

CHAPTER 23.25 LOCAL AMENDMENTS TO THE UNIFORM PLUMBING CODE 2009 EDITION

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23.25.100 Local amendments to the Uniform Plumbing Code, 2009 Edition.

Amendments to the 2009 Uniform Plumbing Code and appendices A, B, D, parts E-M of Appendix E, I, and L, (excluding L 8.0 and L 9.0), are adopted and listed hereafter by section. The digits after the title and chapter digits are the section number of the Uniform Plumbing Code to which the amendment refers, e.g., 23.25.510.8 refers to section 510.8 of the Uniform Plumbing Code.

23.25.102-103 Delete.

~~102.103~~ Delete: Delete sections 102 and 103; refer to the Anchorage Administrative Code.

23.25. 204.0 "B" definitions.

Amend by deleting the definition of *bathroom* and substitute the following:

Bathroom - any room or space containing a bathtub, shower, hot tub, Jacuzzi or swimming pool.

23.25.313.12.4 Ratproofing.

Delete section 313.12.4 in its entirety.

23.25.315.0 Trenching, excavation, and backfill.

Amend section **315.4** by adding, after the third sentence, the following:

Backfill material shall be 3/8" pea gravel or smaller. In the case of cast iron drain, waste and vent piping, the backfill material shall be 3/4" gravel and earth or smaller.

23.25.321.0 Mezzanines and platforms.

Add new section as follows:

Every mezzanine or platform containing appliances or equipment requiring access more than ten feet, six inches above the ground or floor level shall be made accessible by a stairway or ladder fastened to the structure. The ladder shall be constructed with:

1. Rung spacing not to exceed fourteen (14) inches on center.
2. Toe spacing not less than six (6) inches deep.
3. At least 18" spacing between rails.
4. Rungs at least 0.75 inches in diameter capable of withstanding a 300 lb. load.
5. Offset sections and landings capable of withstanding 100 pounds per square foot when heights exceed 30 feet.

23.25.402.3.1 Non-water urinals.

Delete section in its entirety.

23.25.402.4 Metered faucets.

Add to the end of the first sentence of section 402.4:

...bus stations, cocktail lounges, bars, concert halls, sports arenas, theaters, and shopping malls.

23.25.411.1.1 Unvented garage floor drains.

Add new section as follows:

- A. A maximum of three (3) unvented floor drains may be installed in one- and two-family residential garages. Each shall have a three-inch (3") (76mm) minimum trap and trap arm, and two-inch (2") (50.8mm) floor drain. No other plumbing fixtures may be connected to the garage drain piping. When a contractor or homeowner installs this type of system, they shall install the waste lines as per the Uniform Plumbing Code regarding slopes and backfill material.

B. Underground inspections of these floor drains are not required, but spot checks may be made by inspectors. If requested, MOA staff performs this inspection at no additional fee.

23.25.412 Minimum number of required fixtures.

Delete section 412.1 through 412.5.3 and refer to the Building Code.

23.25.414.1 Access to whirlpool bathtub pump.

Add to section 414.1:

The access shall be required to be a minimum of 16"x16", although alternate access arrangements may be considered. The intent is the pump may be removed easily and safely. All pumps shall be located so the supporting or securing bolts are no more than two (2) feet from the access opening. The access panel may be siliconed in place and shall remain easily removable. If removal of a pump motor is in question, the contractor shall be required to remove the pump motor to demonstrate proper access.

23.25.419.0 Minimum hot water supply temperature.

Add new section as follows:

The minimum hot water temperature to showers, tub and shower combinations, and tub fillers shall be 110°.

23.25.508.0 Other water heater installation requirements.

Replace Section 508.4 with the following:

508.4 Water heaters shall be installed in a watertight pan of corrosion-resistant material. The pan shall be equipped with a minimum three quarter (3/4) inch (20mm) diameter drain discharging to an approved location. Water heater enclosures shall be provided with an approved floor drain.

Exceptions:

1. A floor drain is not required when a water heater is installed in a garage and the garage floor slopes to the exterior.
2. A floor drain is not required if a water heater is equipped with a listed safety device to control flooding.
3. A floor drain is not required when a water heater is installed in an attic or above a drop ceiling and the pan is drained to an approved location.
4. A pan is not required when a water heater is installed on a concrete slab on grade.
5. A pan is not required in a garage, where a corrosion-resistant material is placed under the water heater provided it covers the entire platform and extends to all walls adjoining the platform and turning up the walls a minimum of two inches.

23.25.508.2 Seismic strapping for small water heaters.

Add an exception to UPC Section 508.2:

Exception: Tank type gas and electric water heaters with a minimum of 5 gallons and a maximum of 10 gallons require only one approved seismic strap placed as close to the middle of the heater as possible, measured vertically, without blocking access to the controls.

23.25.508.4.1 Water heaters located in mobile homes.

Add new section as follows:

508.4.1 Water heaters located in mobile homes.

- A. Installation of a water heater located in a compartment off the bedroom shall be acceptable if the water heater was factory installed, if the compartment is sealed from the bedroom by a panel screwed to the wall, and if the combustion air is taken from a source outside of the bedroom and complies with Uniform Plumbing Code.
- B. A water heater replaced in an existing mobile home shall be replaced with a water heater tested, approved, and listed for use in mobile homes. The proper combustion air shall be installed to supply the new water heater per Uniform Plumbing Code.

23.25.508.5 Relief valve discharge.

Replace Section 508.5 with the following:

When a water heater is installed in a garage, the water heater relief valve piping shall discharge to the floor over the edge of the platform.

23.25.508.14 Installation in residential garages.

Delete the words "unless listed as flammable vapor ignition resistant" from paragraph (1).

23.25.603.0 Cross-connection control.

Amend by adding the following:

Purpose and scope - the purpose of this section is to protect the public health by controlling or eliminating actual or potential installation of cross-connections. The control or elimination of cross-connections shall be in accordance with this code, the current edition of the cross-connection control manual published by the Pacific Northwest section of The American Water Works Association and the manual of Cross-Connection Control published by the University of Southern California Foundation for Cross-Connection Control. In the event a conflict exists between the technical publications adopted herein and the Uniform Plumbing Code, the most stringent provision shall apply.

Unsafe facilities - the Municipality may refuse to furnish water and may discontinue services to any premises where plumbing facilities, appliances, or equipment using water are dangerous, unsafe, or not in conformity with the water utility tariff or other related municipal ordinances. No potable water service connection to any premises shall be installed or continued in

use by a purveyor unless the potable water supply is protected by all necessary backflow prevention devices and assemblies. The installation or maintenance of a cross-connection, endangering the quality of the purveyor's water supply, shall be unlawful and is prohibited.

Administrative authority - the Building Official or authorized representative.

Purveyor - the operator or owner of a water supply.

Premises - real property, including any house or building thereon, located within the Municipality.

Cross-connection inspections - no water shall be delivered to any structure hereafter built within the Municipality until it is inspected by the Administrative Authority for possible cross-connections and approved as being protected from such cross-connections.

Inspections shall be made periodically of all potentially hazardous buildings, structures, or improvements of any nature now receiving water through the municipal water system, for the purpose of ascertaining whether cross-connections exist. Such inspections shall be made by the Administrative Authority.

Any building modification requiring a plumbing or mechanical permit may require a cross-connection inspection and compliance.

Possible cross-connections - backflow prevention assemblies or devices shall be installed in any premises where, in the judgment of the Administrative Authority, the nature and extent of activities, or the materials used or stored on the premises, may present a hazard to the potable water supply in the event a cross-connection were to be made; even though such cross-connection has not been made. Such circumstances include, but are not limited to:

- Premises having an auxiliary water supply.
- Premises having intricate plumbing arrangements making it impractical to ascertain whether or not cross-connections in fact exist.
- Premises where entry is restricted so inspection for cross-connections cannot be made with sufficient frequency or on sufficiently short notice to assure cross-connections do not exist.
- Premises having a repeated history of cross-connections being established or re-established.
- Premises on which any substance is handled under pressure, so as to permit entry into the water supply. This shall include the handling of process waters and cooling waters.
- Premises where materials of a toxic or hazardous nature are handled in such a way if back siphonage should occur, a health hazard might result.
- The following facilities, or portions of a building containing one of the listed facilities, when connected to a potable water supply, require backflow prevention assemblies or devices unless the authority with jurisdiction determines no hazard exists. An example of a facility

within a building is a dental office in a multi-story office building. For this application, a reduced pressure principle backflow preventer is required to be installed on the hot and cold water serving the dental office and backflow prevention is not required on the main supply to the building. This protects both the city main and the occupants in the building:

- Hospitals, mortuaries, and clinics;
- Laboratories;
- Metal plating industries;
- Piers and docks;
- Sewage treatment plants;
- Food or beverage processing plants;
- Chemical plants;
- Petroleum processing or storage plants;
- Radioactive material processing plants, nuclear reactors, or other facilities where radioactive materials may be utilized;
- Manufacturing facilities;
- Car wash facilities;
- Water systems not within the definition of potable water supply;
- Fire sprinkler systems;
- Medical/dental facilities;
- Waterfront facilities;
- Irrigation systems;
- Laundries and dry cleaners;
- High rise or other buildings above system pressure which require booster pumps; and
- Sand, gravel and concrete plants or other material processing plants.

23.25.603.3 General requirements.

Amend by adding a second paragraph to section **603.3.1** as follows:

Backflow assemblies and devices shall be approved if it successfully passed both the laboratory and field evaluation tests conducted by the University of Southern California Foundation for Cross-Connection Control.

23.25.603.3.9 Area drain sizing for backflow assemblies.

Delete Section 603.3.9 and replace with the following:

For new building construction, backflow devices or assemblies with drainage (reduced pressure principle assemblies) shall be provided with an area drain, as listed below.

Backflow Device Size	Area Drain Waste Line Minimum Size
1" and less	2"
1¼" – 2"	3"
2 ½" – 3"	4"

4" and greater	6"
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Exception: Area drain size is not required to be larger than building sewer service line.

23.25.603.4.6.5 Lawn irrigation.

Add new paragraphs as follows:

The Uniform Plumbing Code regulates the installation of these types of plumbing systems up to and including the required type(s) of backflow preventer. A permit, plan check, and inspection is required to ensure the potable water piping is sized correctly for the number of fixture units effected by such a system and required piping material and backflow preventer(s) are installed. The installation down stream of the required backflow preventer is not regulated by the plumbing code and is considered non-potable water piping.

Installation of backflow preventers and/or vacuum breakers on public systems shall be done by a plumbing contractor properly licensed with the Municipality of Anchorage. Private installations require either a plumbing contractor or a legal owner complying with all the requirements in the Anchorage Administrative Code.

23.25.603.4.8 Water cooled compressors, degreasers.

Amend section by adding a second paragraph to read as follows:

Installation, operation or use of air conditioning or cooling units employing water or other fluid as a cooling agent without a recovery and recirculation unit is prohibited.

23.25.603.4.23 Potable water supply to dental chairs.

Add new section as follows:

603.4.23 Potable water supply to each individual dental chair shall be protected by a backflow preventer as approved by the administrative authority.

23.25.603.4.24 Hydronic heating/cooling.

Add a new section as follows:

603.4.24 Hydronic heating/cooling. Systems with heat transfer fluids containing plain water or water/propylene glycol mixture require a minimum double check valve with intermediate atmospheric vent backflow preventer to be installed on any directly connected potable water makeup piping to the system. (A suitable example of this backflow preventer is a Watts 9D or a Hersey BCP valve.) In addition, the below listed requirements shall be complied with when a system contains propylene glycol:

1. Water/propylene mixture shall contain a food grade powder dye. (A suitable example is FD+C Powder Dye.) Liquid food coloring is not acceptable due to its potential dissipation into the system.
2. A warning tag shall be installed on the backflow preventer stating

the following information:

- A. System contains propylene glycol - use no other substitute.
- B. Do not add ethylene glycol or automotive anti-freeze of any type.
- C. No high hazard toxic chemicals permitted to be added to this system.

Systems with a heat transfer fluid containing Ethylene Glycol approved for such use require minimum protection of the potable water makeup system by installation of a physical air gap or a reduced pressure principal backflow preventer.

23.25.603.4.25 Steam systems.

Add new section 603.4.25 as follows:

Due to potential addition of toxic chemicals in any steam system, the minimum protection for the potable water makeup shall be by installation of a physical air gap or a reduced pressure principal backflow preventer.

23.25.603.4.26 Cooling towers.

Add new section as follows:

603.4.26 Cooling towers. Cooling towers obtaining makeup water from a potable source shall have a reduced pressure principal backflow preventer or air gap separation installed at the source of the potable water.

23.25.603.4.27 Tall buildings over 30 feet in height.

Add new Local Amendment 23.25.603.4.27 – Tall buildings over 30 feet in height.

Buildings with water piping exceeding 30 feet in height measured from grade plane as defined by the Building Code to the highest portion of the piping system shall be equipped with a Double Check Valve Assembly on the main water supply to the building.

23.25.603.4.28 Commercial hose bibbs.

Hose bibbs within facilities with a potential for a high hazard cross-connection, such as automotive and maintenance shops and any facility where chemicals are used or stored in the vicinity of the hose bibb, shall be protected by a minimum pressure vacuum breaker or spill-resistant vacuum breaker.

23.25.604.1 Materials - water pipe and fittings.

Add a sentence to the end of 604.1 to read as follows:

Asbestos-Cement, PE, PVC, PEX-AL-PEX, PE-AL-PE and HDPE shall not be used for cold water building supply distribution systems outside a building.

23.25.604.2 Materials - copper tube.

Amend to delete the words "or underground outside of structures" in the Exception.

23.25.604.8 Materials - plastic pipe materials.

Amend by deleting paragraph 604.8 and the exception and substitute the following:

604.8 Plastic piping materials shall not be used for water service piping from the street service main, private well, or other water source to a building or premises.

23.25.605.3 Shut off valves in multi-family dwelling units.

In multi-dwelling units, one (1) or more shutoff valves shall be provided in each dwelling unit so the water supply to the entire dwelling unit can be shut off without stopping water supply to other units. These valves shall be accessible in the dwelling units that they control. Shutoff valves shall be visible and shall not exceed ten (10) feet from a crawl space access when the shutoff valves are located in a crawl space.

23.25.608.0 Water pressure, pressure regulators and pressure relief valves.

Amend by deleting paragraph 608.5 and substitute the following:

608.5 Relief valves shall be provided with a drain, not smaller than the relief valve outlet of galvanized steel or hard drawn copper pipe and fittings, CPVC or listed relief valve drain tube with fittings which shall not reduce the internal bore of the pipe tubing (straight lengths as opposed to coils), and shall extend from the valve to a floor drain or other approved location inside the building. The drain pipe shall terminate not more than two (2) feet (610 MM) nor less than six (6) inches (152 MM) above the floor drain or other approved location and point downward. No part of such drain pipe shall be trapped, and the terminal end shall not be threaded. Each relief valve drain shall be piped independently of other relief valve drains.

23.25.609.3.2 Installation.

Add exception:

Exception: Brazing shall not be required on non-pressurized, non-potable piping such as trap primers. Where joints are permitted, they shall be of the approved type.

23.25.609.3.3 Water supply accessibility.

Where the building water supply pipe enters the building within a crawlspace, it shall exit the ground or slab in an area with a minimum of forty inches (40") clear space between ground or slab and bottom of structure, and provide an unobstructed passageway no less than forty (40) inches high and twenty-two (22) inches wide from the water supply entrance to the crawlspace access.

23.25.609.4 Testing.

Amend by deleting the words "Except for plastic piping" before "a fifty (50) pound test, to read as follows:

Upon completion of a section or of the entire hot and cold water supply system, it shall be tested and proved tight under a water pressure not less than the working pressure under which it is to be used. The water used for tests shall be obtained from a potable source of supply. A fifty (50) pound per square inch (344.5 k Pa) air pressure may be substituted for the water test. In either method of test, the piping shall withstand the test without leaking for a period of not less than fifteen (15) minutes.

23.25.609.10.1 Water hammer.

Add sentences to the end of Section 609.10 to read as follows:

Properly sized expansion tanks approved for potable water may be used in a single-family and duplex residence in lieu of water hammer arresters. Such expansion tanks must be installed on the cold water piping between the shutoff valve and each water heater maker location. In the event the expansion tanks do not eliminate the water hammer, mechanical water hammer devices will be required. Examples of quick-acting valve locations include, but are not limited to, a dishwasher, clothes washer, toilet ballcock, icemaker, and any single handle faucet.

23.25.610.8 Size of meter and building supply pipe using Table 6-6.

Amend by deleting the last sentence of section 610.8 and substitute the following:

No new street service or building supply pipe shall be less than one (1) inch (25.4 mm) in diameter.

23.25.612.0 Indoor water meter setter.

Add new sections as follows:

612.0 Indoor water meter setter.

612.1 All newly constructed single family, duplex and triplex residences shall install an approved indoor water meter setter with meter idler or a removable section of pipe to facilitate the future installation of water meters in a horizontal position. It shall be located in the vicinity of the main supply full-way valve, ahead of any branch lines and shall also be valved on the outlet side. An easily accessible frost-proof area with adequate clearances shall be provided for meter installation, maintenance or removal. "Easily accessible" shall be considered an open area not concealed by an appliance, furnace, water heater or standard building material. When the meter is installed in under floor or crawl spaces, the maximum distance from the access opening to the meter shall not exceed ten (10) feet (3048 mm).

612.2 A horizontal section of pipe may be used in lieu of the indoor meter setter provided the pipe is equal in length to a water meter of the same size including meter couplings, but in no case shall it be less than twenty-four inches (24"), (610 mm) in length. The piping shall be supported to provide a permanent support for the water meter when installed.

612.3 When the water tariff is revised to allow the metering of these residences, the utility shall furnish two meters and remote feed-outs at its expense and its crews shall install remote read-out meters at the time of actual meter installation.

23.25.704.0 Fixture connections (drainage).

Change the second sentence in paragraph 704.3 to read as follows:

“A floor drain **or flush mounted floor sink** shall be provided **within 5 feet of** the fixture, and the fixture...”

23.25.719.0 Cleanouts.

Delete first paragraph of 719.1 and substitute the following:

719.1 Cleanouts shall be placed at the end of building drains, two (2) feet (610 mm) outside building and shall be of same material as building drain.

23.25.724.0 Building drain accessibility.

Add new Local Amendment 23.25.724.0 – Building drain accessibility.

Where the building drain pipe enters in a crawl space, it shall exit the ground or slab in an area with a minimum of forty (40) inches clear space between the ground or slab and bottom of structure, and provide an unobstructed passageway no less than forty (40) inches high and twenty-two (22) inches wide from where the building drain exits the ground and the crawlspace access.

23.25.801.3 Bar and fountain sink traps.

Amend paragraph 801.3 by deleting the words “5 feet” from the last sentence and substituting the words “fifteen (15) feet.”

23.25.815.0 Soda fountains, condensates, drip pans, ice machines, and other similar equipment.

Add new section as follows:

815.0 Soda fountains, condensates, drip pans, ice machines, and other similar equipment.

A. If the drain outlet for this type of equipment is below or remotely located from an approved point of disposal, the equipment may drain by gravity to a single pump, lift station receiver based on the following:

1. A "Little Giant" condensate unit or equal is acceptable for lift station receiver. The pump shall be appropriately sized for the required condition.
2. The equipment drain outlet or tailpiece may not exceed 1" I.D.
3. The equipment drain pipe from the outlet or tailpiece to the lift station receiver shall not exceed five (5) feet measured along the centerline of the pipe and shall be piped per UPC section 803.0.

4. The discharge pipe and fittings from the lift station receiver shall be a material approved for drainage piping and shall be piped to an approved indirect waste receptor per Uniform Plumbing Code section 701.
- B. Vending company employees may install the drainage piping from the equipment they install to the approved point of disposal, provided such piping is in accordance with the Uniform Plumbing Code requirements.
- C. If the equipment installed requires a water supply, it shall be provided by a properly licensed plumber to within ten (10) feet of the equipment, complete with any required backflow prevention device. The vendor employee may make the water connection from that point to the equipment.

23.25.908.2 Bathroom wet venting.

Delete in its entirety.

23.25.Table 10-1 Horizontal distance of trap arms.

Add ** after Horizontal Distance of Trap Arms and add below Table 10-1 the following:

** Trap arms for residential floor drains may be extended beyond the limits of Table 10-1 to where they pass under the nearest wall before installing the required vent.

23.25.1014.1 Grease interceptors.

Amend by adding the following words to the first sentence after the words "leading from sinks":

1014.1 ...“such as pot sinks (two- and three-compartment), scullery sinks, dishwashing sinks, silverware sinks”.

23.25.1017.1 Interceptors required.

Amend by deleting reference to "550 gallons" and replacing with "100 gallons".

23.25.1101.1 Where required.

Delete from the first sentence the words "or into a combined sewer system where a separate storm sewer system is not available."

Delete from the second sentence the words "In the case of one- and two-family dwellings." and "such as streets or lawns".

23.25.1101.3 Material uses.

Amend by deleting reference to "Chapter 15 Firestop Protection" and replacing with "the Building Code"

23-25-1101-5 Subsoil drains.

Amend section 1101-5.1 by adding the following to the beginning of the section:

When required by the authority having jurisdiction...

23.25.1101.6 Building subdrains.

Amend section 1101.6 by deleting the word "public" and inserting the word "storm".

23.25.1101.9 Filling stations and motor vehicle washing establishments.

Amend section 1101.9 by adding to the beginning of the paragraph:

When required by the authority having jurisdiction...

23.25.1101.11.1 Primary roof drainage.

Delete the first sentence and replace with the following:

Roof areas of a building shall be drained by roof drains, gutters, scuppers, or sheet flow off the edge of the roof.

23.25.1101.11.2.2.2 Combined system.

Delete 1101.11.2.2.2 and replace with the following:

The secondary roof drains may connect to the horizontal portion of the primary drain a minimum of 3 feet downstream from the primary drain. Additionally, an approved flexible connector shall be installed on each roof drain per the manufacturer's installation instructions or a swing joint configuration may be used (see detail "A" of MOA Handout P.02). When this combined system is used, an overflow line must be installed in the drain line and run to the exterior of the building above grade to an appropriately designed overflow drain or scupper system to allow sheet flow from the drain line to surface in case of below grade freeze-up of main drain line or storm main. The primary storm drainage system shall connect to an underground public storm sewer or discharge to an approved location.

23.25.1108.0 Controlled-flow roof drainage.

Delete sections 1108.1 and 1108.2 in their entirety.

23.23.1109.2 Methods of testing storm drainage systems.

Delete the words "except that plastic pipe shall not be tested with air" from the first sentence.

23.25.1208.1 Temporary gas installations – permit required.

Add a new section as follows:

- A. Temporary gas approval is given to allow "comfort heating" appliances to be used to provide temporary heat to a building or building site prior to the completion of the building's primary heating system.
- B. The most commonly used appliance is a natural gas portable space heater. Other comfort heat appliances allowed for temporary heat

purposes are warm air furnaces, boilers, and unit heaters. It is NOT the policy of the Building Safety Division or Enstar Natural Gas Company to allow "decorator fireplaces" or "ranges" to be utilized as temporary heat for buildings. These appliances are not designed or "listed" for such purpose.

- C. All appliances used to provide temporary heat for buildings shall be installed in accordance with the manufacturers' instructions and terms of their listing, with particular attention being paid to the clearances to combustibles from the top, bottom, back, and sides of these appliances.
- D. Unit heaters used for temporary heat shall be installed per manufacturers' instructions and listed clearances to combustibles from the top, bottom, front, back, and sides of these appliances. The vent connector shall be graded at one-quarter inch (1/4") per foot slope upward to the outside and it shall be changed to "B" vent at the wall penetration. The "B" vent must maintain its listed clearance to combustibles, extend a minimum of five (5) feet vertically, and be secured.
- E. Furnaces used for temporary heat shall comply with the same requirements as for unit heaters as stated above. In addition, the return air for the furnace shall be ducted a minimum of ten (10) feet from the furnace.
- F. Portable space heaters shall be provided with one hundred percent (100%) outside air to the back end of the heater. In most cases, the gas regulator attached to these heaters shall be piped to the outside. If the regulator vent discharges, it shall not be allowed to discharge into the space being heated.
- G. Gas hose used for temporary heaters shall be a type approved by the Building Safety Division and all manufacturers' listed clearances shall be maintained. The hose shall have an internal wire mesh or braid and be "kink proof". Supporting wire shall run the full length of the hose. Each time a hose is moved from one lot to another, it shall be retested with sixty (60) psi air pressure.

23.25.1208.2 Temporary gas installations – permit not required.

A permit and inspection shall not be required for residential temporary construction heat serving tented footings and foundations. This provision is for thawing ground and curing concrete, not comfort heat for workers, such as plumbers installing underground. This allowance is limited to portable "SURE FLAME" type heaters and not intended for unit heaters, furnaces, and boilers with special venting considerations. All heaters and hoses shall be of the approved type. Heaters shall be listed by an approved listing agency. All hoses shall have an internal wire mesh or braid, and be "kink proof". Supporting wire shall run the full length of the hose. One hundred percent (100%) outside air shall be provided to heater at all times. Listed clearances to combustibles shall be maintained. A licensed journeyman plumber or gasfitter shall perform all work.

23.25.1209.5.8.1 Pipe joints.

Amend by adding the following at the end of the paragraph:

All joints in underground ferrous piping shall be welded when any of the following conditions apply:

1. The nominal pipe diameter is 2 ½ inches or larger.
2. The pipe is installed under a driveway.
3. Medium pressure systems.

23.25.1209.5.8.2 Tubing joints.

Amend by adding the following sentences at the end of the paragraph:

All joints in underground copper shall be brazed with wrought copper fittings. No underground joints shall be permitted unless the underground length of run exceeds sixty (60) feet. All pipe to tubing transitions shall be made above ground.

23.25.1209.5.8.4(2) Metallic piping joints and fittings.

Amend Item 2 by deleting the words "cast iron".

Delete Item 5.

Add a new Item 9 as follows:

9. Right and left nipple couplings. Where unions are necessary, right and left nipples and couplings shall be used. Ground joint unions may be used at exposed fixture, appliance, or equipment connections and in exposed exterior locations immediately on the discharge side of a building shutoff valve.

23.25.1211.1.2(A) Cover requirements.

Amend by adding the following sentence to the end of the paragraph:

Plastic and copper gas piping shall have at least eighteen inches (18") of earth cover or other equivalent protection.

23.25.1211.1.5 Piping through foundation wall.

Delete paragraph in its entirety and replace with the following:

Building fuel gas piping entrances and exits shall be located above grade or in an approved vented vault.

23.25.1211.1.8 Ground penetrations.

Add a new section as follows:

1211.1.8 Ground penetrations. At all points where fuel gas piping enters or leaves the ground, there shall be installed, above ground, an approved or listed fuel gas piping connector, capable of absorbing a six-inch (6") displacement, in any direction, due to frost heave action.

23.25.1211.1.9 Fuel gas piping connectors.

Add a new section as follows:

1211.1.9 Fuel gas piping connections. Fuel gas piping connectors listed

for outdoor use may be used between the meter and house main. No flex connector may pass through any wall, partition, panel, or other barrier. Solid fittings shall be used on each end.

23.25.1211.1.10 Frost heave protection for copper tubing.

Add a new section as follows:

1211.1.10 Frost heave protection for copper tubing. At points where copper tubing type systems enter or leave the ground, the systems shall be protected from frost heave action by the incorporation of a suitable above ground six-inch radius loop, or listed fuel gas piping connector of equal size.

23.25.1211.5.1(3) Manufactured home connections.

Add the following item to the section:

3. Pounds to inches water column regulators serving mobile homes and connected to copper tubing shall be attached to the exterior of the mobile home, and shall not be located under the mobile home.

23.25.1211.5.5 Medium pressure gas.

Add a new section as follows:

1211.5.5.1 Medium pressure gas. The installation of a medium pressure gas system (2 psig or 5 psig) within a building must be pre-approved by the local gas utility. Steel piping shall be welded. Test pressure for all medium pressure gas piping shall be 60 psig.

1211.5.5.2 CSST medium pressure gas. The installation of a CSST medium pressure gas system (2 psig or 5 psig) within a building must be preapproved by the local gas utility. Test pressure for all medium pressure gas piping shall be 60 psig. Joints shall be limited to the meter connection and at the regulator to the appliance being served. Intermediate joints are not allowed without prior approval.

23.25.1214.3.2 Test pressure.

Replace the reference to "1 ½" with "ten (10)".

Replace the minimum test pressure of three (3) psig with ten (10) psig and add the following sentences at the end of the paragraph:

Required pressure tests of ten (10) psig shall be performed with gauges of 1/10 psi increments or less.

Welded pipe shall be tested with not less than sixty (60) psig test pressures.

23.25.1301.1 Application.

Amend by adding to the end of the first sentence the words "or in accordance with the latest version of AIA Guidelines for Design and Construction of Hospital and Health Care Facilities."

23.25.1309.0 Veterinary clinics.

Amend by adding new section:

23.25.1309.1.1 Veterinary clinics. The material requirements, installation, and testing practices of NFPA 99 for Level 3 gas and vacuum systems shall apply to veterinary clinics except third party verification is not required.

23.25.1309.8 Vacuum systems for dental offices.

Amend by adding new section:

23.25.1309.8 Vacuum systems for dental offices. The purpose of this amendment is to point out and clarify the requirements for wet vacuum systems in dental offices. Refer to NFPA 99C (most current edition) [NFPA 99 5.3.10] for full text of these requirements.

- A. Level 3 wet vacuum systems (in dental offices) may be installed using schedule 40 PVC with pressure fittings [NFPA 99 5.3.10.2 and 5.3.10.3]. Piping and fittings installed in plenums shall have a flame spread index of not more than 25 and a smoke developed rating of not more than 50.
- B. The wet vacuum system (in dental offices) is considered a Level 3 system if:
 - 1. The system is entirely separate from other Level 1 systems.
 - 2. The occupancy to be served and the function of the occupancy is distinct from other occupancies in the building.
 - 3. The patient population, during or subsequent to treatment, are not dependent for life on the vacuum system, and the treatment the facility performs may be completed without detrimental effect on patient outcomes in the event of sudden loss of vacuum systems [NFPA 99 Chapter 18].
- C. The wet vacuum system (in dental offices) shall be verified by a third party technically competent and experienced in the field of Level 3 vacuum systems and testing, and meeting the requirements of ANSI/ASSE Standard 6030 [NFPA 5.3.12.3].

23.25.1310.3.1 Definitions – health care facilities.

Health Care Facilities – Buildings or portions or buildings in which medical, dental, psychiatric, nursing, obstetrical or surgical care is provided.