gradient, Section 890.1490.

Section 890.1340 Determination of Sizes for Drainage System

890.1340(d) Change this sub-section to read as follows: Stacked tees are prohibited for kitchen sinks. All sink waste openings shall be continuously vented within eighteen (18) inches of trap inlet. Arms are prohibited. A two (2) inch cleanout shall be provided at trap connections.

890.1340(e) Change this sub-section to read as follows: Future Fixtures: When provision is made for the future installation of fixtures, those provided for shall be considered in determining the required size of drain and vent piping during initial construction. Piping provided for such future installation of fixtures may be terminated with a plugged fitting or fittings at the stack so as to form no dead ends, or the waste and vent system may be completed and tested. Future basement rough-ins shall have a vent run from each opening in the floor to the building venting system.

SECTION	REVISION
Section 890.1360 Sanitary Wastes Below Sewer	
890.1360(a)(1)	At the end of this sub-part, add the following: The Village of Gurnee prohibits gravity drainage of any fixture below grade, including floor drains directly into the sanitary system. All fixtures shall discharge into a proper ejector pit and be pumped into the elevated sanitary main drain or stack. Said pump discharge piping shall be metal or solid core PVC, and have a full port valve and a solid check valve installed. See Appendix J, Revised Illustrations K and L.
890.1360(a)(2)	At the end of this sub-part, add the following: Ejector pits that have been damaged or modified to assist sub-soil drainage shall be replaced.
890.1360(b)	At the end of this sub-section, add the following: Ejector pits shall be a minimum thirty (30) inches in depth. The pit shall be sized to the potential D.F.U. load.
890.1360(c)	At the end of this sub-section, add the following: All floor drains shall be vented.
890.1360(f)	Delete this sub-section and substitute with the following: See Section 890.1320(a)(4).
Section 890.1370 Floor Drains	
890.1370(a)	At the end of this sub-section, add the following: A vented floor drain shall be provided at the location of any RPZ backflow preventer to receive its discharges. Floor drains shall be provided in all laundry rooms with concrete floors, residential or commercial.
890.1370(a)(1)	Delete this sub-part and substitute with the following: All floor drains shall be vented.
890.1370(a)(2)	Change this sub-part to read as follows: Each floor drain shall be connected to a sanitary waste drain, except hub drains receiving only clear water discharges which may be connected to the sub-soil drainage system. Any sump or hub drain for receiving clear water waste shall extend two (2) inches above the floor, and all indirect clear water waste lines shall be above the floor level. Top of pits damaged or modified shall have a concrete curb poured two (2) inches high x four (4) inches wide around its perimeter. Any floor drain level with the floor shall discharge to a sanitary waste drain (See Appendix A: Tables F and Revised Table I.
890.1370(a)(4)	Delete this sub-section and substitute with the following: See Section 890.1370(a)(3).
890.1370(b)	Change this sub-section to read as follows: Size. Each floor drain shall be sized for its intended use and the surface area that it drains. Any floor drain installed below a basement floor or underground shall be no less than four (4) inches in diameter.
890.1370(d)	Change this sub-section to read as follows: Provision for Evaporation. Floor drain seals subject to evaporation shall be of the deep seal type and may be filled with vegetable oil. Trap primers are prohibited.

SECTION **REVISION**

(Section 890.1370 Floor Drains Continued:)

890.1370(e)(3) Change this sub-part to read as follows: Floor drains shall be indirectly discharged to the drainage system.

Section 890.1380 Storm Water Drainage Within a Building

890.1380 Change this section to sub-section a) as follows and add the following sub-sections:

a) Any piping installed within a building for the purpose of carrying storm water shall conform with the requirements of Appendix A, Table A ("Approved Building Drainage/Vent Pipe"), and Sections 890.910 through 890.930, and Section 890.420.

b) Drainage Required. Roofs, paved areas, yards, courts, and courtyards shall be drained into a storm sewer system where such systems are available.

Prohibited Drainage. Storm water shall not be drained into sanitary sewers.

c) Sub-soil Drains. Sub-soil drains shall discharge into a sump. Such sumps do not require vents.

d) All buildings, except above grade slab construction, shall be required to have a proper sub-soil drainage system. All sump pumps and sump pump discharge lines shall be no less than 1-1/2 diameter, and have a vertical check. The piping shall be secured to the building. Cellular core PVC is prohibited for pressurized piping. An air gap shall be provided at the sump pump discharge line to the storm sewer. See Appendix J Illustration M.

e) Sump pump discharges shall meet Village of Gurnee Engineering Department requirements.

SECTION **REVISION**

(Section 890.1380 Storm Water Drainage Within a Building Continued:)

h) Underground Storm Drains Within Buildings. All drains within buildings, when underground, shall be of cast iron soil pipe to a distance beyond the footings or bearing walls to undisturbed earth, and in no case less than five (5)-feet.

i) Traps. No traps shall be required for storm water drains which are connected to a sewer carrying storm water.

Exception. An area well drain for an enclosure to an air intake of a ventilating unit shall be trapped.

j) Conductors and Connections.

1) Conductor pipes shall not be used as soil, waste, or vent pipes; nor shall soil, waste, or vent pipes be used as conductors.

2) Rain water conductors installed along alley ways, driveways, or other locations where they may be exposed to damage shall be protected by metal guards, recessed into the wall, or constructed from standard weight galvanized steel pipe or equivalent.

3) Expansion Joints. Expansion joints shall be provided where warranted by temperature variations or physical conditions, as per manufacturer's installation instructions.

4) All piping within the interior, vertical, or horizontal shall be secured and supported, as per Sub-Part G, all sub-sections.

5) All PVC fittings shall bear an ASTM design number embossed into it, or an approved manufacturer's label.

6) A cleanout shall be provided at the base of each leader. Cleanouts shall follow Section 890.420 guidelines.

k) Roof Drains

1) Material. Roof drains shall be of cast iron, or other acceptable corrosion-resisting material.

SECTION **REVISION**

(Section 890.1380 Storm Water Drainage Within a Building Continued:)

2) Strainers. All roof areas, except those draining to hanging gutters, shall be equipped with roof drains having strainers extending not less than four (4)-inches above the surface of the roof immediately adjacent to the roof drain. Strainers shall have an available inlet area, above roof level, of not less than 1-1/4 times the area of the conductor or leader to which the drain is connected.

3) Flat Decks. Roof drain strainers for use on sun decks, parking decks, and similar areas normally serviced and maintained may be of the flat surface type, level with the deck and shall have an available inlet area not less than 2 times the area of the conductor or leader to which the drain is connected.

4) Roof Drain Flashings. The connection between roofs and roof drains which pass through the roof and into the interior of the building shall be made watertight by the use of proper flashing or roofing material.

5) Roof drains shall be mounted in deck sump pans on metal sheated roofs. The head shall be secured to the sump pan with the manufacturer's specific under deck clamping hardware. These types of installations shall be provided with an approved expansion joint at the heads outlet.

6) Roof drains mounted in wood or concrete decks shall be securely attached with under deck mounting hardware, with provisions for piping expansion.

l) PVC piping penetrating fire rated assemblies shall be protected with fire collars, or as per Village of Gurnee code requirements.

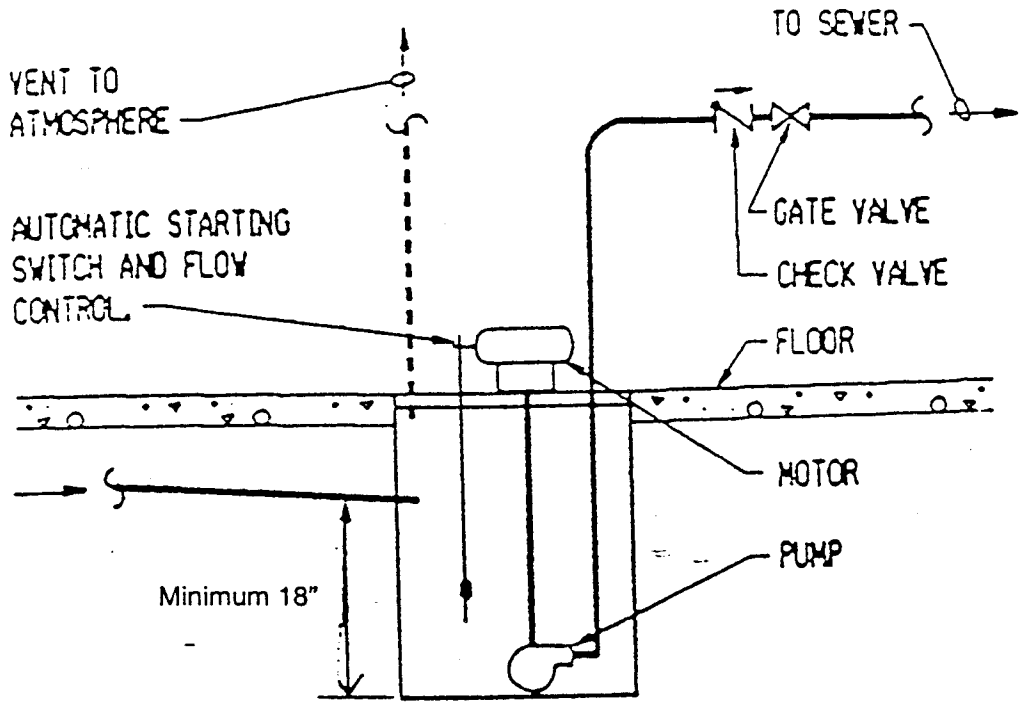
890 Appendix J Illustrations for Subpart J

890.Appendix J Illustration E	Add: Circuit Venting is prohibited.
890.Appendix J Illustration K	Add the following: See Revised Illustration K.
890.Appendix J Illustration L	Add the following: See Revised Illustration L.
890.Appendix J Illustration M	Add the following: See Revised Illustration M.

Section 890.Appendix J Illustrations for Subpart J

ILLUSTRATION K Drainage Below Sewer Level

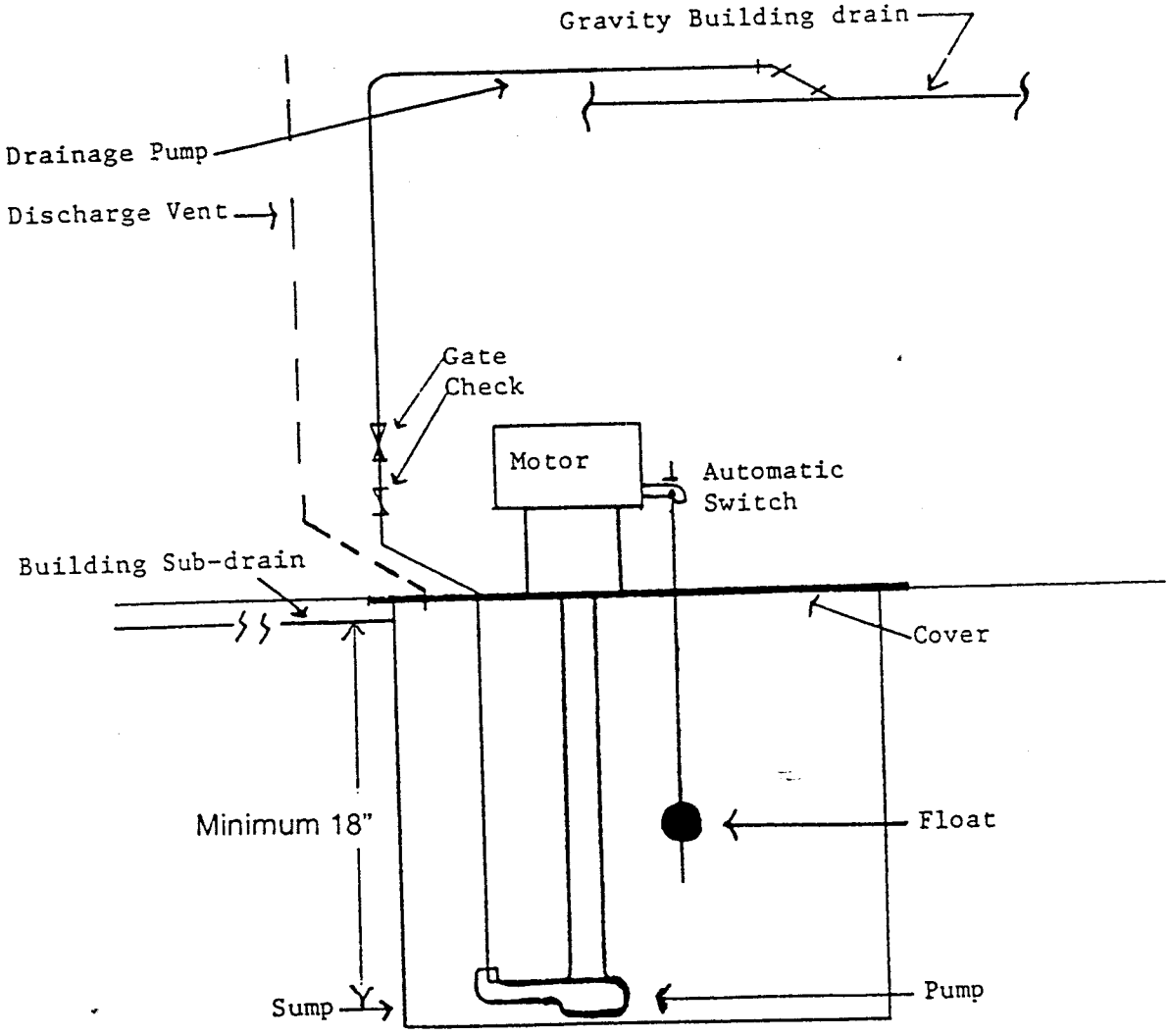
(Referenced in Section 890.1360(a)(1))



Section 890.Appendix J Illustrations for Subpart J

ILLUSTRATION L Sanitary Wastes Below Sewer

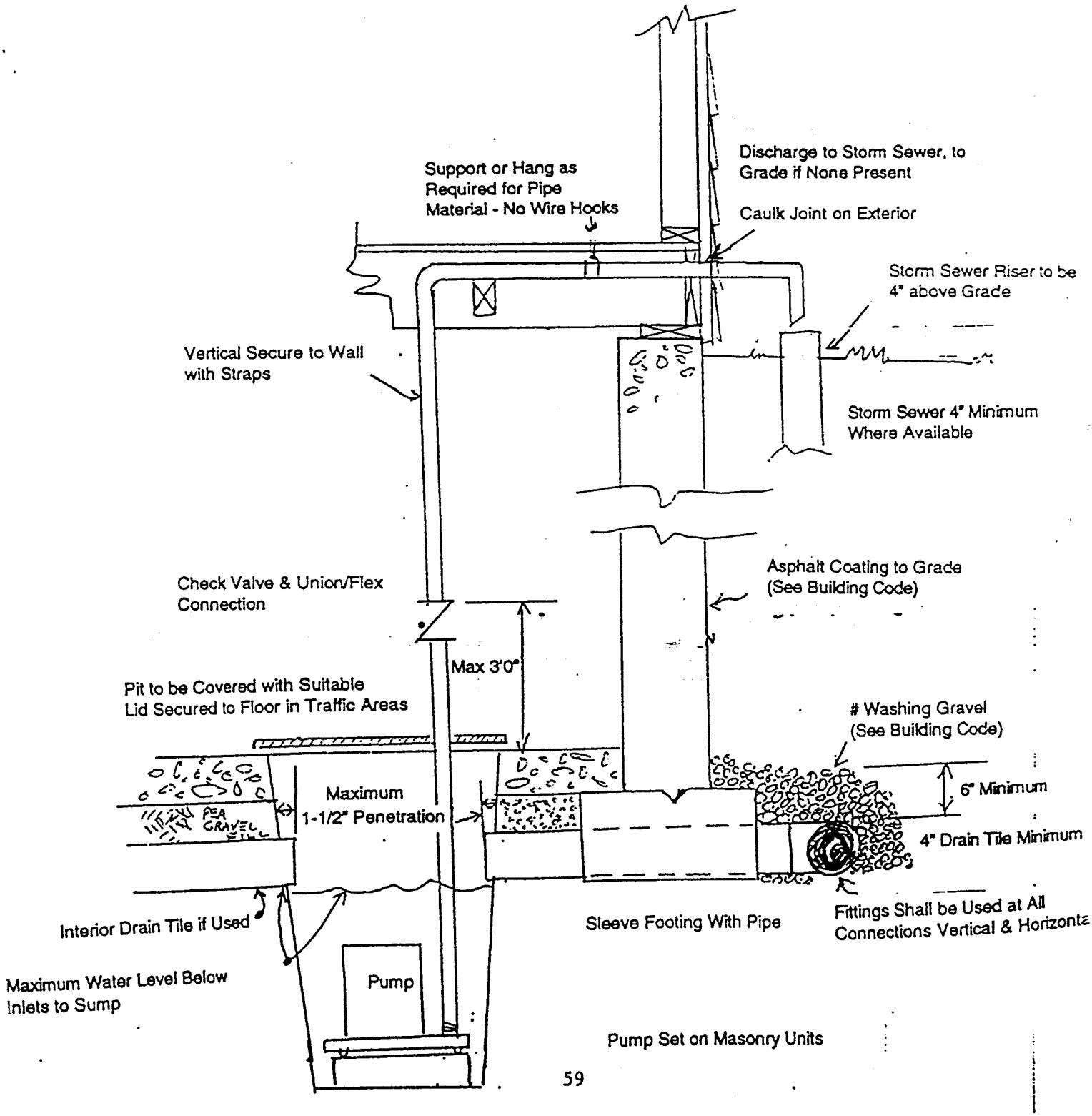
(Referenced in Section 890.1350(a)(1))



SECTION 890.APPENDIX J ILLUSTRATIONS FOR SUB-PART J

ILLUSTRATION M

Referenced in Section 890.1380 (d)



SECTION	REVISION

890.1420 Stack Vents, Vent Stacks, Main Vents

890.1420(a)	At the end of this sub-section, add the following: 890.410(f)(3) regarding trap primers.
890.1420(b)	At the end of this sub-section, add the following: Delete upper illustration showing lavatory arm.
890.1420(d)	Change this sub-section to read as follows: Main Stack. Each building, habitable dwelling unit, or commercial occupied space in which plumbing is installed shall have at least one main vent stack no smaller than three (3) inches for each building drain installed. Every main vent or vent stack shall connect full size at its base to the main soil or waste pipe at or below the lowest fixture branch, and shall be reconnected with the main soil or waste vent not less than six (6) inches above the spill line of the highest fixture, or shall be extended to and increased in size at the roof. (See Appendix A: Table K and Appendix K: Illustration C).
890.1420(e)	At the end of this sub-section, add the following sub-section: f) In all new or remodeled work there shall be a two (2) inch vent pipe brought below the basement ceiling for future basement fixtures, whether roughed in or not. The vent shall be capped or plugged in case the fixtures are not installed.

890.1430 Vent Terminals

890.1430(c)	Change this sub-section to read as follows: Location of Vent Terminal. No vent terminal from a drainage system shall be directly beneath a door, window, overhang, or other ventilating intake opening of the building, nor shall any such vent terminals be within twelve (12) feet horizontally of such an opening unless it is at least five (5) feet above the top of such opening. (See Appendix K: Illustration E, Revised).
890.1430(d)	At the end of this sub-section, add the following: See Village of Gurnee Building Code regarding false walls.

890.1440 Vent Terminal Size

890.1440(a)	Change this sub-section to read as follows: Vent Terminal Size. Each vent extension through the roof shall have a diameter at least one inch greater than that of the pipe proper; but in no case shall it be less than three (3) inches in diameter through and above the roof.
890.1440(b)	At the end of this sub-section, add the following: See Section 890.380(a).

SECTION	REVISION

890.1450 Vent Grades and Connections

890.1450(b)	At the end of this sub-section, add the following: See Revised Drawing.
890.1450(d)	At the end of this sub-section, add the following sub-part: 1) See Village of Gurnee Building Code regarding penetration limitations and requirements, (i.e., a two {2}-inch vent line requires a 2-9/16" diameter hole. A hole this size can not be drilled in a load bearing two {2"} inch x four {4"} inch structural framing member).
890.1450(e)	Change this sub-section to read as follows: Heel or Side-Inlet Bend. A heel or side-inlet quarter bend or closet bend shall not be used as a dry or a wet vent when the inlet is placed in a horizontal position of a waste line (See Appendix K: Illustration I Revised Drawings).

890.1460 Fixtures Back-to-Back

890.1460	Change this section to read as follows: Distance. Two fixtures set back-to-back, within the distance allowed between a trap and its vent 18" C to C, may be served with one (1) continuous soil or waste vent pipe, provided that each fixture discharges separately into an approved double fitting having inlet openings at the same level. (See Section 890.1480(b), and Appendix K: Illustration K Revised Drawings).

890.1470 Fixture Trap Vents

890.1470(a)	At the end of this sub-section, change the following: Appendix A: Table I to Appendix A: Table I Revised.

890.1480 Types of Fixture Trap Vents

890.1480(c)	Change this sub-section to read as follows: Vertical Wet Vent. A vertical wet vent may be used for two fixtures set on the same floor level, but connecting at different levels in the stack, provided the vertical drain and vertical vent is one (1) pipe diameter larger than the upper fixture drain and that both drains conform to Appendix A: Table I. (See Appendix K: Illustration P and Q Revised).

890.1490 Installation of Vents for Fixture Traps

890.1490(b)	Change this sub-section to read as follows: Different Level. If any stack has fixtures entering at different levels, the fixtures other than the fixtures entering at the highest level shall be vented.
890.1490(c)	Change this sub-section to read as follows: Horizontal Branch Drains. Where a water closet discharges into a branch drain, each fixture discharging into that branch drain shall be individually vented.

890.1500 Installation of Wet Venting

890.1500(a)	Change this sub-section to read as follows: Single Bathroom Groups.
890.1500(a)(1)	Delete this sub-part without substitution.

SECTION	REVISION

(890.1500 Installation of Wet Venting Continued:)

890.1500(a)(2) Change this sub-part to read as follows: The horizontal branch shall be a minimum of two (2) inches and connect to the stack at the same level as the water closet drain. (See Appendix K: Illustration S Revised).

890.1500(a)(2) At the end of this sub-part, add the following sub-parts:

3) Wet venting is permitted for fixtures on the same floor and in the same room only (i.e. water closet and lavatories, a floor drain and laundry tray or stand pipe). Consult with the Plumbing Inspector for approval of any wet vent application.

4) When a lavatory and water closet are installed on the first floor of any building or structure and the main bath on the second floor, the lavatory on the first floor may be installed on a two (2) inch vent serving the first floor water closet.

One fixture unit may be installed on a four (4) inch stack above the unrevented to water closet or stack connection. When the top water closet is installed in the horizontal portion of an off-set soil stack, it will be necessary to install a fixture above the water closet connection to wash the horizontal portion of such stack. (See Appendix K: Illustration S Revised.)

890.1500(b) Change this sub-section to read as follows: Double Bathroom Groups. Bathroom groups back-to-back on the top floor consisting of two (2) lavatories and two (2) bathtubs or showers may be installed on the same horizontal branch with a common vent for the lavatories and with individual vents for bathtubs or showers, provided the wet vent is two (2) inches in diameter, and the length of the fixture drain conforms to Appendix A: Table E (See Appendix K: Illustration T Revised).

890.1500(c) Change this sub-section to read as follows: Multi-Story Bathroom Groups. On the lower floors of a multi-story building, the waste pipe from one (1) or two (2) lavatories may be used as a wet vent for one (1) or two (2) water closets. (See Appendix K: Illustration V Revised).

890.1500(c)(3) At the end of this sub-part, add the following sub-part:

4) Unit Vents. Where two fixtures are location on opposite sides of walls on the same floor, they may have a common waste and vent.

890.1510 Stack Venting

890.1510 Change this section to read as follows: Delete. Stack venting as described in Section 890 Appendix K: Illustration X. Reference revised illustrations for the needed information.

890.1520 Circuit and Loop Venting

890.1520(a) Delete this sub-section without substitution.

890.1520(b) Change this sub-section to read as follows: Dual Branches. These methods are prohibited.

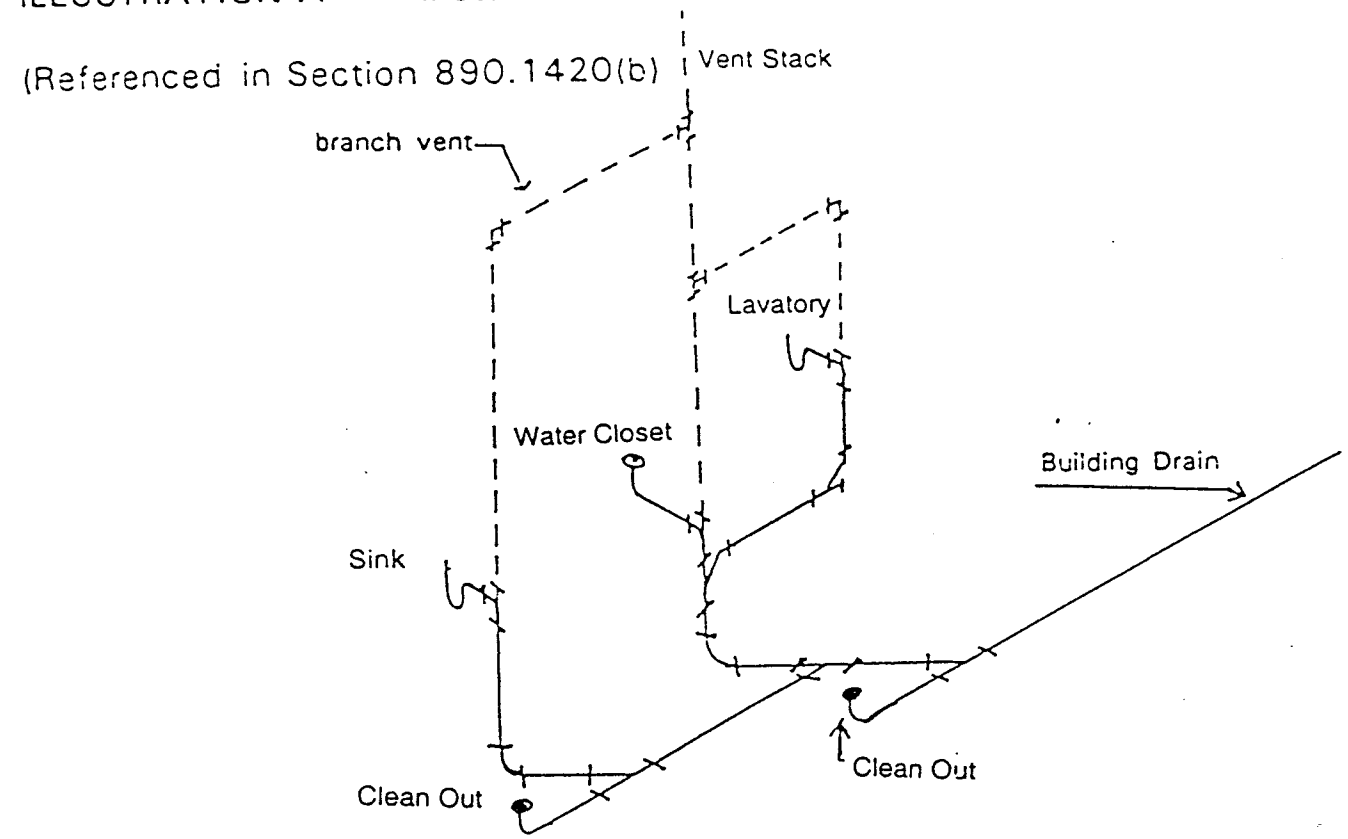
SECTION	REVISION
(890.1520 Circuit and Loop Venting Continued:)	
890.1520(c)	Change this sub-section to read as follows: Vent Connections. When the relief vent connections are taken off the horizontal branch, the vent branch connection shall be taken off vertically from the top of the horizontal branch. (See Appendix K: Illustration AA Revised).
890.1520(e)	Change this sub-section to read as follows: Fixture Connections. Delete as written and Illustrations Y and DD.
890.1520(f)	Change this sub-section to read as follows: Loop Vented Fixtures: When loop vented fixtures are installed in a multi-story building, a relief vent shall be provided at the base connection into the horizontal. This is done by connecting the vent stack, full size, into or near the base of the soil stack, or by connecting the vent stack directly into the horizontal branch near the soil stack. The vent shall be carried full size.
890.1520(f)	At this end of this sub-section, add the following sub-section: g) Exceptions. When architectural designs create a venting problem, circuit venting may be permitted. Consult the Administrative Authority with drawn designs for written approval before proceeding with the work.
890.1580 Size and Length of Vents	
890.1580(d)	Delete this sub-section with no substitution.
890.1590 Combination Waste and Vent (Floor and Hub Drains Only)	
890.1590	Change this section to read as follows: Combination Waste and Vent. A combination waste and vent is permitted only where structural conditions preclude conventional plumbing. Submit design drawings for written approval before proceeding with the work.
890.1590(a)	Delete this sub-section without substitution.
890.1590(b)	Delete this sub-section without substitution.
890.1590(c)	Delete this sub-section without substitution.
890.1590(d)	Delete this sub-section without substitution.
890.1600 Special Venting for Island Fixtures	
890.1600(b)	Change the last sentence of this sub-section to read as follows: (See Section 890.1340 and Appendix K: Illustration GG Revised).
890 Appendix K Illustrations for Subpart K	
890.Appendix K Illustration A	Add the following: See Revised Illustration A.
890.Appendix K Illustration E	Add the following: See Revised Illustration E.

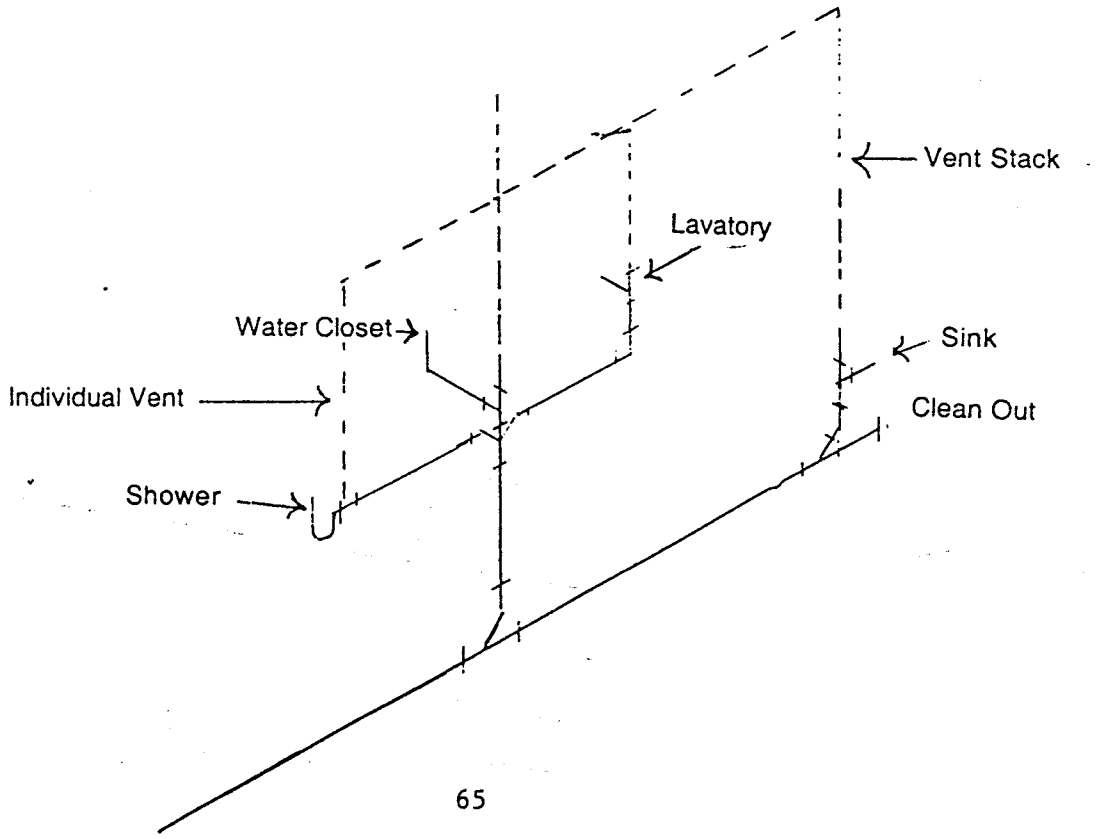
SECTION	REVISION
(890 Appendix K Illustrations for Subpart K Continued:)	
890.Appendix K Illustration G	Add the following: See Revised Illustration G.
890.Appendix K Illustration I	Add the following: See Revised Illustration I.
890.Appendix K Illustration J	Add the following: See Revised Illustration J.
890.Appendix K Illustration K	Add the following: See Revised Illustration K.
890.Appendix K Illustration P	Add the following: See Revised Illustration P.
890.Appendix K Illustration Q	Add the following: See Revised Illustration Q.
890.Appendix K Illustration S	Add the following: See Revised Illustration S.
890.Appendix K Illustration T	Add the following: See Revised Illustration T.
890.Appendix K Illustration V	Add the following: See Revised Illustration V.
890.Appendix K Illustration X	Add the following: See Revised Illustration X.
890.Appendix K Illustration Y	Delete this Illustration without substitution.
890.Appendix K Illustration AA	Add the following: See Revised Illustration AA.
890.Appendix K Illustration DD	Delete this Illustration without substitution.
890.Appendix K Illustration GG	Add the following: See Revised Illustration GG.

Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION A Installation of Vent Stack or Main Vent

(Referenced in Section 890.1420(b)

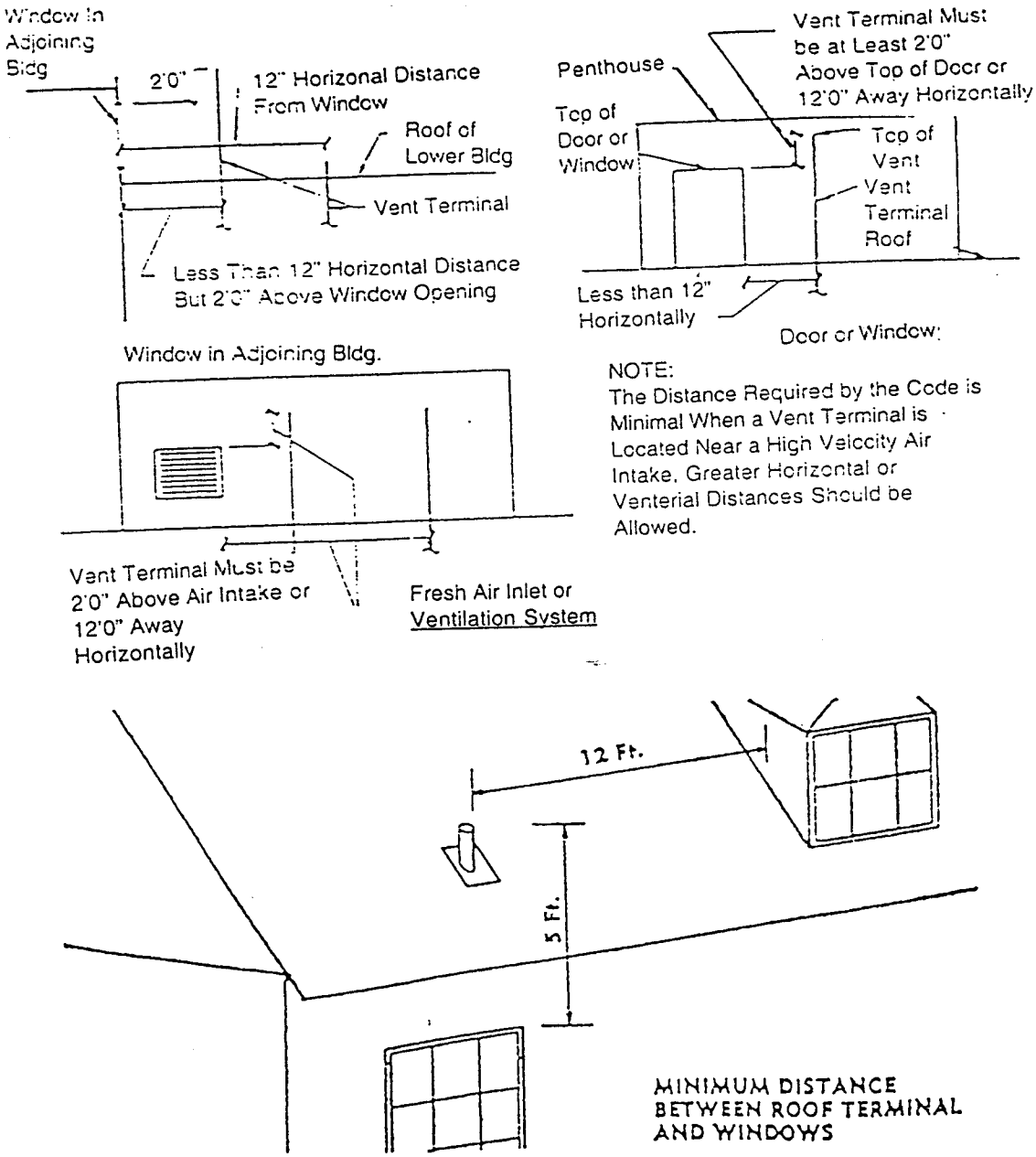




Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION E Location of Vent Terminal

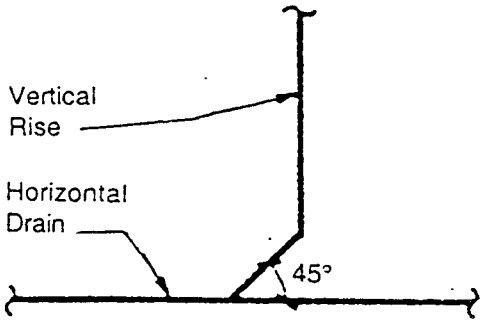
(Referenced in Section 890.1430(c))

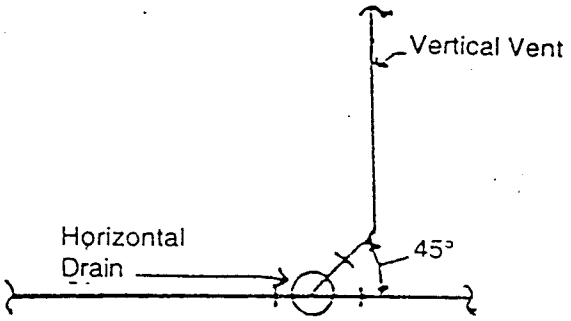


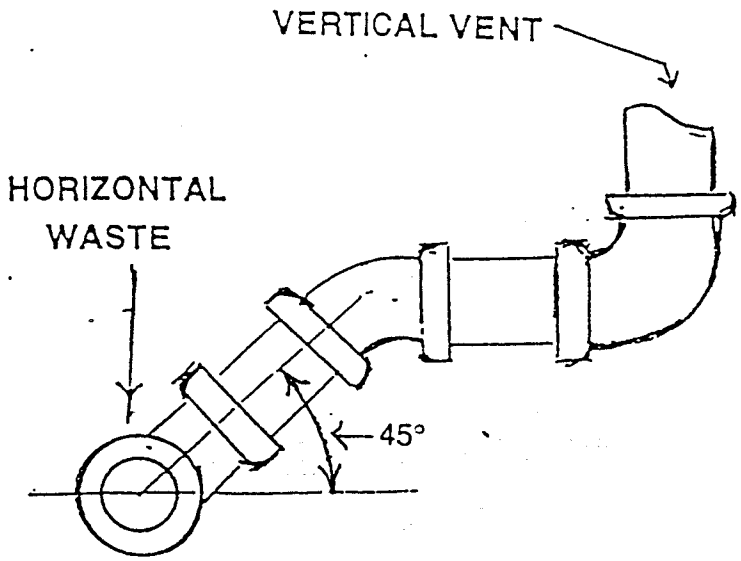
Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION G Vertical Rise

(Referenced in Section 890.1450(b))



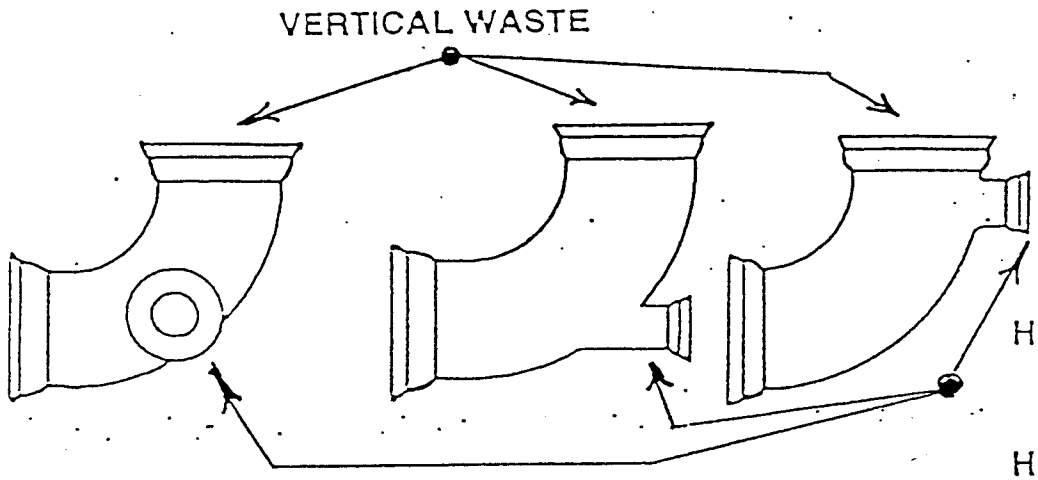


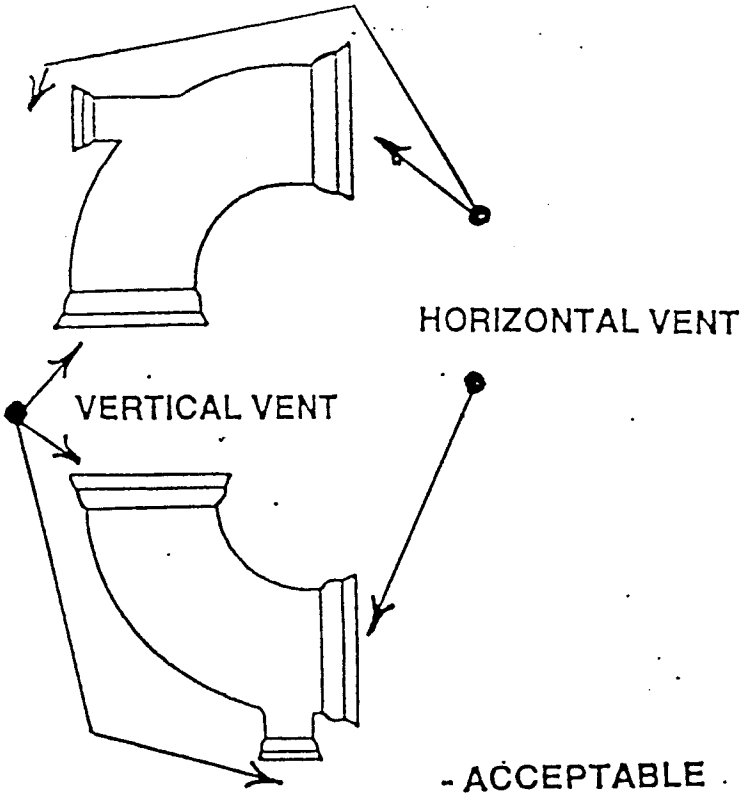


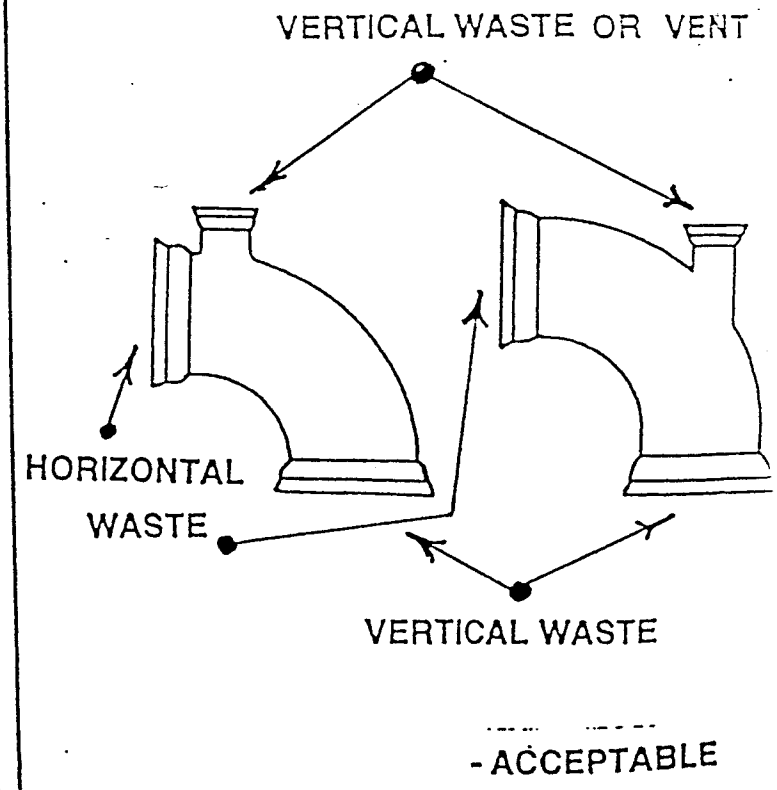
Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION I Quarter Bends

(Referenced in Section 890.1450(e))



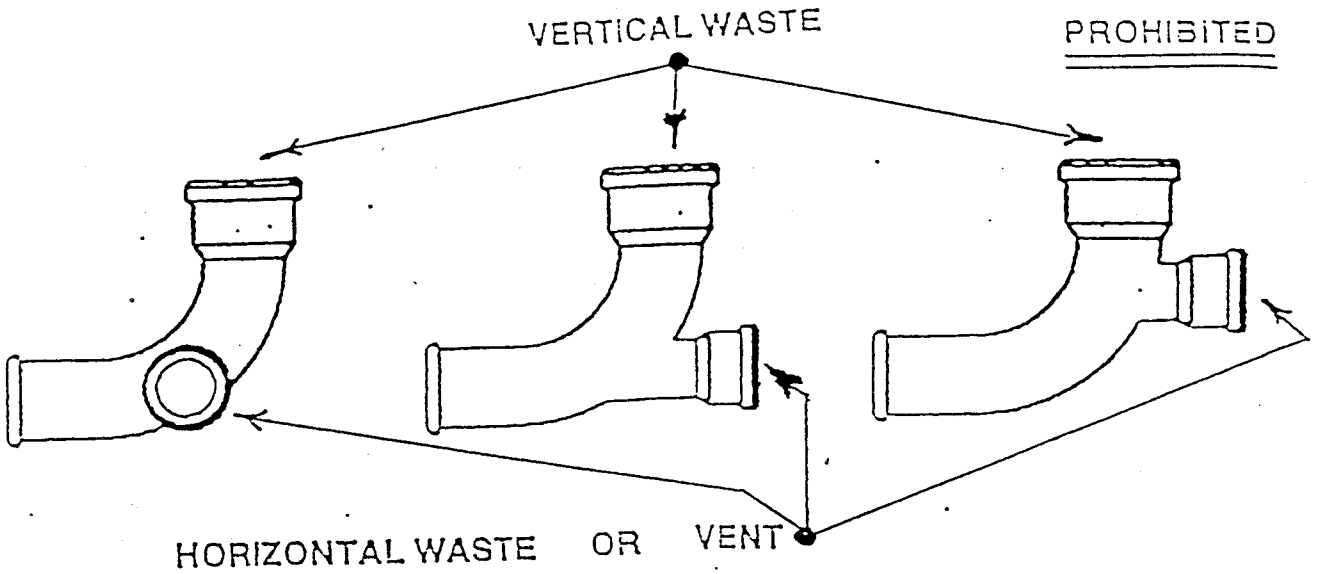


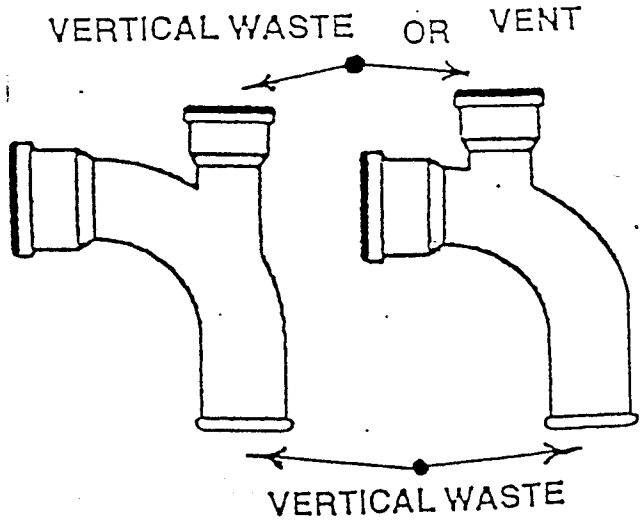


Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION J Heel or Side-Inlet

(Referenced in Section 890.1450(e))





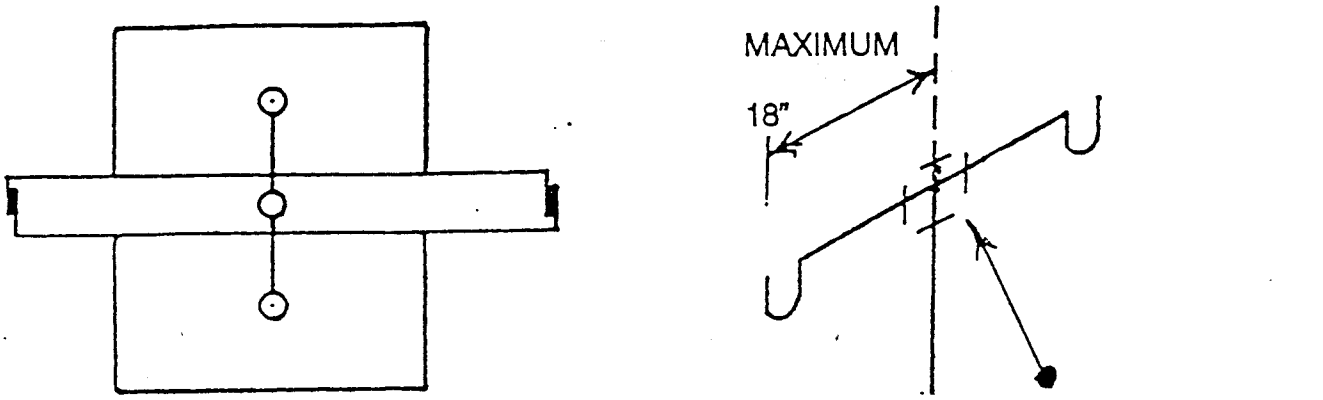
- ACCEPTABLE

Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION K Fixtures Back-to-Back and Side-by-Side

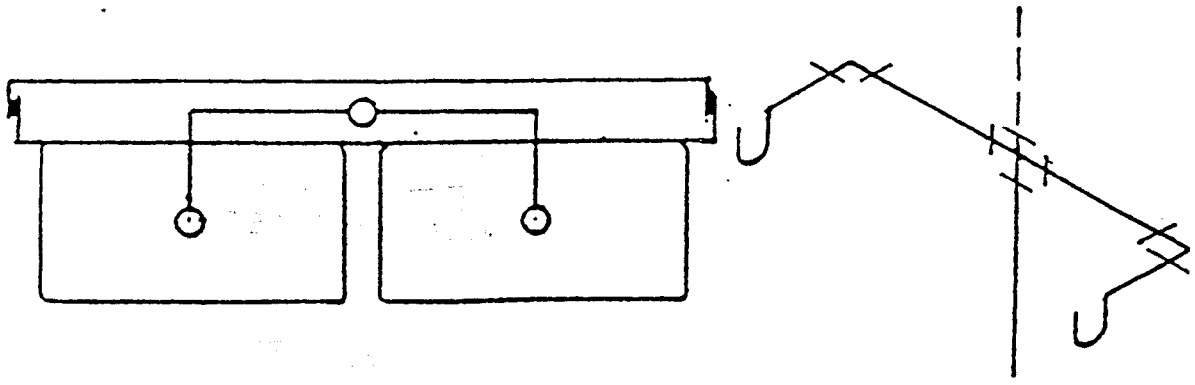
(Referenced in Section 890.1460)

- ACCEPTABLE



A CROSS ONLY SHALL BE USED SEE 890.1490 a)

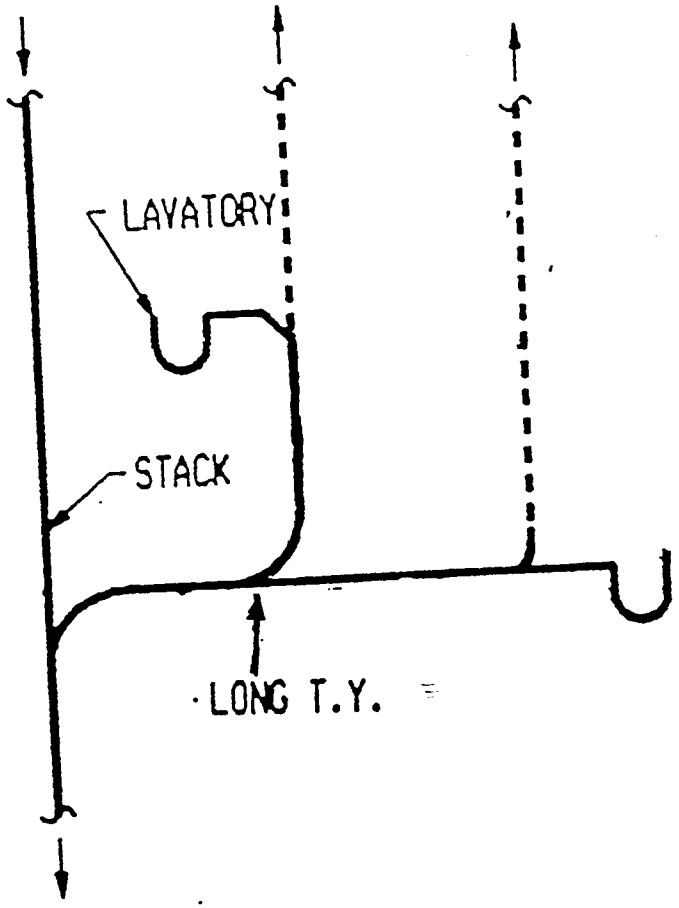
PROHIBITED



Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION P Wet Vent

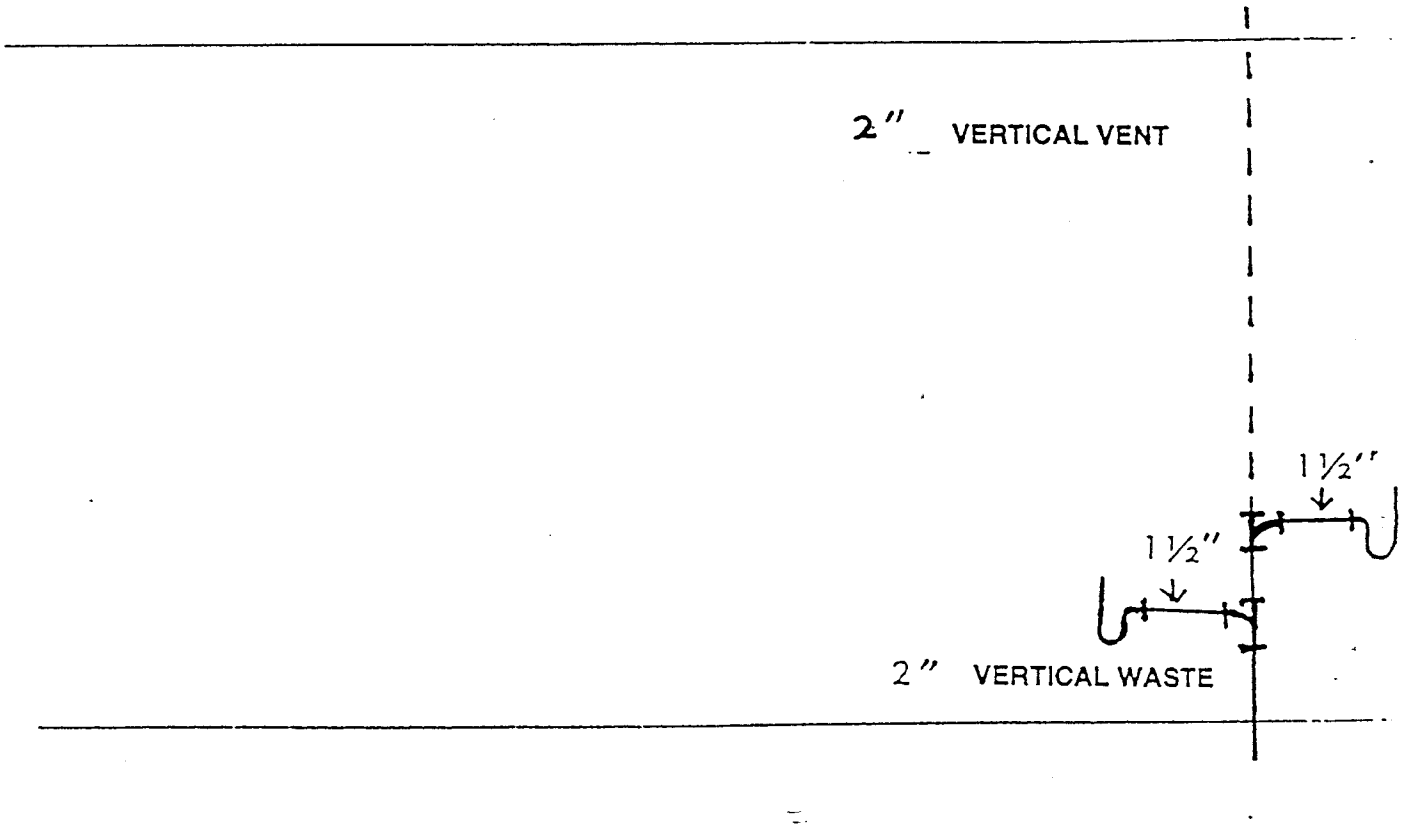
(Referenced in Section 890.1480(c))



Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION Q Vertical Wet Vent

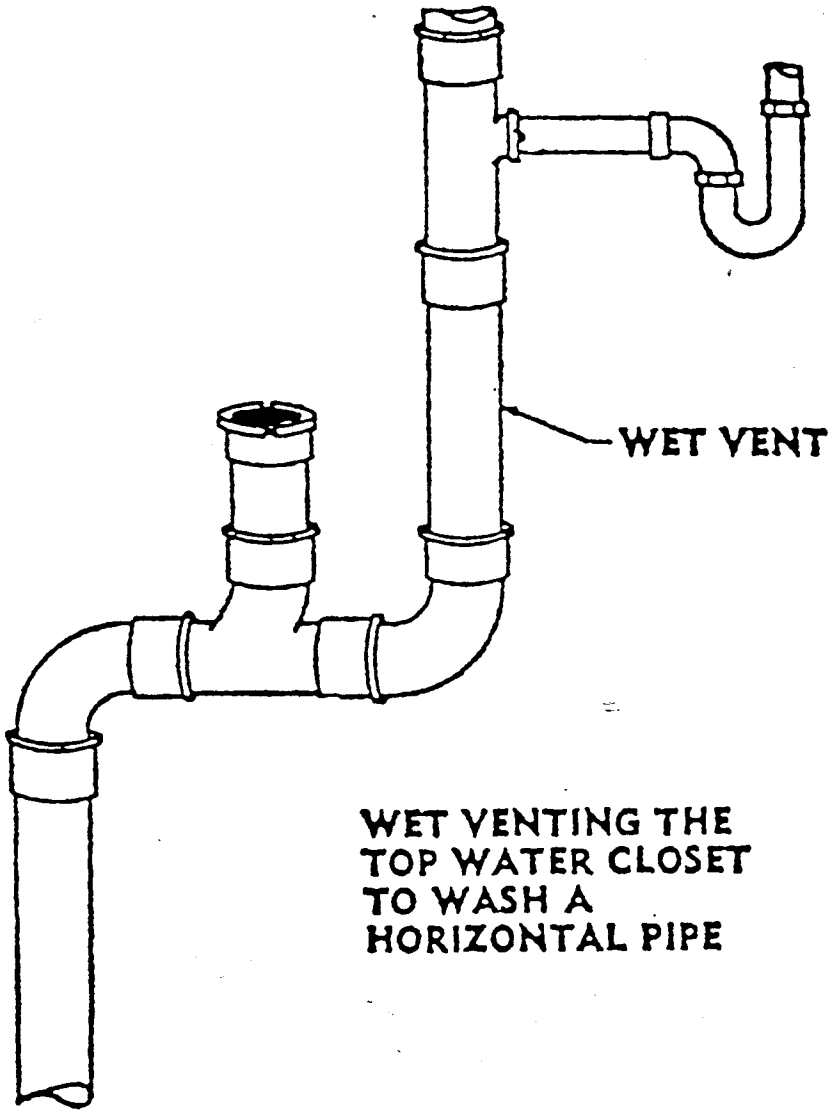
(Referenced in Section 890.1480(c))



Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION S Single Bathroom Groups

(Referenced in Section 890.1500(a)(2))

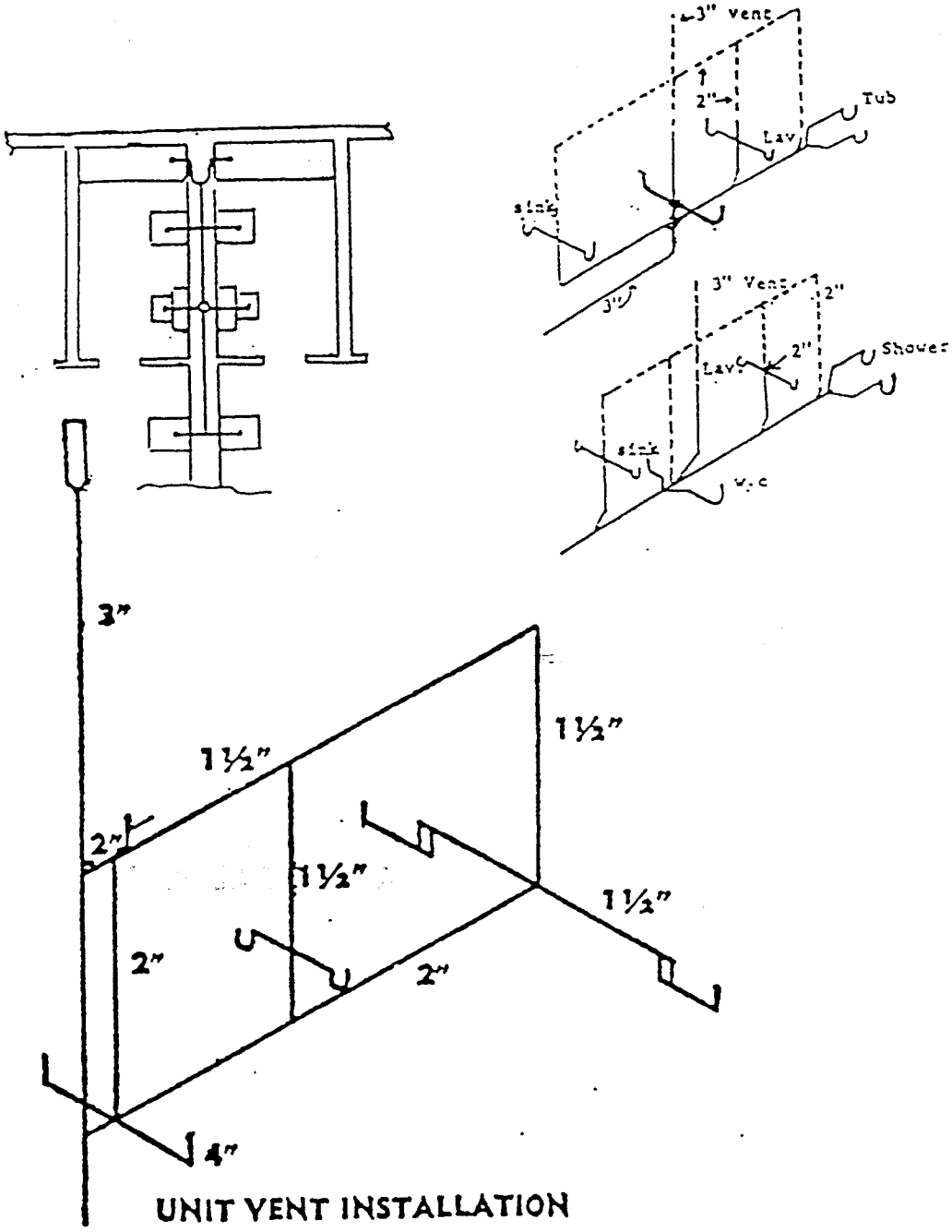


WET VENTING THE TOP WATER CLOSET TO WASH A HORIZONTAL PIPE

Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION T Double Bath

(Referenced in Section 890.1500(b))

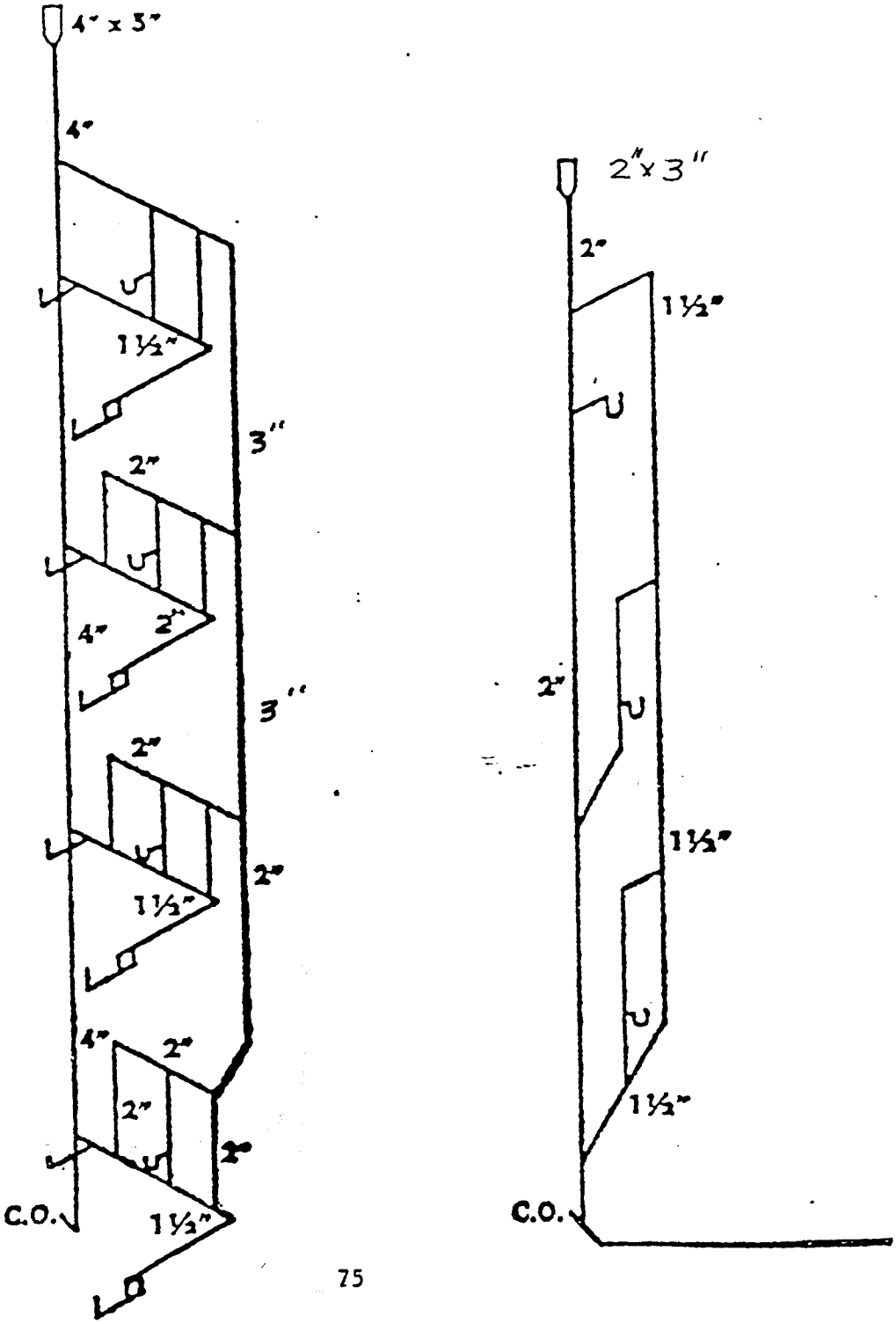


UNIT VENT INSTALLATION

Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION V Multistory Bathroom Groups-Elevation

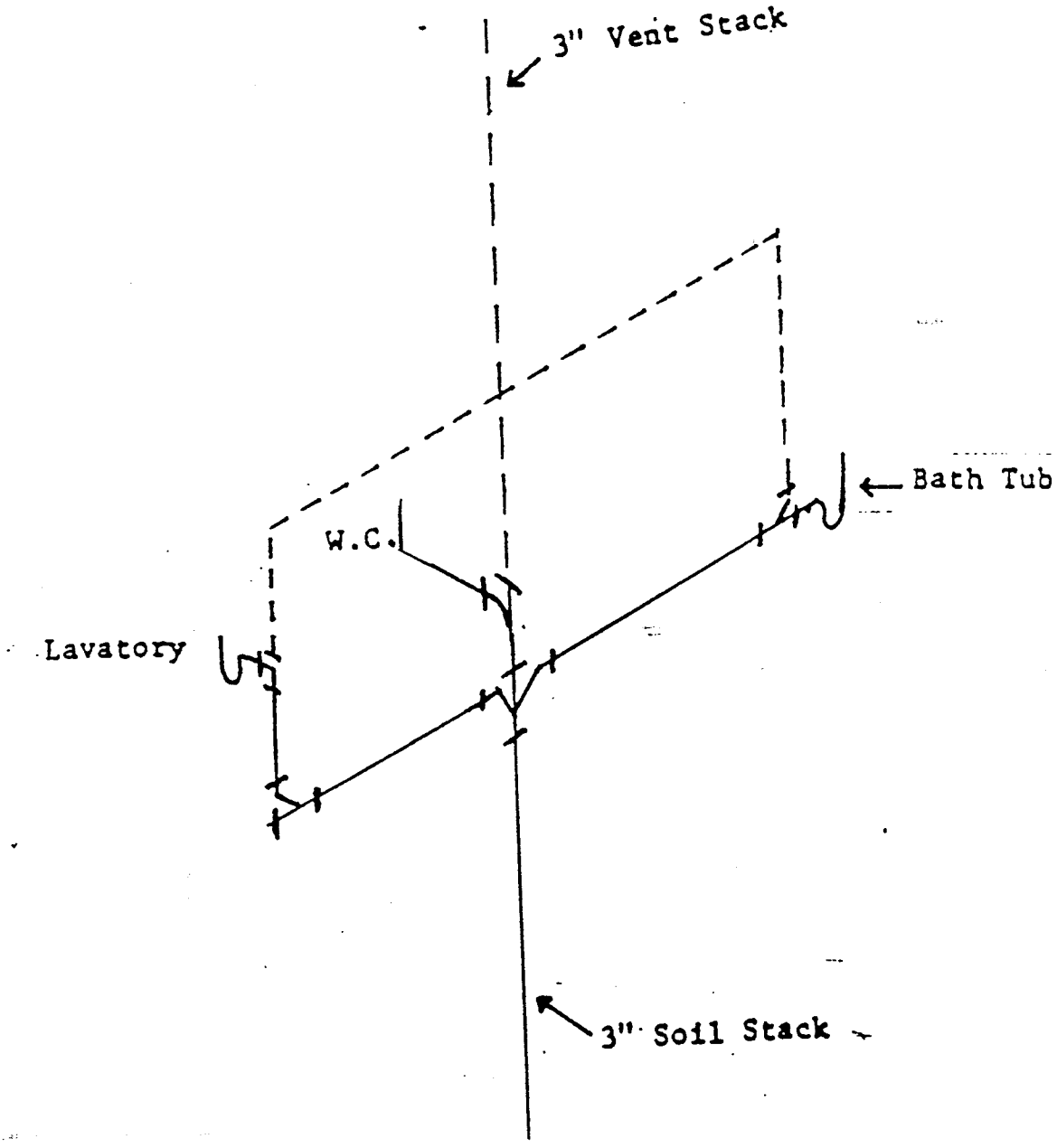
(Referenced in Section 890.1500(c))



Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION X One Bathroom Group-Elevation

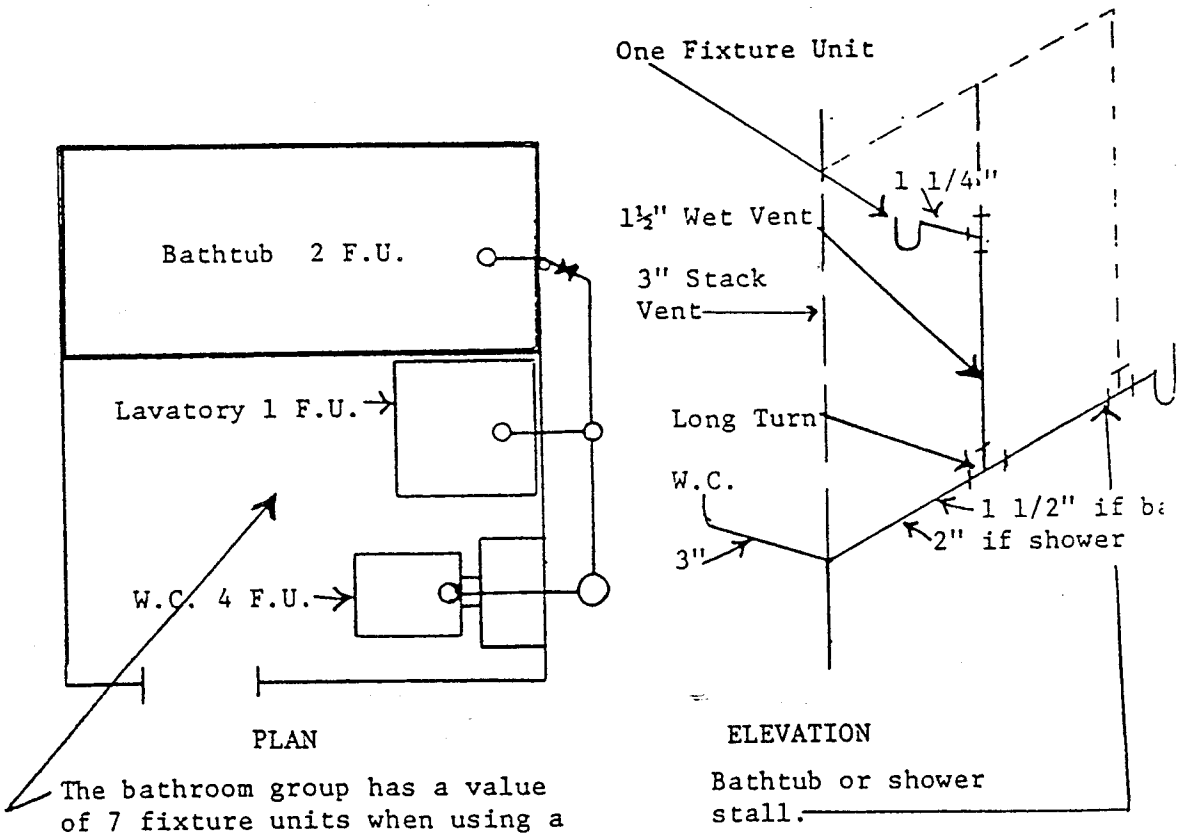
(Referenced in Section 890.1510)



Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION X One Bathroom Group-Elevation

(Referenced in Section 890.1510)

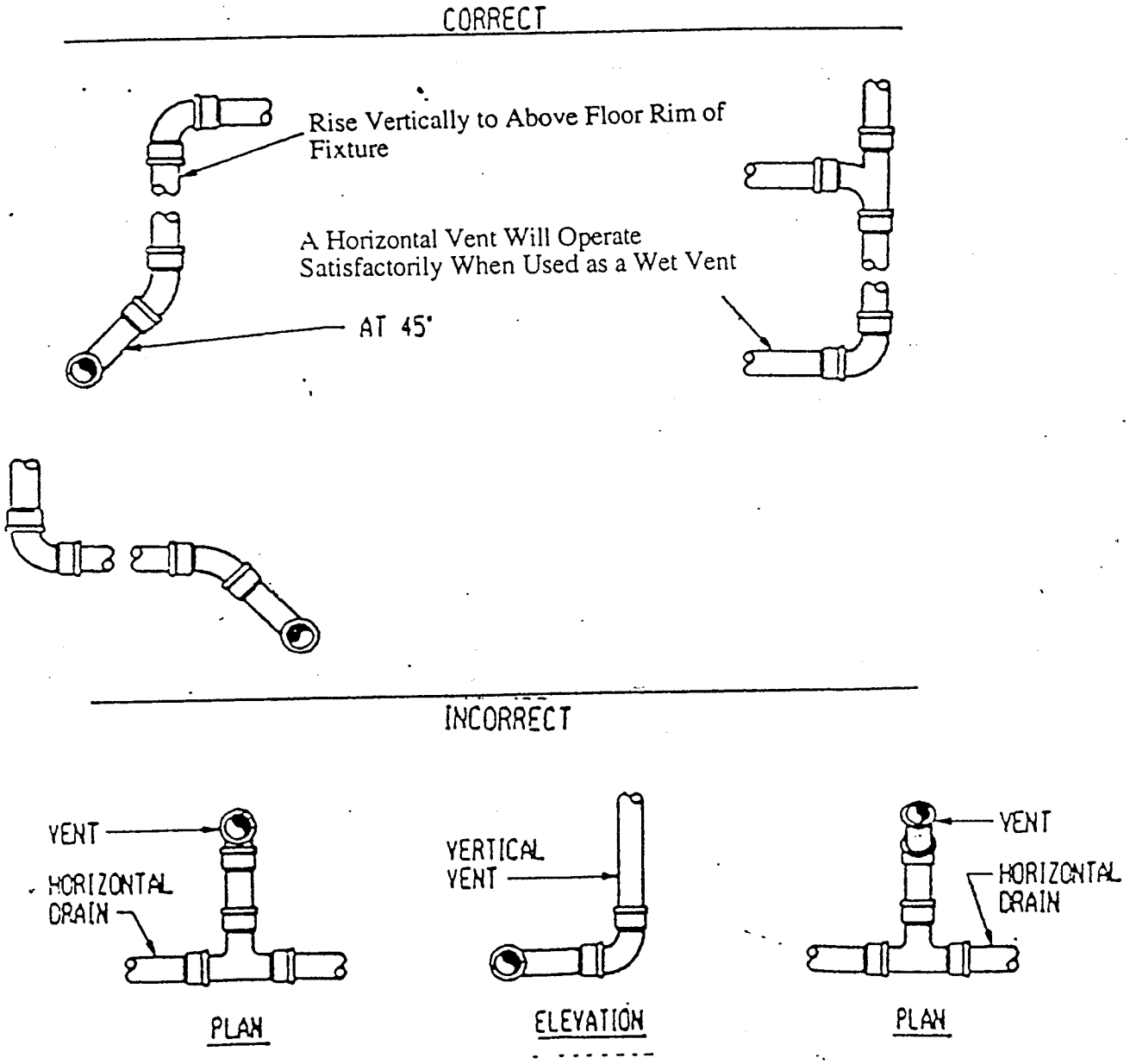


The bathroom group has a value of 7 fixture units when using a flush tank; 11 F.U. when using a flushometer.

Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION AA Right and Wrong Vent Connections

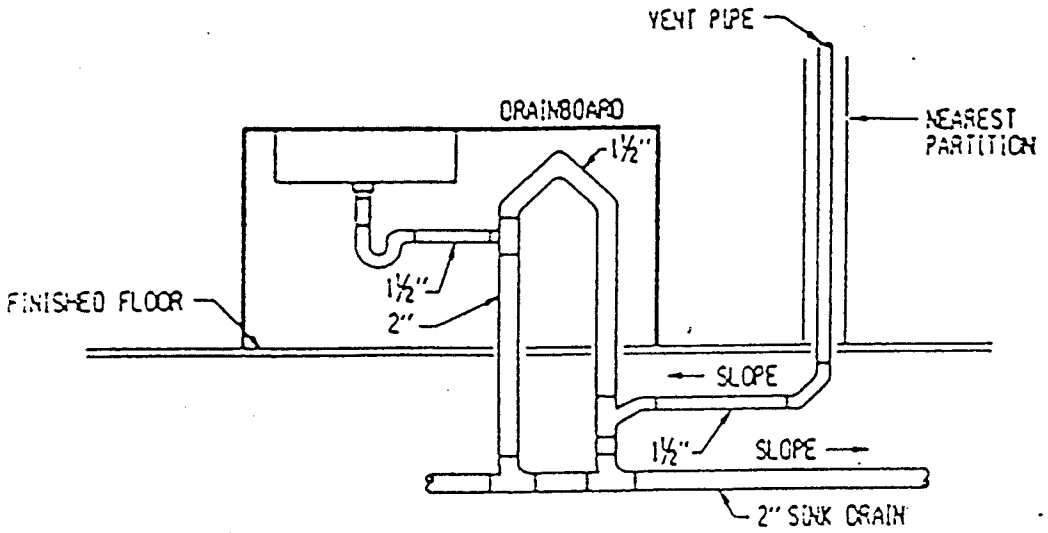
(Referenced in Section 890.1520(c))

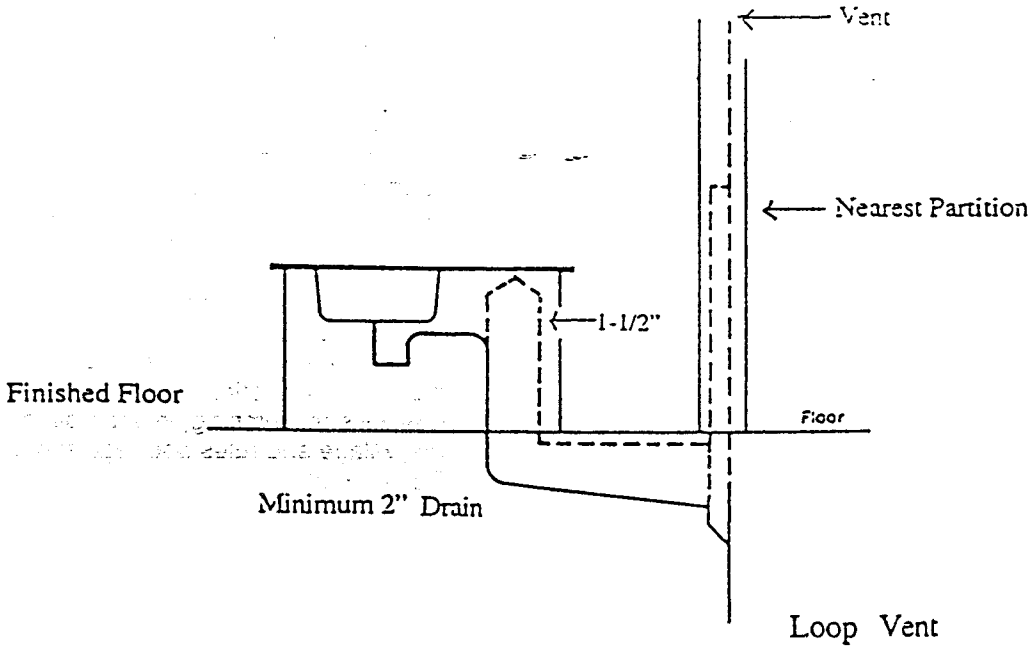


Section 890.Appendix K Illustrations for Subpart K

ILLUSTRATION GG Special Venting for Island Fixtures

(Referenced in Section 890.1600(b))





SECTION **REVISION**

890.1720 Water Closets

890.1720(c) At the end of this sub-section, add the following: The flush valves and water closets shall be equipped with flood-proofing controls.

SUBPART M: INSPECTIONS, TEST, MAINTENANCE, AND ADMINISTRATION

Add the following new Section: 890.1900

890.1900

1) Sanitation Preamble - Scope of This Part

   a) This part shall apply to and include all water supply and sanitary work, and sanitary equipment thereafter installed, constructed, altered, or repaired in, for, or about any building, or structure of any kind, within the Village limits.

   b). Enforcement and Proper Authority. Unless otherwise prescribed or made an exception, it shall be the duty of the Plumbing Inspector to enforce all the provisions of this part relating and pertaining to sanitary plumbing. Where this part refers to, or mentions “Inspector,” the same shall mean the Plumbing Inspector.

2) Bond Necessary - Permits

   a) No plumbing work of any description shall be done in the Village of Gurnee, except by a State of Illinois or City of Chicago licensed plumber whose license is in good standing. No permit shall be issued by the Building Department, unless the person applying therefore shall hold a valid license; a surety bond in the amount determined by current Ordinance and approved by the Village Board conditioned, among other things, that the applicant will indemnify and save harmless the Village of Gurnee from all accidents and damages arising from any negligence or unskillfulness in work done under or by virtue of any permit that may be issued to him by the Building Department of said Village, and that he will restore the streets and sidewalks over any pipe he may lay and fill all excavations made by him, so as to leave said streets and sidewalks in as good state and condition as he found them and will keep and maintain the same in good order for a reasonable time thereafter to the satisfaction of the Superintendent of Streets; and further conditioned that he will pay all fines that may be imposed upon him for a violation of any Ordinance, rules or regulations adopted by the Village Board or the Public Works Department relating thereto; and that he will conform to all the lawful regulations of the Village pertaining to the business of plumbing, in accordance with the Ordinances of the Village and rules and regulations of the Department of Public Health.

SECTION **REVISION**

(SUBPART M: INSPECTIONS, TEST, MAINTENANCE, AND ADMINISTRATION CONTINUED:)

b) All business regarding permit applications, permit issuance, and inspection requests shall be conducted at the Village of Gurnee Building Department office located at 325 N. O'Plaine Road, Gurnee, Illinois.

3) Doing Work Without Permit - Penalty

a) Any person who shall begin any plumbing job without a permit shall be subject to a fine of not less than Fifty Dollars ($50.00) and not exceeding Five Hundred Dollars ($500.00).

b) All person, firms, companies, or corporations shall before beginning any installation, alteration, or change or plumbing equipment in the Village of Gurnee, obtain a permit for such work. Permits will only be issued to qualified plumbers who have a current State of Illinois or City of Chicago plumbers license. Said plumbing contractor must certify in writing to the Plumbing Inspector that he is going to perform plumbing on all plumbing installations as described above.

c) The application for each such permit shall contain the name of the owner or user of the plumbing equipment to be installed, altered, or changed; and the location of such work by correct address, street, and number; also name and address of person, firm, company, or corporation making the installation.

d) Permits shall be valid for the balance of the fiscal year in which they are issued or in accordance to the normal amount of time needed for said installation. The money received for such permit shall be turned over to the Village of Gurnee, together with the list of all qualified contractors for whom such permits are issued.

4) Permit, Fees, and Fixture Outlet

a) The minimum charge and permit fees shall be determined by current ordinance. The word "Fixture Outlet" shall include all openings for waste and ventilation pipes, whether the plumbing fixtures are set or not and shall include the alteration of existing plumbing, replacement of existing plumbing fixtures, and shall also apply to any water or sewer connected apparatus or receptacle or combination for such.

b) Additional Fees. In all cases wherein inspections are necessitated through a non-compliance with the provisions of this Code, or where calls are made in case where work has been erroneously reported as being ready for inspection, additional fees as per current Village Ordinance shall be charged for each and every inspection, or call made for inspection. See item 8) b).

SECTION **REVISION**

(SUBPART M: INSPECTIONS, TEST, MAINTENANCE, AND ADMINISTRATION CONTINUED:)

c) Whenever material change is made in any plumbing work, beyond that specified in the permit therefor, the plumber is hereby required to give previous notice to the Building Official, presenting the original permit for correction and record.

d) Included in this would be the relocation, addition, or deletion of any piping, fixtures, or accessories to the plumbing system. Examples are: irrigation/lawn sprinkler systems; swimming pools, hot tubs, and whirlpools; water supplied equipment such as dishwashers, clothes washers, humidifiers, laboratory commercial/industrial equipment, etc.

5) Plumbing Commission

a) There is hereby created a Commission as to be known as the Plumbing Commission of the Village of Gurnee which shall consist of the Building Commissioner to serve as chairman of such Commission; the Plumbing Inspector; one Journeyman Plumber; two licensed and State of Illinois certified plumbing contractors; and one representative of a plumbing supply company shall be appointed by the Village President and with the consent of the Village Board of Trustees as soon as possible after each fiscal year. The Plumbing Inspector and other members of the Commission shall receive such compensation as shall be provided for in the annual Appropriation Ordinance.

b) Duties of the Plumbing Commission. Said Commission shall be and is charged with the duties of recommending safe and practical standards and specifications for installing, altering, and use of plumbing equipment designed to meet the necessities and conditions that prevail in the Village and shall recommend the fees to be paid for the inspection by the Plumbing Inspector of all plumbing equipment installed, altered, or used in the Village. The Plumbing Commission may from time to time, as the need or occasion demands and the interest of the public requires, recommend such changes in the standard, specifications, and fees as they may unanimously agree are necessary. Upon the changes of any of the provisions set form in this Ordinance, a copy of the same shall be filed in the office of the Village Clerk and the Plumbing Inspector and a copy of such changes to be posted at the Village of Gurnee Building Department for review and/or purchase. Such recommendations made by the Plumbing Commission shall be subject to approval by the Village Board of Trustees and changes passed by the Village Board of Trustees.

SECTION **REVISION**

(SUBPART M: INSPECTIONS, TEST, MAINTENANCE, AND ADMINISTRATION CONTINUED:)

6) Plumbing Inspector - Duties

a) The Plumbing Inspector shall have the management of all affairs pertaining to the inspection of all plumbing, but he shall be subject to the authority of the Village Board. He shall be charged with the survey and inspection of all plumbing work and the enforcement of this Code. He shall keep a proper record of each inspection for which a permit is issued.

Disputed Decisions. In the case of dispute over any decision he may make, the matter shall be referred to the Building Commissioner for decisions.

Board of Appeal. In case of dispute that cannot be adjusted by the Building Commissioner, an appeal can be taken to the Village Board of Trustees at its next regular meeting.

b) Right to Enter Premises. Any person charged with the enforcement of this Ordinance, or any law in force in the Village applicable to the same subject matter, shall have the right to enter upon any building site premises, property or grounds, or into any building alleged to the unsanitary or a menace to health, at all reasonable hours, upon showing his badge or other credentials of office, and any person or persons interfering with him in the performance of such duties shall be guilty of violating therefore.

7) Adjoining Higher Buildings

a) In the event that a new building is built higher than an existing building, the owner of such new building shall not locate windows within twelve (12) feet of any existing stack on the lower building, unless the owner of such new building shall defray the expenses of, or shall himself make such alteration to conform with this Section. It shall be the duty of the owner of the lower or existing building to make such alteration therein upon receipt, in advance, of money or security therefor, sufficient or the purpose from the owner of the new or higher building, or to permit at the election of the owner of the new or higher building, the making of such alteration by the owner of said new or higher building.

8) Notice of Inspection

a) When the work performed is ready for inspection, a notification shall be given for the Plumbing Inspector to the Building Department not less than eight work hours between the hours of 8:00 A.M. and 4:30 P.M. before the work is to be inspected or tested and an appointment will be scheduled at least twenty-four (24) hours in advance.

(SUBPART M: INSPECTIONS, TEST, MAINTENANCE, AND ADMINISTRATION CONTINUED:)

b) It shall be the duty of the plumber to make sure that the work will stand the test prescribed before giving the notification. If the Inspector cannot be at the place at the time mentioned, he shall notify the plumber at once, stating when he can inspect the work. Failure by the plumber to cancel 8 hours prior to the scheduled inspection time will require a re-inspection fee to be paid at the Village of Gurnee Building Department office. No further inspections will be performed until all fees are collected. See Item 4) b).

c) Upon the satisfactory completion and final test of the plumbing system, a certificate of approval shall be issued by the Plumbing Inspector and he shall attach it to the plumbing or post it in plain sight.

9) Testing Plumbing System

a) The entire plumbing system within the building must be tested by the plumber in the presence of the Plumbing Inspector, under a water test, as directed. All pipes must remain uncovered in every part until they have successfully passed the test.

b) When plumbing work has been covered or concealed prior to being tested and approved, it shall be exposed for testing. It is the responsibility of the licensed plumbing contractor to expose plumbing for inspection purposes.

c) The plumber must securely close all openings as directed by the Plumbing Inspector. The use of wooden plugs for this purpose is prohibited.

d) All equipment, material, and labor required for inspection and testing a plumbing system or any part thereof is the responsibility of the plumbing contractor.

e) Defective pipe and fittings shall be removed and all defective work made good to conform with the provisions of this Ordinance. A re-test of the repaired section shall be performed.

f) Faulty and defective work shall be made satisfactory to said Inspector and no further permit shall be issued to the party in default until such defective work has been corrected.

g) Testing

Waste and Vent -	Normal Conditions:	Water
Water -	Normal Conditions:	Water
Waste and Vent -	Winter Conditions:	Water (No Exceptions)
Water -	Winter Conditions:	Water or Air
Gas -		Air

SECTION **REVISION**

(SUBPART M: INSPECTIONS, TEST, MAINTENANCE, AND ADMINISTRATION CONTINUED:)

List of Special Requirements For:

Underground W & V: Minimum 5-foot static head for water test and full visual inspection.

Aboveground W & V: Static head water test, fill to roof or minimum 10-feet above top vent bar and full visual inspection.

Storm: Full visual inspection of entire system.

Water: Full visual inspection of entire system.

BFPV Valves, RPZ, DCV or DDCV: Schedule inspection of installation immediately upon completion. Test device and provide test report to Village of Gurnee, and post one on device.

Plumbing Final: Prior to occupancy inspection of building. The complete plumbing system and its fixtures, water heaters, appliances, etc., will be subjected to a full operational performance function examination inspection.

EXCEPTION: When testing of the waste, stack and vent system of a building with water becomes a risk of creating damage to an occupied building or its contents, an air test may be substituted. A visual inspection of said premises shall be performed by the Plumbing Inspector and written permission to authorize said air test. (The test shall be performed as follows in Sub-Section h).

h) Air Test. An air test shall be made by attaching an air compressor testing apparatus to any suitable opening and after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gauge pressure of five (5) pounds per square inch (p.s.i.) or sufficient to balance a column of mercury ten (10) inches in height. This pressure shall be held without introduction of additional air for a period of at least fifteen (15) minutes.

i) Water Supply System: Upon completion of a section, or the entire water supply system, the system shall be tested and proved tight under a water pressure at least one and one-half (1-1/2) times the system pressure, but at least 100 p.s.i., by air or water. When exceeding 100 p.s.i., the test shall be of the hydrostatic type only. Testing pressure shall be maintained for fifteen (15) minutes. The water used for this test shall be from a potable water supply.

SECTION **REVISION**

(SUBPART M: INSPECTIONS, TEST, MAINTENANCE, AND ADMINISTRATION CONTINUED:)

j) Building Sewer. The building sewer shall be tested by insertion of a test plug at the point of connection with the public sewer. The building sewer shall be filled with water under a head of at least ten (10) feet of water. The water level at the top of the water column shall not drop for at least 15 minutes.

k) Finished Plumbing. After the plumbing fixtures have been set and their traps filled with water, their connections shall be tested and proved gas and watertight. The test for gas and water tightness of the completed drainage and vent system shall be made by filling all traps with water, and then introducing into the system a pungent, thick smoke produced by one or more smoke machines. When the smoke appears at stack openings on the roof, the stack opening shall be closed and a pressure equivalent to a one (1) inch water column shall be maintained for the period of the inspection. Where the Department or local Plumbing Inspector finds that a smoke test cannot be performed , a peppermint test may be substituted. A peppermint test is conducted by introducing two (2) ounces of oil of peppermint into the roof terminal of every line or stack to be tested. Immediately after the oil of peppermint is introduced into the system, ten (10) quarts of hot (160 degrees F) water shall be added, and each terminal sealed. The detection of the odor of peppermint at any trap or at any other point in the plumbing system denotes a leak. Individuals whose body or clothing have come in contact with oil of peppermint shall be excluded from the area until the test is completed.

890.1910 Inspections

890.1910 Delete this Section. See Section 890.1900.

890.1920 Testing of Plumbing Systems

890.1910 Delete this Section. See Section 890.1900.

890.1930 Test Methods

890.1930 Delete this Section. See Section 890.1900.

890.1950 Violations

890.1950(a)(2) At the end of this sub-part, add the following: Included are all existing buildings, residential, commercial, and industrial.

Village Ordinances - Application and Permit
No person, firm, or corporation shall dig up or open any street, avenue, alley, sidewalk, or other public place, except parks, pleasure grounds, or other premises not under control of the Village of Gurnee, without first obtaining a permit from the Village Engineer.

SECTION **REVISION**

(890.1950 Violations Continued:)

Any person, firm, or corporation desiring a permit to so dig up or open any street, avenue, alley, sidewalk, or other public place, shall first submit to the Village Engineer a written application describing the nature of the work proposed; whereupon the Village Engineer shall, if the work be such as is permissible under the ordinances of the Village of Gurnee, and upon the payment of all permit fees and charges required in this Ordinance for such work, issue a permit to the applicant to so dig up or open such street, avenue, alley, sidewalk, or other public place as above provided.

Permit Fees for Excavations
The fee for permits to open or tear up hard-surfaced streets, sidewalks, or parkways, which fee shall include the maintenance of the temporary surfacing, shall be determined by current ordinance.

Connecting to Sewers - Fee
The fee for connecting with any public sanitary sewer in the Village of Gurnee shall be determined by current ordinance, except on an extension from a sewer stub or service where a permit fee has heretofore been paid for such sewer stub or service.

The connection shall be made with the “Y” branch designated by the Village Engineer in the permit, and no connections shall be cut into the main or street sewer, except where such “Y” branch does not exist. In such cases, special permission shall first be obtained in writing from the Village Engineer.

Cut-in connections shall be neatly cut without breaking or cracking the sewer pipe beyond the point of cut and shall be flush with the inside of the street sewer and a Dayton, Hubslant & Buffold, or equal tile saddle shall be used.

The joint shall be installed in a manner to reinforce the street sewer.

Before laying or joining additional pipe, all cut-in connections shall be inspected and approved by the Plumbing Inspector or his authorized representative.

No roof drain, sump pump discharge, or any sub-surface drainage shall be connected to any sanitary sewer.

Connecting With Public Sewers - House Sewers
House sewer to be of sewer pipe, cast iron pipe, or their equal.

Cast iron pipes to be connected by joints regulated by the Village of Gurnee Plumbing Code.

No house sewer shall have an inside diameter of less than four (4) inches.

SECTION	REVISION
(890.1950 Violations Continued:)	
	The connection with the riser on the public sewer shall be made with a long sweep curve and the pipe continued to within two (2) feet of the building foundation. Pipe shall have a fall not less than 1/8 inch to the foot and shall be laid in trenches of uniform grade. The house sewer on residential property shall be eight (8) feet below the established street grade, at the curb of the street; provided, however, that the public sewer is of sufficient depth.

SECTION **REVISION**

890.Appendix A **PLUMBING MATERIALS, EQUIPMENT, USE RESTRICTIONS, AND APPLICABLE STANDARDS**

TABLE A Approved Building Drainage/Vent Pipe
Change this Table to read as follows:

1.	Brass Pipe	ASTM B	43-1988
2.	Cast Iron Pipe	ASTM A	74-1987
		ASTM A	888-1991
		ASTM C	564-1988
		CISPI	301-1990
3.	Copper/Copper Alloy Pipe	ASTM B	42-1988
		ASTM B	302-1988
4.	Copper/Copper Alloy Tubing	ASTM B	75-1986
	(K-L-M or DWV)2	ASTM B	88-1988
		ASTM B	251-1988
		ASTM B	306-1988
5.	Galvanized Steel Pipe2	ASTM A	53-1988
		ASTM A	120-1984
6.	High Silicon Content Cast Iron Pipe3	ASTM A	377-1984
7.	Polyvinyl Chloride (PVC) Clear Pipe3	ASTM D	1784-1990
8.	Polyvinyl Chloride (PVC) Pipe and Fittings	ASTM D	2665-1988
		ASTM D	2949-1987
9.	Solder	ASTM B	32-1989

Agency Notes:
2 Type M copper tubing, DWV copper tubing, and galvanized steel pipe are approved for above-ground uses only.

3 Approved for corrosive waste or corrosive soil conditions.

TABLE A Approved Materials for Building Sewer
Change this Table to read as follows:

1.	Cast Iron Soil Pipe/Fittings	ASTM A	74-1987
	Hubless Soil Pipe	CISPI	301-1990
		CISPI	310-1990
	Rubber Gaskets	ASTM C	564-1989
2.	Polyvinyl Chloride (PVC) Pipe	ASTM D	2665-1988
		ASTM D	2949-1987
		ASTM D	3034-1988
	Joints	ASTM D	2855-1983
3.	Vitrified Clay Pipe Pressurized by a Pump or Ejector is Prohibited	ASTM C	4-1981
		ASTM C	700-1988

SECTION REVISION

TABLE A Approved Materials for Water Service Pipe
Change this Table to read as follows:

1.	Brass Pipe	ASTM B	43-1988
2.	Cast Iron (ductile iron) Water Pipe	ASTM A	377-1984
3.	Copper/Copper Alloy Pipe	ASTM B ASTM B	42-1988 302-1988
4.	Copper/Copper Alloy Tubing	ASTM B	88-1988

TABLE A Approved Materials for Water Distribution Pipe
Change this Table to read as follows:

1.	Brass Pipe	ASTM B	43-1988
2.	Copper/Copper Alloy Pipe	ASTM B ASTM B	42-1988 302-1988
3.	Copper/Copper Alloy Tubing	ASTM B	88-1988
4.	Galvanized Steel Pipe	ASTM A ASTM A	53-1988 120-1984
5.	Welded Copper Water Tube	ASTM B	447 WK, WL, and WM-1989
6.	Solder	ASTM B	32-1989

TABLE B Minimum Number of Plumbing Fixtures

At the beginning of this Appendix, add the following:

a) Toliet Rooms for The Two Sexes

Where two sexes are accommodated, separate toliet rooms shall be provided, except in dwellings. Entrance to toliet rooms for the two sexes shall be properly separated. Each toliet room shall be distinctly marked with regard to the sex which uses it and no person shall be allowed to use a toliet room assigned to the other sex. There shall be provisions for complete privacy at the entrance and at the fixtures in multiple fixture baths.

b) Toliet Rooms Required

Every residence and apartment building, store, or place of business, factory, or workshop shall be provided with proper sanitary fixtures. Every toliet or bathroom shall be lighted by a window or windows opening directly upon a street, alley, court, or vent shaft, or adequate lighting per the National Electric Code (N.E.C.) and Village of Gurnee standards. Each toliet room shall be ventilated per Village of Gurnee requirements.

SECTION REVISION

(TABLE B Minimum Number of Plumbing Fixtures Continued:)

Private residences, two family dwellings, and apartment houses shall have at least one water closet, one kitchen sink, one lavatory, one tub or shower per unit, and adequate laundry facilities, and hot water supply.

Restaurants and lunch rooms shall have at one water closet and one wash basin provided for each sex. The waste water from sinks, dishwashing machines, and other fixtures likely to contain grease shall, before entering the sewer, discharge into an approved intercepting catch basin or grease trap.

Depots or waiting stations shall have at least one water closet and wash basin for females; one water closet, one urinal, and one wash basin for males.

Stores shall have at least one water closet and one sink or wash basin for each sex. Bathrooms shall not open directly facing front entrance of store and the door shall be provided with a proper spring for keeping such door closed. Water closet or urinal compartments shall never open directly into any bakery, market, restaurant, or into any room where food is being prepared and shall always be so located as to be least objectionable as regards to sanitation and privacy.

Office building. Where such offices or suite of offices are not fitted with a water closet and wash basin for each such office or suite of offices, a bathroom for each sex shall be provided for the use of the occupants and such toliet rooms shall be located in the public hall. Men's bathrooms shall have at least one water closet, one urinal, and one wash basin. The bathroom for women shall have at least one water closet, and one wash basin. In the hall, a sanitary drinking water arrangement. Provide accessible and adequate fixtures for housekeeping and janitorial services.

Public laundries, wash houses, or cleaning establishments shall not have less than one water closet and one sink or wash basin for each sex. Laundry trays, drums, vats, etc., see Section 890.540 and 890.740.

Where gasoline, benzene, naphtha, or other inflammable oils or compounds are used in cleaning establishments and where such business is carried on, there shall be provided a drain pipe to a trap or separator; trap separator to have a waste bucket which shall separate the oil and gases, and with a fire preventive water ring. The trap shall have a four (4) inch waste outlet and a two (2) inch or larger vent hub connection which shall be carried through the roof, properly vented. See Section 890.520.

c) Public Garages and filling stations, including gas and convenience stores, vehicle sales, and rentals shall have at least one water closet and one wash basin for each sex. Wash basins and service sinks to be provided with hot and cold water. The drain used for car washing shall have a trap or separator, see Section 890.520.

SECTION **REVISION**

(TABLE B Minimum Number of Plumbing Fixtures Continued:)

d) Toliet Rooms in Existing Buildings

Every existing building must be provided with facilities equal to the facilities required by this Code for new buildings of a similar kind.

e) Toliet Rooms - Auditorium

Separate toliet rooms in connection with auditoriums shall be provided for males and females.

There shall be separate water closets provided for males and females in connection with the stage of every theater which accommodates more than 500 persons, except theaters used for motion picture exhibitions only. Separate drinking fountains shall be provided for the stage and auditorium.

f) Proper Use and Care of Plumbing Fixtures

All plumbing fixtures, such as water closets, urinals, sinks, lavatories, bath tubs, etc., shall be used only for the purpose for which they are intended. All such fixtures shall be kept in a sanitary and clean condition.

Temporary closet accommodations for new buildings or other construction work. Suitable and adequate toliet facilities shall be provided during building operations. Toliets shall be properly enclosed to secure privacy, and shall be kept in a sanitary and clean condition.

TABLE B Minimum Number of Plumbing Fixtures

Instructions/Footnotes for Table B

Footnotes:

6. Change this footnote to read as follows: In addition to providing separate hand washing facilities in the kitchen for employees, all restaurants shall provide a minimum of one (1) service/utility sink and one three-compartment sink to sanitize dishes and eating utensils.

TABLE D Minimum Water Distribution Pipe Size

Type of Fixture or Device (See Footnotes 1 and 2)

At the end of this Table, add the following footnote:

3. Only one fixture shall be supplied with 1/2". The pipe size shall be increased one pipe size at multiple fixture groups. (Appendix A/Tables-27)

SECTION **REVISION**

TABLE I Allowed Distance from Fixture Trap to Vent

Change this Table to read as follows:

Size of Fixture Drain (Inches)	Maximum Allowed Distance From Trap to Vent
1 1/4	1 Ft. 6 In.
1 1/2	1 Ft. 6 In.
2	1 Ft. 6 In.
3	5 Ft. 0 In.
4 and Larger	6 Ft. 0 In.

TABLE L Horizontal Circuit and Loop Vent Sizing Table

Change the name of this Table to read and add the following: Table L Horizontal Circuit and Loop (See Section 890.1520 a) and b)."

SECTION 4: That the unenforceability or invalidity of any provision or provisions hereof shall not render any other provision or provisions herein contained unenforceable or invalid.

SECTION 5: That all ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 6: That the Village Clerk is hereby directed and ordered to publish this Ordinance in pamphlet form as provided by law.

SECTION 7: That this Ordinance shall be in full force and effect from and after its passage, approval, and publication as provided by law.

APPROVED:

Richard A. Walters
Village President

ATTEST:

Norman C. Ballitt
Village Clerk

PASSED AND APPROVED THIS 24TH DAY OF JANUARY, 2000

ROLL CALL VOTE: AYES: O'Brien, Chamberlain, Damijonaitis, Kovarik, Rudny

NAYS: None

ABSENT: Rocheleau

STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

CERTIFICATE

I, NORMAN C. BALLIET, certify that I am the duly elected and acting Municipal Clerk of the Village of Gurnee, Lake County, Illinois.

I certify that on January 24, 2000, the Corporate Authorities of such municipality passed and approved Ordinance No. 2000- 5 , entitled "AN ORDINANCE AUTHORIZING THE VILLAGE PRESIDENT AND VILLAGE CLERK TO EXECUTE AN ORDINANCE ADOPTING THE STATE OF ILLINOIS PLUMBING CODE, WITH MODIFICATIONS AND PROVIDING PENALTIES FOR VIOLATIONS" which provided by its terms that it should be published in pamphlet form.

The pamphlet form of Ordinance No. 2000 - 5 , including the Ordinance and a cover sheet thereof, was prepared, and a copy of such Ordinance was posted in the municipal building, commencing on January 24, 2000, and continuing for at least ten days thereafter. Copies of such Ordinance were also available for public inspection upon request in the office of the Municipal Clerk.

DATED at Gurnee, Illinois this 24th day of January , 2000.

Norman C. Balliet

Municipal Clerk