

**Revisions to Chapters 2 & 3
of the 2018 International
Plumbing Code**

Definitions and General Regulations

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Minimum Standard Construction Codes in Georgia

While you are reading and studying these classes on construction codes in Georgia it is important to understand what Georgia says about the codes. Codes are law and are to be enforced as such.

From the early 1960s until 1991 there were no statewide construction codes. It was entirely up to a local government to decide which codes they would enforce on construction projects in their jurisdiction. This caused a lot of confusion in the construction industry. The state decided to remedy the situation by adopting statewide Minimum Standard Construction Codes so no matter where you worked in the state you would be required to meet the same level of quality and standard on all construction projects. This bill passed and became law in 1991 and was known as “Uniform Codes Act”. It set up eight mandatory codes that covered all phases of construction and set the minimum standards for all work performed. An additional six permissive codes were also adopted that cover existing buildings and other issues. The Georgia Department of Community Affairs is the state agency that manages the Code program.

While codes are state laws, the state delegated code enforcement to the local governments. It is required that they adopt administrative procedures on how they will enforce codes and declare which codes they will enforce. As with many state laws. If the local jurisdiction does not enforce codes, the person installing a plumbing, electrical or heating system or building a structure must still meet these minimum standards. If a person is found guilty of not complying with these requirements, they will be held responsible by the courts. The next slide shows the current Minimum Standard codes for Georgia.

2020 State Adopted Mandatory Construction Codes

- 2018 International Building Code (IBC)
 - 2018 International Residential Building Code (IRC)
 - 2018 International Plumbing Code (IPC)
 - 2018 International Mechanical Code (IMC)
 - 2018 International Fuel Gas Code (IFGC)
 - 2018 International Fire Code (IFC)
 - 2015 International Energy Code (IECC)
 - 2017 National Electrical Code. (NEC)
 - 2018 International Swimming Pool and Spa Code (IPSC)
- Except for the National Electrical Code, all codes listed above have Georgia Amendments which change the requirements of the code. Amendments must be used in conjunction with the code to determine compliance of work performed.
- The Latest edition of the Code are adopted by the state every six years. Amendments can be adopted yearly
- Amendments can be found on the DCA: [website dca.ga.gov/constructioncodes](http://dca.ga.gov/constructioncodes)

Revisions to the 2018 International Plumbing Code

Chapter 2

Definitions

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

Chapter 2 of the 2018 International Plumbing Code provides definitions of common terms used in the codes. Definitions give a description of items used in plumbing systems and helps clarify their part in meeting the intent of the code. New terms and definitions were added to Chapter 2 because of new products. Some definitions were revised. Changes are made by the International Code Council after a three-year long process including several hearings and a final membership vote.

Georgia also added several terms and their definitions because Georgia adopted the **“Water Sense Program”** in 2011. The Water Sense program changed requirements found in the code with regards to water conservation. For instance according to plumbing code a toilet can use 1.6 gallons of water per flush. Under the “Water Sense” program you are restricted to no more than 1.28 gallons per flush. There are other definitions that had to be revised which covered such things as lavatories, faucets, showers and kitchen sinks. Revisions had to be made to chapter 2 due to the state law covering non-water urinals. You will find all the definitions and revisions that were adopted by the state in another class on this website covering Georgia Amendments.



Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

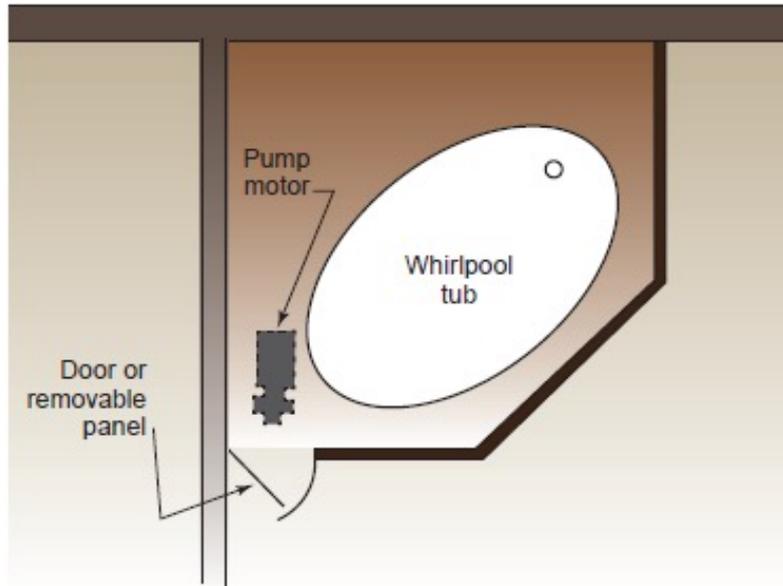
The definition of the word **accessible** was revised into the codebook for clarification purposes. The slide shows there are two situations where that word accessible could apply. This caused some confusion as to the intent of the word. The whirlpool on the left is equipped with a pump that are generally located under the tub. Because it may require service, repair or replacement, the code requires this pump to be **accessible (You can get to it.)**. The word **accessible** is also used regarding fixtures that will be used by handicapped individuals such as handicap **accessible** water closet. To clear up the confusion the definition of **accessible** was revised and the code states that it shall only be used when describing a fixture used in a handicap situation. The word **access** shall be used when the code requires that you can get to a fixture or part that requires service., repair or replacement



CODE REVISION TO THE 2018 IPC (Definitions)

A definition was added to eliminate confusion between requirements for accessibility by disabled persons, and access requirements for repair personnel to reach and work on various components of plumbing systems.

2018 CODE: ACCESSIBLE. A site, building, facility or portion thereof that complies with Chapter 11 of the *International Building Code*.



Access to whirlpool tub pump



Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The definition of **Alternate On-site Nonportable Water** was added to the 2018 IPC to support information and requirements found in Chapter 13 Reclaimed Water. The water described by this definition is captured and stored instead of being sent down the drain to a sewer or septic tank. After it's collected it is filtered and disinfected to make it suitable for the application for which it is used. It is allowed to be reused only in the building or property from which it originated. Waters most collected are graywater and rainwater. Graywater is water drained from a bathtub, laboratory or a washing machine which means it would contain no fecal matter. The main three uses for graywater is that it's used for either flushing toilets or urinals on the property or in a limited scope to irrigate shrubbery or trees. Other types of water that can be reclaimed are rainwater, condensate or ejected water from a water purification system such as a reverse osmosis system. Chapter 13 contains all the requirements covering these systems and dictates that the water must be brought up to a level of purity equal to the requirements for the application in which it will be used. The slide accompanying this shows a graywater collection system. This is a system that is generally located in a single-family dwelling or a small commercial establishment

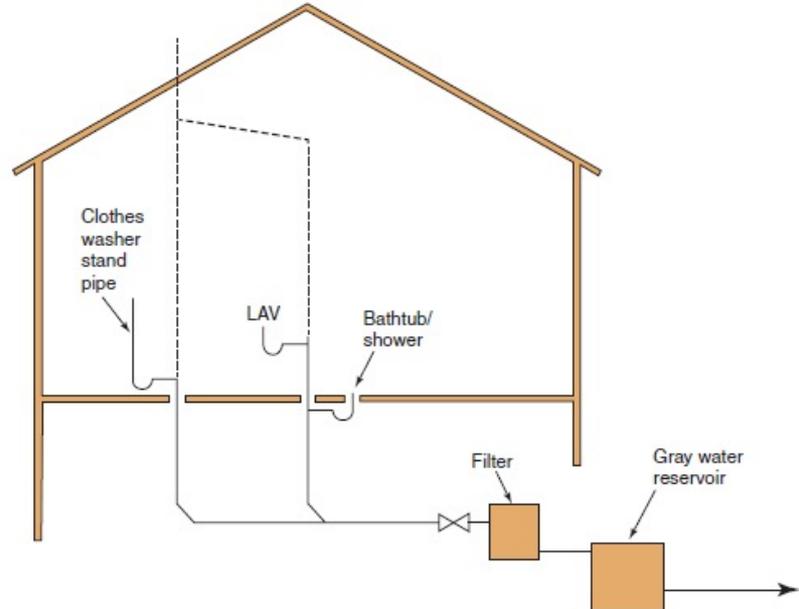


CODE REVISION TO THE 2018 IPC (Definitions)

Alternate Onsite Nonpotable Water Definition

Term has been added to support a revised Chapter 13 that covers how various nonpotable waters are to be collected, stored and distributed.

Alternate Onsite Nonpotable Water. Nonpotable water from other than public utilities, onsite surface sources and subsurface natural freshwater sources. Examples of such water are gray water, on-site reclaimed water, collected rainwater, captured condensate, and rejected water from reverse osmosis systems.

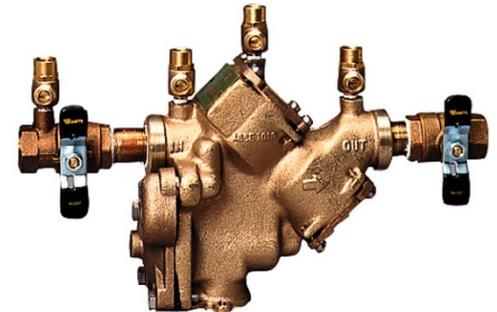


Gray water is an example of alternate onsite nonpotable water.

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The definition for a **backflow preventer** was revised in Chapter 2 because the term was used frequently throughout the plumbing code and there was no clear meaning of the term. The code used the term wherever a protection against backflow must be included in the system. There are a number of different devices used to protect against backflow. A backflow preventer assembly or device is a means of protecting the potable water system from any type of contamination due to backflow.

Backflow is the reversal of the flow from its intended direction. In the context of the code, it refers to a reversed flow condition that occurs in a closed water piping system caused by an event (Open pipe or valve) or device (Pump) within the system. Backflow occurs is when the water pressure in the public system drops below atmospheric pressure which causes the water in the pipes to flow backwards and allows contaminated water to infect the water in the public system. Tables and sections in chapter 6 of the plumbing code dictate what type of device must be used based on the system type degree of hazard and possible location.



CODE REVISION TO THE 2018 IPC (Definitions)

Definition has been made more specific about what constitutes a backflow preventer: a backflow prevention assembly, a backflow prevention device or other means or methods.

Backflow Preventer. A backflow prevention assembly, a backflow prevention device or other means or methods to prevent backflow into the potable water supply.



Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The term **Water Dispenser** was added in definitions to help clear up confusion regarding substitution of bottled water dispensers or water coolers for drinking fountains. Chapter 4 of the 2012 IPC the plumbing code limited the 50% substitution of drinking fountains to replacing the drinking fountain with either a a bottle water cooler or a water cooler. The new water dispenser definition expands the group of devices and apparatuses that can be used for the 50% substitution. The pictures below and the accompanying slide show water dispensers that can be used for substitution



CODE REVISION TO THE 2018 IPC (Definitions)

Definitions for a drinking fountain, a water dispenser and a water cooler clarify Section 410 on drinking fountain requirements. The water dispenser definition expands the group of devices and apparatus that can be used as substitutions for 50 percent of the required number of drinking fountains.

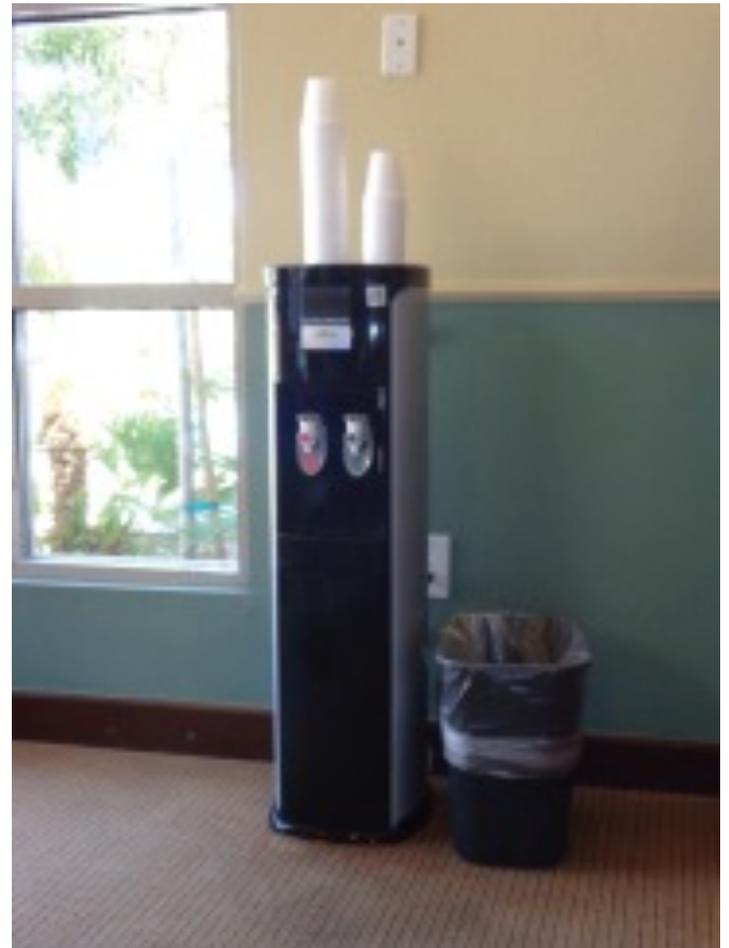
Drinking Fountain. A plumbing fixture that is connected to the potable water distribution system and the drainage system. The fixture allows the user to obtain a drink directly from a stream of flowing water without the use of any accessories.

Water Dispenser. A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises. This definition also includes a freestanding apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.

Water Cooler. A drinking fountain that incorporates a means of reducing the temperature of the water supplied to it from the potable water distribution system.

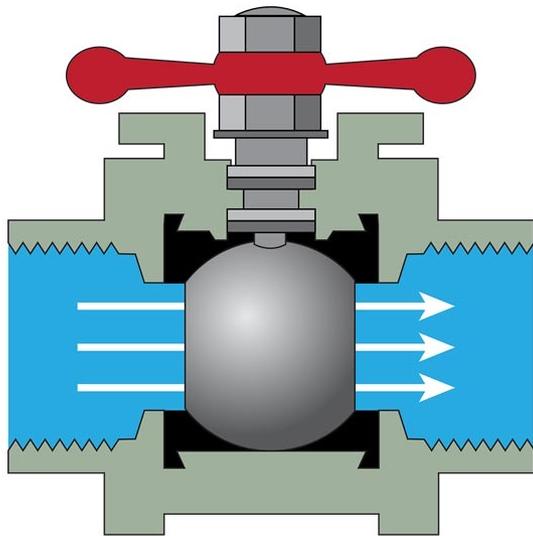
CODE REVISION TO THE 2018 IPC (Definitions)

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Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

While the code required Full Open Valves on fixtures and at certain locations in plumbing systems the IPC had never included a definition to clarify what a full open valve was. This caused some confusion, so a definition was added. A full open valve is one that when the valve is in the full open position there is no restriction of water flow through the body. The inside opening of the valve must be the same diameter of the pipe that is connected. This way there is no restriction of water flow as it passes through the valve. A ball valve or a gate valve is considered a full open valve. You may have also seen or heard them referred to as a full port valve. They are the same.



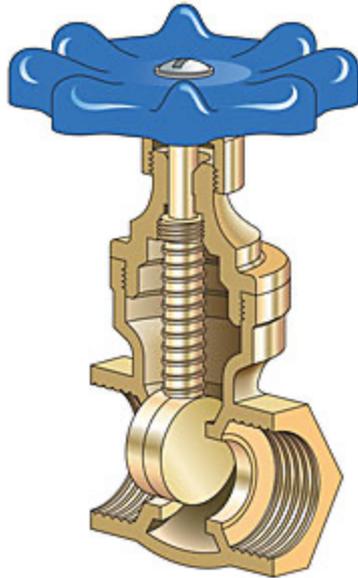
FULLY OPEN



CODE REVISION TO THE 2018 IPC (Definitions)

Definition was added to clarify what type of valve is intended where the term “full-open valve” is used in code language.

FULL-OPEN VALVE. A water control or shutoff component in the water supply system piping that, where adjusted for maximum flow, the flow path through the component’s closure member is not a restriction in the component’s through-flow area.



Plug valve with rectangular port in closure member

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

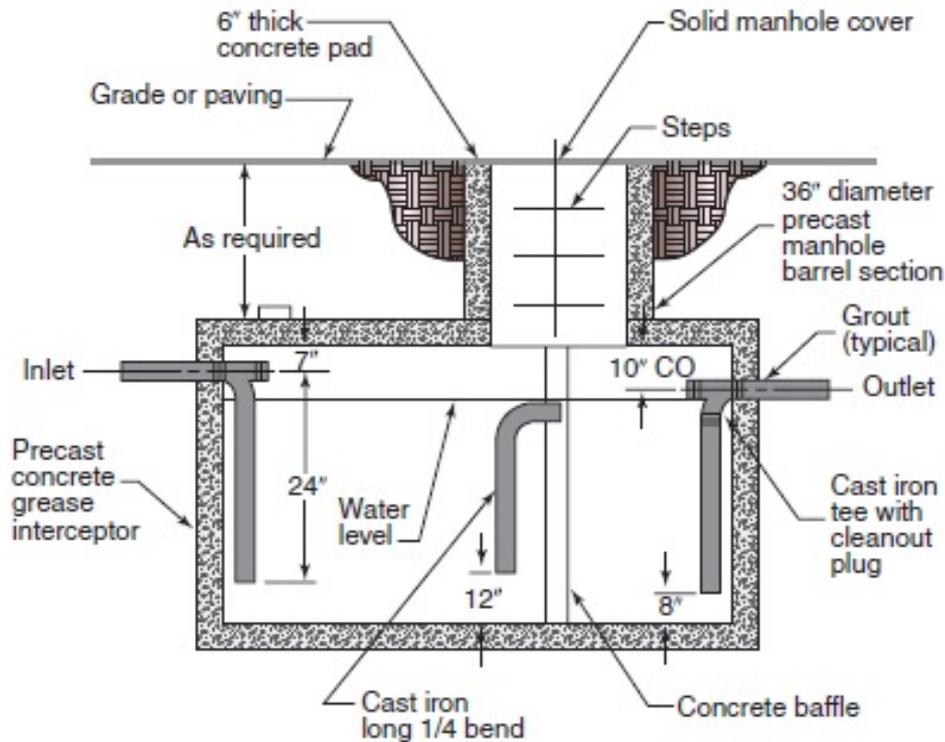
The Definition of a **Fat, Oils and Grease Disposal System** was added in Chapter 2 to support revisions made in Chapter 10 regarding grease interceptors. This is a program that has been created by the U S Department of Natural Resources to assist in the sizing of grease interceptors. Size does matter. If a grease interceptor is too small the waste moves through too quickly. If the greasy waste does not stand for an adequate period of time inside the tank, the grease will not separate from the water. It is then carried downstream and generally causes problems in the sewer system or septic tank.

The FOG system sizes the tank based on the maximum flow of waste (gpm) generated by the system and a 30-minute retention time of the greasy water inside the tank. Take the maximum flow of waste (gpm) and multiply it by 30 to determine the minimum capacity of the tank. **Word of Advice to All Plumbers.** Always check with the local jurisdiction to find out the required size of a grease interceptor to be installed before you install it. Counties and cities around the state have their own requirements and they vary one jurisdiction to the next. Interceptors have had to be replaced because people did not check with the local government before they installed what was on the plans and then found it was the incorrect size.

CODE REVISION TO THE 2018 IPC (Definitions)

Another type of grease interceptor, the **Fats, Oils and Greases (FOG) disposal system**, has been added to support the revised text in Section 1003.3.4 covering grease interceptors.

Fats, Oils and Greases (FOG) Disposal System. A plumbing appurtenance that reduces nonpetroleum fats, oils and greases in effluent by separation or mass and volume reduction.



Typical concrete grease interceptor

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The definition of mechanical joint was revised to show that a heat fused joint on a plastic pipe is not considered a mechanical fitting. The code stipulates what is classified as a mechanical joint in sort of a backward fashion. Instead of telling you what a mechanical joint is it lists joints that are not to be considered mechanical. This means any joint not listed there would be considered mechanical. The joints listed there that are not mechanical are found in the code with instructions on how each is to be made. Such as solvent cement joints must have the pipe cleaned, primed and glue applied. Mechanical joints are strictly required by the code to be installed in accordance with manufacturer's instructions. New joining methods for piping are being developed constantly. There are new fittings that are approved and marketed during code cycles that can be used but are not listed in the code. Rather than code delay the use of these fittings and joining methods they simply refer them to manufacturer's instructions. **Word to Plumbers**, it is your responsibility to know the manufacturer's requirements. If you install something incorrectly and there is a failure you are at fault.

CODE REVISION TO THE 2018 IPC (Definitions)

The definition of a mechanical joint now includes heat-fused joints.

Mechanical Joint. A connection between pipes, fittings, or pipes and fittings that is not screwed, caulked, threaded, soldered, solvent cemented, brazed, or welded or heat-fused. A joint in which compression is applied along the centerline of the pieces being joined. In some applications, the joint is part of a coupling, fitting, or adapter.



Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The definition of a **Press Connect Joint** was added in definitions. Like many other fitting and materials it is not new to the plumbing industry. It has been approved and used in several industries for over 40 years. **Press connect joints** are classified as a mechanical joining method and as such they are required to be installed per manufacturer's instructions. These joints play a large part of the installation of commercial plumbing where copper piping is used , but they also play a large role in repair and service. They have the advantage of connecting copper pipes with no torch or solder.

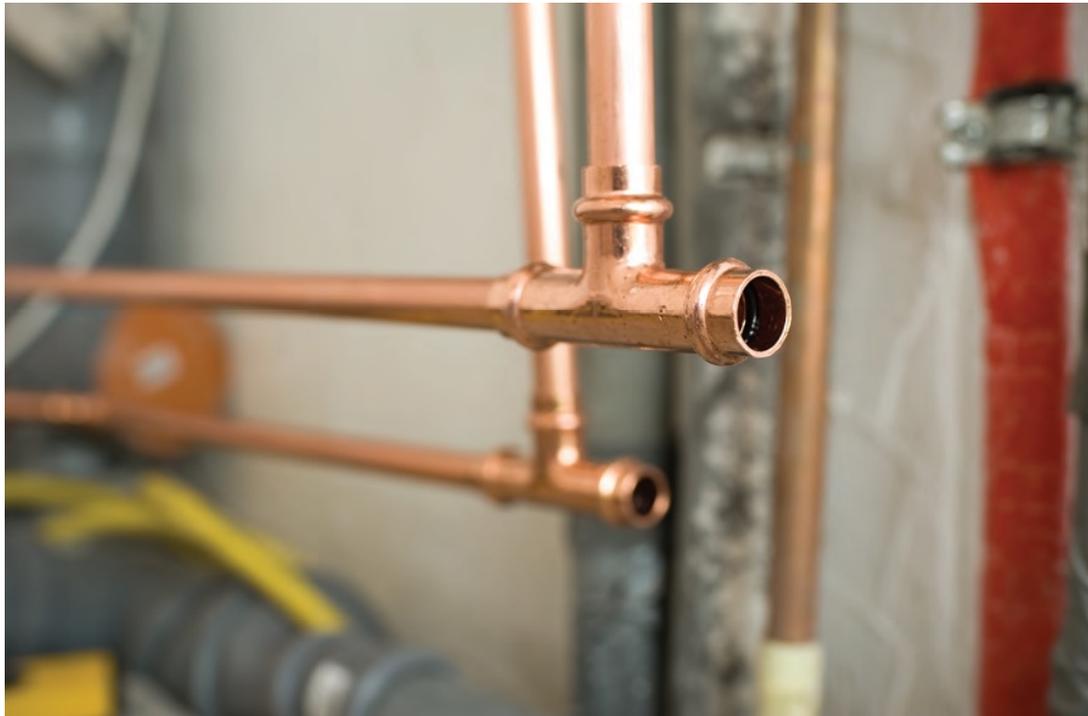
The system has been approved and can be used in gas piping. It is approved for use with schedule 40 steel and 10 gage carbon steel piping. **Note to Plumbers.** As always everything must be done per manufacturer's instructions and the fittings used on water piping cannot be used on the gas system. Water fitting have Green marking, Gas have yellow.



CODE REVISION TO THE 2018 IPC (Definitions)

Definition was added to provide more meaning to the code sections where the term is used.

PRESS-CONNECT JOINT. A permanent mechanical joint incorporating an elastomeric seal or an elastomeric seal and corrosion resistant grip ring. The joint is made with a pressing tool and jaw or ring approved by the fitting manufacturer.



Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The definition of **Swimming Pool** was added to support and correspond with the definition found in the **International Pool and Spa Code (ISPC)**. There are various types of pools such as a private, community or public facility, The term private covers both residential pools and one located at a hotel, motel and gyms. The requirements that had been found in the plumbing code (IPC) have been moved to the international pool and spa code. The only area in which the plumbing code still covers pools and spas is found in chapter 6 and chapter 8. Chapter 6 requires the water supply to the pool must be protected against backflow either by an air gap or a backflow prevention device. Chapter 8 deals with the drainage from the pool going into a public sewer states that the connection between the pool drain and the sewer must be made when an indirect connection. Chapter 6 of the Pool and Spa code gives the requirements for the toilet facilities at community,

CODE REVISION TO THE 2018 IPC (Definitions)

New definition supports the new code Section 403.1.1 regarding required plumbing fixtures for outdoor public swimming pools.

PUBLIC SWIMMING POOL. A pool, other than a residential pool, that is intended to be used for swimming or bathing and is operated by an owner, lessee, operator, licensee or concessionaire, regardless of whether a fee is charged for use.



CODE REVISION TO THE 2018 IPC (Definitions)

Definition was revised to support the definition of, and intended coverage for, swimming pools as regulated by the *International Swimming Pool and Spa Code* (ISPSCR).

SWIMMING POOL. A permanent or temporary structure that is intended to be used for swimming, bathing or wading and that is designed and manufactured or built to be connected to a depth circulation system. A swimming pool can be open to the public regardless of whether a fee is charged for its use or can be accessory to a residential setting where the pool is available only to the household and guests of the household.



CODE REVISION TO THE 2018 IPC (Definitions)

Definition was revised to support the definition of, and intended coverage for, swimming pools as regulated by the *International Swimming Pool and Spa Code* (ISPSCR).

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Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The definition of a **toilet facility** was added to chapter 2 in order to clarify what fixtures it must have to meet the code. Many times people assumed a toilet facility means a bathroom which included a tub or shower with the lavatory and toilet. As the definition states only a toilet and lavatory make up this facility. The code dictates the total number facilities required for the conditions. The number of fixtures is based on the number of people that will be in the facility or event.



CODE REVISION TO THE 2018 IPC (Definitions)

This definition has been added to clarify that a toilet facility is a room or space that contains not less than one water closet and one lavatory.

Toilet Facility. A room or space that contains not less than one water closet and one lavatory..



Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

The definition of a **Waste Receptor** was added to clarify what the meaning of the term and to identify what plumbing arrangements fall in the category. Floor drain , standpipes, floor sinks and hub drains are designated as waste receptors. A waste receptor can receive the waste from one or multiple fixtures. The fixtures drained into the receptor are not directly connected and the waste must enter the receptor through either an air gap or air break.



CODE REVISION TO THE 2018 IPC (Definitions)

This definition has been added to clarify what is considered a waste receptor.

Waste Receptor. A floor sink, standpipe, hub drain or a floor drain that receives the discharge of one or more indirect waste pipes.



Revisions to the 2018 International Plumbing Code

Chapter 3

General Regulations

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

Revision to Chapter 3 General Regulations

Chapter 3 covers **General Regulations** for plumbing systems. It covers the installation and testing of water piping (both service and water distribution systems) plus the drainage and vent piping. In it you will find requirements concerning the installation, testing and protection of all the piping. Whether the piping is installed inside or outside the building this chapter covers the installation. This is different from the other chapters in the code which deal only with one specific part of the system.

All the chapters of the plumbing code have been amended by the state of Georgia. Chapter 3 has several amendments. There are administrative requirements that were moved from chapter 1 and placed in chapter 3. These Amendments are shown on the next slides. Other amendments that were added to chapter 3 deal with the “**Water Sense Program**” which is the water conservation program adopted by the Georgia State legislature in 2011.

Remember that any amendment adopted by the state becomes the code. State law dictates that the 2018 international plumbing code along with all amendments adopted by the state of Georgia constitute the minimum standard plumbing code of the state of Georgia. You will find all these amendments and their explanation located in another online class on our website.

Amendments to the 2018 IPC

GENERAL APPLICABILITY STANDARDS

*Add new Section 300 ‘GENERAL APPLICABILITY STANDARDS’ as follows:

SECTION 300

GENERAL APPLICABILITY STANDARDS

300.1 Scope. The provisions of this code shall apply to the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing systems within this jurisdiction. This code shall also regulate condensate collection systems. The installation of fuel gas distribution piping and equipment, fuel-gas-fired water heaters and water heater venting systems shall be regulated by the *International Fuel Gas Code*.

Amendments to the 2018 IPC

300 GENERAL APPLICABILITY STANDARDS

*Add new Section 300 ‘GENERAL APPLICABILITY STANDARDS’ as follows:

300.2 Appendices. Appendices are not enforceable unless they are specifically referenced in the body of the code or adopted by the Department of Community Affairs or the authority having jurisdiction.

300.3 Intent. The purpose of this code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing equipment and systems.

300.4 Severability. If any section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

Amendments to the 2018 IPC

GENERAL APPLICABILITY STANDARDS

*Add new Section 300 ‘GENERAL APPLICABILITY STANDARDS’ as follows:

300.5 General. The provisions of this code shall apply to all matters affecting or relating to structures, as set forth in Section 101. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

300.6 Maintenance. All plumbing systems, materials and appurtenances, both existing and new, and all parts thereof, shall be maintained in proper operating condition in accordance with the original design in a safe and sanitary condition. All devices or safeguards required by this code shall be maintained in compliance with the code edition under which they were installed. The owner or the owner’s designated agent shall be responsible for maintenance of plumbing systems. To determine compliance with this provision, the code official shall have the authority to require any plumbing system to be reinspected

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

Revision to Chapter 3 General Regulations

305.1 Corrosion Protection Against Contact, This section of the code was revised in several areas. First it listed the type of piping that must be protected against corrosion caused by contact with the soil, different metals and masonry products. The two piping systems that require protection are copper or black iron. The next revision dealt with steel framing and copper pipe. Nowhere in the code did it clearly state that copper piping could not come in direct contact with steel framing members but there are a number of code sections which prohibit direct connection of copper pipe or tubing to steel pipe. This restriction is because of corrosive damage caused by galvanic action. The last revision of this section changed the thickness of the required plastic sleeving used to protect piping passing through concrete or masonry products. The new thickness required is 0.008 inch.

CODE REVISION TO THE 2018 IPC

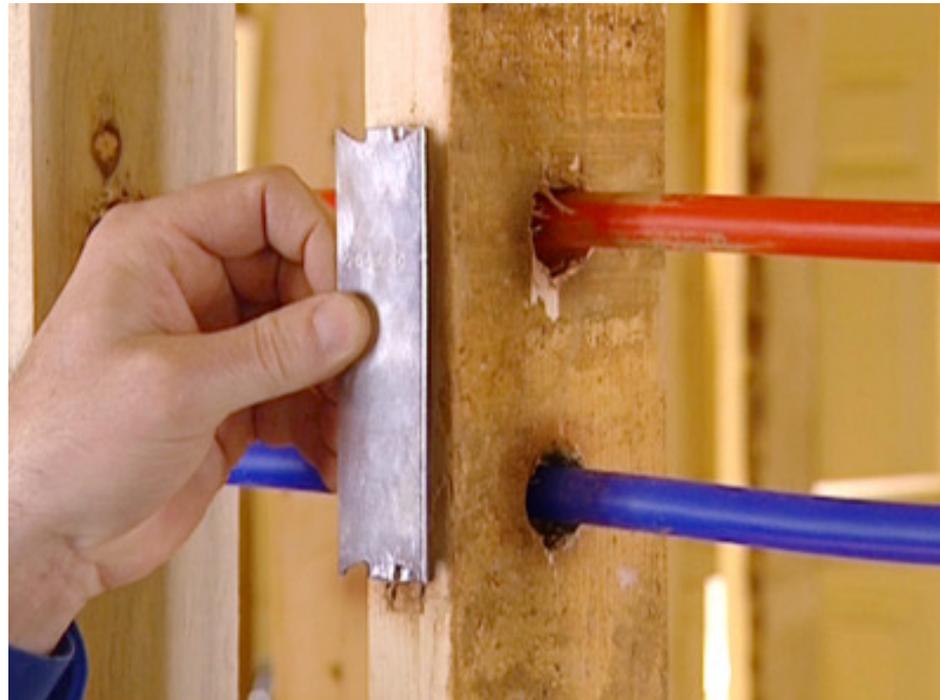
Change clarifies where and what type of metallic piping is required to be protected from corrosion.

305.1 Corrosion Protection against contact. Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive material soil. Where sheathing is used to prevent direct contact, the sheathing shall have a wall thickness of the material shall be not less than 0.008 inch (8 mil) (0.64 0.203 mm) and the sheathing shall be made of plastic. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.



Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

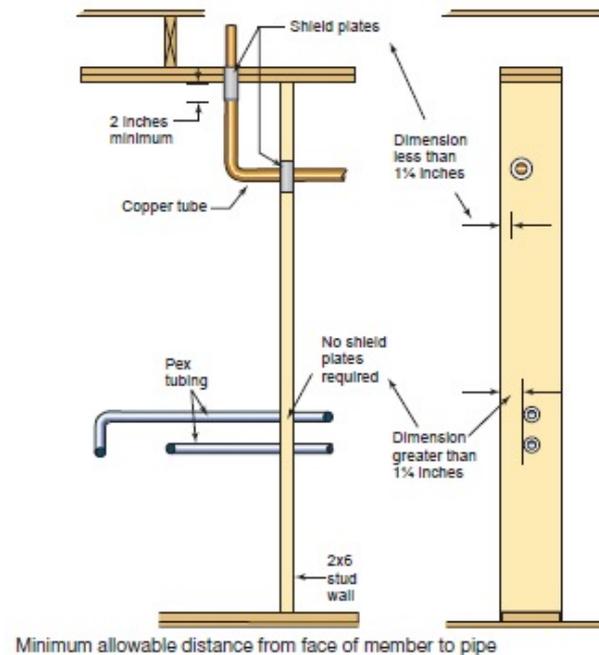
Section 305.6 Protection Against Physical Damage. The revision found in this section changed the distance that a pipe could be installed from the edge of a stud or joist before it would need to be protected with a FHA strap or metal plate. The plumbing code has always required protection to be installed if the pipe is installed closer than 1 ½ inches to the edge. All other codes including the electrical used 1 ¼. This change brought the Plumbing code in line with all other codes.



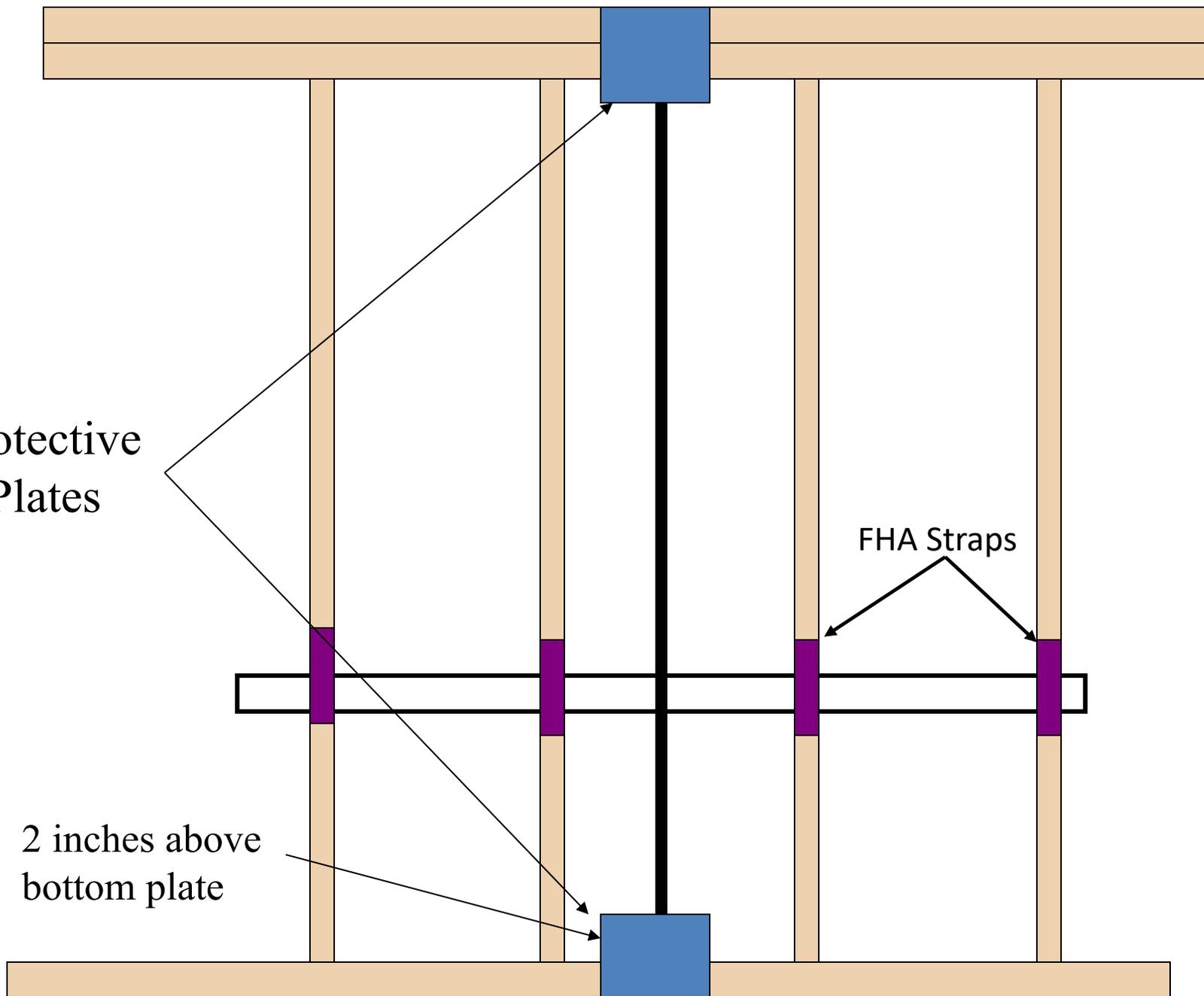
CODE REVISION TO THE 2018 IPC

Concealed piping installed through holes or notches, the minimum distance to the face of the framing member without protection has been reduced.

305.6 Protection against physical damage. In concealed locations where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than ~~1 1/2~~ 1 1/4 inches (32 mm) from the nearest edge of the member, the pipe shall be protected by steel shield plates. Such shield plates shall have a thickness of not less than 0.0575 inch (1.463 mm) (No. 16 gage). Such plates shall cover the area of the pipe where the member is notched or bored, and shall extend not less than 2 inches (51 mm) above sole plates and below top plates.



Protective
Plates



FHA Straps

2 inches above
bottom plate

CODE REVISION TO THE 2018 IPC

Table 308.5 Mid-Story Pipe Guide

Footnote “b” of Table 308.5 in previous editions of the code required a mid-story guide for pipe sizes 2 inches and smaller for some types of pipes. Because the code did not define what a midstory guide was, there was uncertainty about what was necessary to be installed. The revised language provides the clarification.

- a. The maximum horizontal spacing of cast-iron pipe hangers shall be increased to 10 feet where 10-foot lengths of pipe are installed.
- b. For sizes 2 inches and smaller, a guide shall be installed midway between required vertical supports. Such guides shall prevent pipe movement in a direction perpendicular to the axis of the pipe.

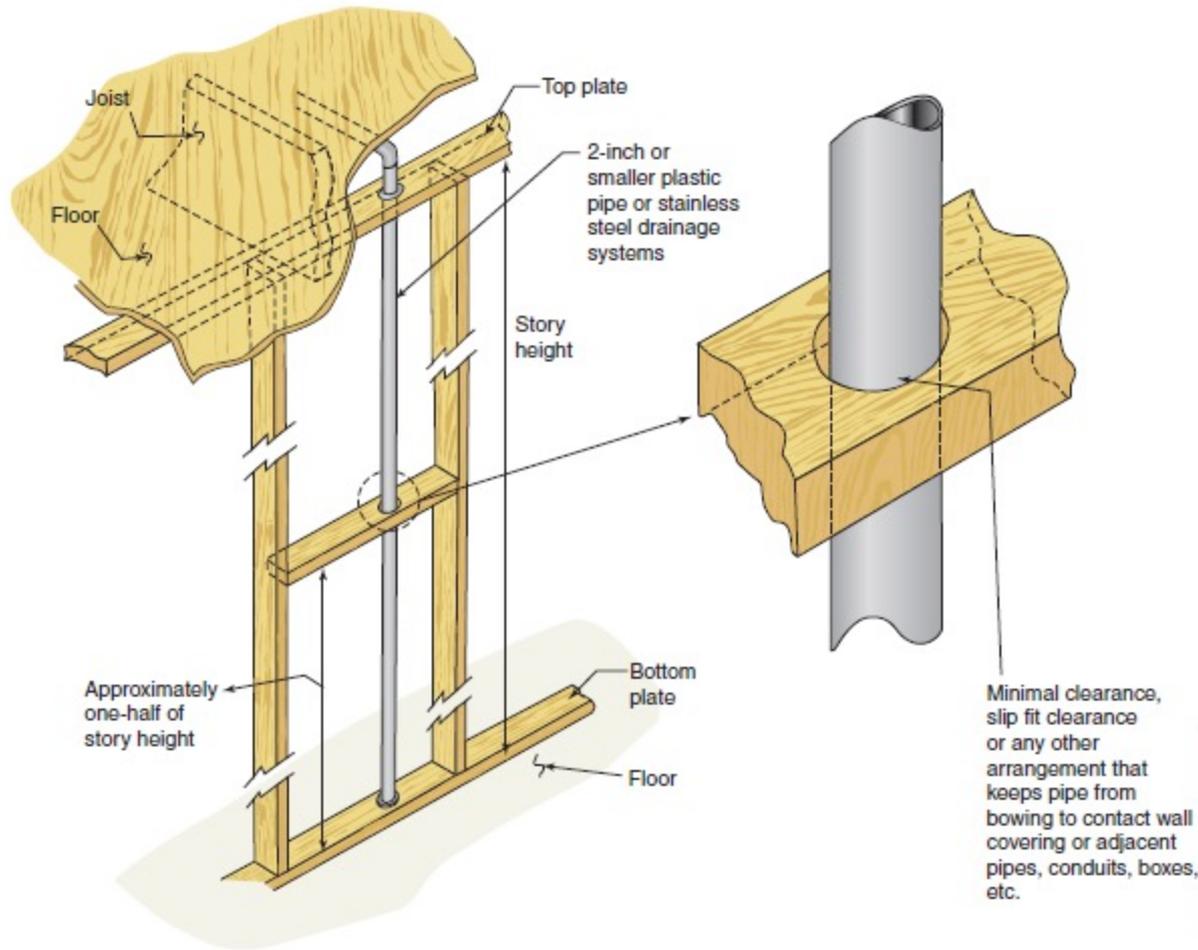
Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

Revision to Chapter 3

Footnote “B” of Table 308.5. This footnote in previous editions of the code required a mid-story guide for pipes 2 inches and smaller in size when they were run between floors in a stud cavity and were not secured to the framework of the building. The revision is to clarify what is required and the purpose. This pricing is installed to stabilize the pipe or tubing installed inside the stud cavity. Without such bracing the pipe can react by moving horizontally due to pressure change inside the system. This is especially important when plastic pipe or tubing is used for the water distribution piping. The illustration on the previous slide shows a typical mid-story guide set up. Even though there is some confusion in regard to the height of a story being 10 feet a mid-story guide still be required an 8 foot wall.

CODE REVISION TO THE 2018 IPC

Table 308.5 Mid-Story Pipe Guide



Mid-story pipe guide

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

Revision to Chapter 3

308.6 The section addressing Sway bracing was revised for clarification. This bracing is required on large waste or drainage pipes and when the pipe makes a turn of direction greater than 45 degrees. It is mainly used on systems in multistory buildings. It helps to secure pipes from shifting when there is a surge of waste coming down from the upper floors.

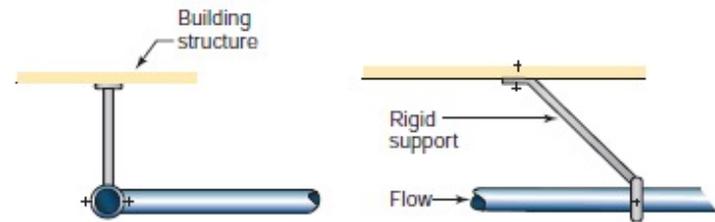
At the request of architects and engineers, Georgia deleted this requirement by amendment. Design professionals wanted to be able to include their own bracing methods.



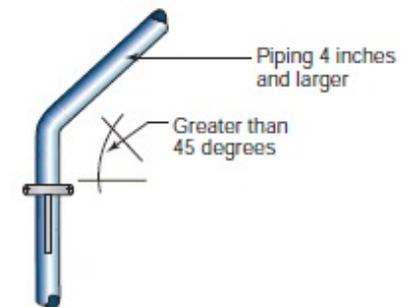
CODE REVISION TO THE 2018 IPC

Additional information clarifies where sway bracing is needed for drainage piping.

308.6 Sway bracing. Where horizontal pipes 4 inches (102 mm) and larger convey drainage or waste, and where a pipe fitting in that piping changes in the flow direction greater than 45 degrees (0.79 rad), rigid bracing or other rigid support arrangements shall be installed to resist movement of the upstream pipe in the direction of pipe flow. A change of flow direction into a vertical pipe shall not require the upstream pipe to be braced.



ELEVATION VIEWS



PLAN VIEW

Revisions to the 2018 International Plumbing Code. (IPC) Chapters Two and Three.

208.10 Thermal Expansion Tanks. One of the major changes of the 2018 IPC was that thermal expansion tanks could not be supported solely by the pipe connecting it to the system. The code now requires it to be installed and supported in accordance with manufacturer's instructions. The issue here was the weight of the tank itself plus the water it contained. Although some metal pipe, under certain conditions, could support the tank weight, plastic pipe was not designed for this type of stress. The larger issue was if the diaphragm inside the tank ruptured then the tank could fill with water and put additional stress on the supporting pipe. Many tank manufacturers give instructions on how this tank must be supported using straps or brackets. It is important to know what the manufacturer of the tank requires when you install it. ***Note the plumbers. If you do not follow the manufacturer's instructions and there is a failure which causes damage, you own it. Know what they require.***



CODE REVISION TO THE 2018 IPC

308.10 Thermal Expansion Tank Support

A thermal expansion tank cannot be supported by the piping connected to the tank. (New Section)

308.10 Thermal expansion tanks. A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

