



OBJECTIVES:

- ~CHANGES FROM THE 2015-2018 CODES
- ~CHANGES FROM THE 2018-2021 CODES
- ~ CITY AMENDMENTS

PLEASE KEEP IN MIND THAT NOT ALL CHANGES ARE INCLUDED.

101.1 ADD CITY OF HARKER HEIGHTS

103.1 ADD BUILDING DEPT

(Ordinance)

108.7.3 AMEND TO READ: "RE-INSPECTION AND TESTING." AMEND TO READ: "WHERE ANY WORK OR AN INSTALLATION DOES NOT PASS ANY INITIAL INSPECTION, THE NECESSARY CORRECTIONS SHALL BE MADE TO ACHIEVE COMPLIANCE WITH THIS CODE. THE WORK OR INSTALLATION SHALL THEN BE RE-SUBMITTED TO THE CODE OFFICIAL FOR RE-INSPECTION. A FEE SHALL BE PAID TO THE CITY FOR EACH RE-INSPECTION

109.5-ADD TO ALLOW REFUND POLICY

2.NOT MORE THAN <u>50 PERCENT</u> OF THE PERMIT FEE PAID WHERE WORK HAS BEEN DONE UNDER A PERMIT ISSUED IN ACCORDANCE WITH THIS CODE.

3.NOT MORE THAN <u>50 PERCENT</u> OF THE PLAN REVIEW FEE PAID WHERE AN APPLICATION FOR A PERMIT FOR WHICH A PLAN REVIEW FEE HAS BEEN PAID IS WITHDRAWN OR CANCELED BEFORE ANY PLAN REVIEW EFFORT HAS BEEN EXPENDED.

(Ordinance)

113.4-STOP WORK ORDER. AMEND LAST SENTENCE TO READ "ANY PERSON WHO SHALL CONTINUE ANY WORK IN OR ABOUT THE STRUCTURE AFTER HAVING BEEN SERVED WITH A STOP WORK ORDER, EXCEPT SUCH WORK AS THAT PERSON IS DIRECTED TO PERFORM TO REMOVE A VIOLATION OR UNSAFE CONDITION, SHALL BE LIABLE AS PROVIDED IN SECTION 150.99 OF THE CODE OF HARKER HEIGHTS, TEXAS."

114 MEANS OF APPEAL-AMEND TO READ <u>"SEE SECTION 113 OF THE INTERNATIONAL BUILDING CODE."</u>

115.4-VIOLATION PENALTIES. AMEND TO READ <u>"REFER TO SECTION 150.99 OF THE CODE OF HARKER HEIGHTS, TEXAS."</u>

ACCESSIBLE. DESCRIBES A SITE, BUILDING, FACILITY OR PORTION THEREOF THAT COMPLIES WITH CHAPTER 11 OF THE INTERNATIONAL BUILDING CODE. CHANGE FROM 2015 TO 2018. NO CHANGE FROM 2018-2021

FULL-OPEN VALVE. A WATER CONTROL OR SHUT OFF 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. CHANGE FROM 2015 TO 2018. NO CHANGE FROM 2018-2021

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. CHANGE FROM 2015 TO 2018. NO CHANGE FROM 2018-2021

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. CHANGE FROM 2015-2018. NO CHANGE TO 2021

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. CHANGE FROM 2015-2018. NO CHANGE TO 2021

COPPER ALLOY. A METAL ALLOY WHERE THE PRINCIPLE COMPONENT IS COPPER. ADDITION IN THE 2021 IPC

PRIVATE. IN THE CLASSIFICATION OF PLUMBING FIXTURES,

"PRIVATE" APPLIES TO FIXTURES IN RESIDENCES AND APARTMENTS,

AND TO FIXTURES IN NONPUBLIC TOILET ROOMS OF HOTELS AND

MOTELS AND SIMILAR INSTALLATIONS IN BUILDINGS WHERE THE

PLUMBING FIXTURES ARE INTENDED FOR UTILIZATION BY A FAMILY

OR AN INDIVIDUAL. THAT ARE NOT PUBLIC. CHANGE TO THE 2021

IPC

PUBLIC OR PUBLIC UTILIZATION. IN THE CLASSIFICATION OF PLUMBING FIXTURES, "PUBLIC" APPLIES TO FIXTURES IN GENERAL TOILET ROOMS OF SCHOOLS, GYMNASIUMS, HOTELS, AIRPORTS, BUS AND RAILROAD STATIONS, PUBLIC BUILDINGS, BARS, PUBLIC COMFORT STATIONS, OFFICE BUILDINGS, STADIUMS, STORES, RESTAURANTS AND OTHER INSTALLATIONS WHERE A NUMBER OF FIXTURES ARE INSTALLED SO THAT THEIR UTILIZATION IS SIMILARLY UNRESTRICTED. WITH UNRESTRICTED EXPOSURE TO WALK-IN TRAFFIC. CHANGE TO 2021 IPC

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 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. AMENDED IN 2021 IPC

IPC Chapter 3-General

303.5 CAST-IRON SOIL PIPE, FITTINGS AND COMPONENTS. CAST-IRON SOIL PIPES AND FITTINGS, AND THE COUPLINGS USED TO JOIN THESE PRODUCTS TOGETHER, SHALL BE THIRD-PARTY LISTED AND LABELED. THIRD-PARTY CERTIFIERS OR INSPECTORS SHALL COMPLY WITH THE MINIMUM INSPECTION REQUIREMENTS OF ANNEX A OR ANNEX A1 OF THE ASTM AND CISPI PRODUCT STANDARDS INDICATED IN THE CODE FOR SUCH PRODUCTS. (NEW SECTION ADDED IN 2018. NO CHANGE IN 2021)





IPC Chapter 3-General

305.1 PROTECTION AGAINST CONTACT. 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 SOIL. WHERE SHEATHING IS USED TO PREVENT DIRECT CONTACT, THE SHEATHING SHALL HAVE A THICKNESS OF NOT LESS THAN 0.008 INCH (8 MIL) (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. (AMENDED FOR CLARIFICATION IN 2018 IPC AND AMENDED BY CITY ORDINANCE.)

(Ordinance)

305.4.1 SEWER DEPTH. BUILDING SEWERS THAT CONNECT TO PRIVATE SEWAGE DISPOSAL SYSTEMS SHALL BE INSTALLED NOT LESS THAN 12 INCHES BELOW FINISHED GRADE AT THE POINT OF SEPTIC TANK CONNECTION. BUILDING SEWERS SHALL BE INSTALLED NOT LESS THAN 12 INCHES BELOW GRADE.

311.1-TOILET FACILITIES FOR WORKERS-ADD THE FOLLOWING SENTENCES: "TOILET FACILITIES SHALL BE PLACED NOT MORE THAN 300 FEET (91.2 M) APART. SEVERAL BUILDERS MAY SHARE THE SAME FACILITY, PROVIDED THERE IS A LETTER ON FILE SIGNED BY ALL PARTIES."

(Ordinance)

312.2 DRAINAGE AND VENT WATER TEST.

CHANGE TO READ: "A WATER TEST SHALL BE APPLIED TO THE DRAINAGE SYSTEM, EITHER IN ITS ENTIRETY OR IN SECTIONS. IF APPLIED TO THE ENTIRE SYSTEM, ALL OPENINGS IN THE PIPING SHALL BE TIGHTLY CLOSED, EXCEPT THE HIGHEST OPENING, AND THE SYSTEM SHALL BE FILLED WITH WATER TO THE POINT OF OVERFLOW. IF THE SYSTEM IS TESTED IN SECTIONS, EACH OPENING SHALL BE TIGHTLY PLUGGED, EXCEPT THE HIGHEST OPENINGS OF THE SECTION UNDER TEST, AND EACH SECTION SHALL BE FILLED WITH WATER, BUT NO SECTION SHALL BE TESTED WITH LESS THAN A 5-FOOT (1,524-MM) HEAD OF WATER. IN TESTING SUCCESSIVE SECTIONS, AT LEAST THE UPPER 10 FEET (3,048 MM) OF THE NEXT PRECEDING SECTION SHALL BE TESTED SO THAT NO JOINT OR PIPE IN THE BUILDING, EXCEPT THE UPPERMOST 10 FEET (3,048 MM) OF THE SYSTEM, SHALL HAVE BEEN SUBMITTED TO A TEST OF LESS THAN A 5-FOOT (1,524-MM) HEAD OF WATER. THIS PRESSURE SHALL BE HELD FOR NOT LESS THAN 15 MINUTES. THE SYSTEM SHALL THEN BE TIGHT AT ALL POINTS.'

(Ordinance)

SECTION 312.3 DRAINAGE AND VENT AIR TEST.

ADD EXEMPTION TO READ: "AN AIR TEST FOR PLASTIC PIPE NOT EXCEEDING 5 PSI FOR A PERIOD NOT LESS THAN 15 MINUTES SHALL BE ALLOWED FOR SOIL TESTING IN WET WEATHER WHERE PRE-APPROVED BY THE BUILDING OFFICIAL."

(Ordinance)

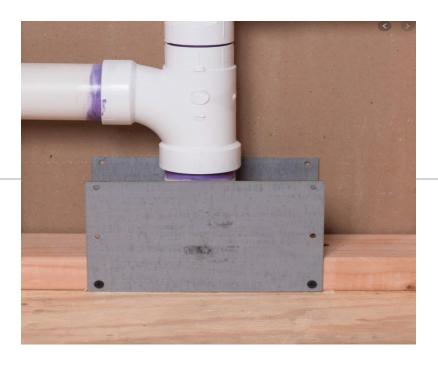
SECTION 312.10-INSPECTION AND TESTING OF BACKFLOW PREVENTION ASSEMBLIES.

REPLACE THE TEXT WITH THE FOLLOWING: "INSPECTION AND TESTING SHALL COMPLY WITH CHAPTER 54 OF THE CODE OF HARKER HEIGHTS."

IPC Chapter 3-General

305.6 PROTECTION AGAINST PHYSICAL DAMAGE. IN CONCEALED LOCATIONS WHERE PIPING IS INSTALLED THROUGH HOLES OR NOTCHES IN STUDS, JOISTS, RAFTERS OR SIMILAR MEMBERS LESS THAN 1/2 1 1/4. (CHANGE MADE 2015 TO 2018. NO CHANGE 2021)



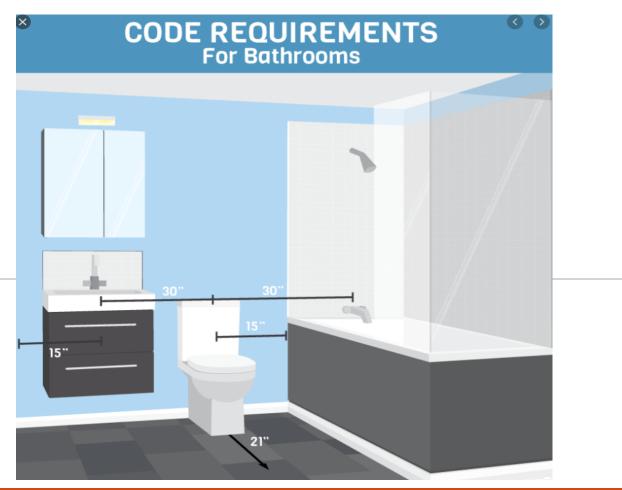


IPC Chapter 3-General

308.10 THERMAL EXPANSION TANKS. SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SHALL NOT BE SUPPORTED BY THE PIPING THAT CONNECTS TO SUCH TANKS. (ADDED IN 2018. NO CHANGE TO 2021)



IPC Chapter 4-Fixture,s Faucets and fixture fittings.



(2018 ADDED) 403.2 SEPARATE FACILITIES. SEPARATE FACILITIES SHALL NOT BE REQUIRED IN BUSINESS OCCUPANCIES IN WHICH THE MAXIMUM OCCUPANT LOAD IS 25 OR FEWER.



(ADDED 5 AND 6 IN 2021)

403.2 SEPARATE FACILITIES

- 5. SEPARATE FACILITIES SHALL NOT BE REQUIRED TO BE DESIGNATED BY SEX WHERE SINGLE-USER TOILET ROOMS ARE PROVIDED IN ACCORDANCE WITH SECTION 403.1.2.
- 6. SEPARATE FACILITIES SHALL NOT BE REQUIRED WHERE ROOMS HAVING BOTH WATER CLOSETS AND LAVATORY FIXTURES ARE DESIGNED FOR USE BY BOTH SEXES AND PRIVACY FOR WATER CLOSETS IS PROVIDED IN ACCORDANCE WITH SECTION 405.3.4. URINALS SHALL BE LOCATED IN AN AREA VISUALLY SEPARATED FROM THE REMAINDER OF THE FACILITY OR EACH URINAL THAT IS PROVIDED SHALL BE LOCATED IN A STALL.



IPC Chapter 4 CHANGES 2015-2018- MAINLY FOR CLARIFICATION

2018 IPC Update

2018 IPC Chapter 4: Fixtures Faucets and Fixture Fittings, Continued						
Code Section		Section Title	Description of Change			
2018	2015	Section Title	Description of Change			
Table 403.1 Modification			The Occupancy (Group) column of the table has been deleted for greater flexibility and accuracy for determining fixture requirements.			

MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES*								
		WATER CLOSETS		LAVATORIES				
CLASSIFICATION	DESCRIPTION	MALE	FEMALE	MALE		BATHTUBS/ SHOWERS	DRINKING FOUNTAIN	OTHER

Table 403.1 Addition	Table 403.1	MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES ⁸	The code language follows: f. The required number and type of plumbing fixtures for outdoor public swimming pools shall be in accordance with Section 609 of the International Swimming Pool and Spa Code.
403.1.2 Modification	403.1.2	Single-user toilet facility and bathing room fixtures	Single user toilet facilities having required plumbing fixtures must now be labeled for use by either sex.
403.1.3 Addition		Lavatory distribution	The code language follows: Where two or more folled rooms are provided for each sex, the required number of lavatories shall be distributed proportionately to the required number of water closets.
403.2 Modification	403.2	Separate facilities	The code language follows: Where plumbing fixtures are required, separate facilities shall be provided for each sex. Exceptions: 1. through 3. are unchanged. 4. Separate facilities shall not be required in business occupancies in which the maximum occupant load is 25 or fewer.
403.3 Clarification	403.3	Employee and public toilet facilities	The code language follows: Customers For structures and tenant spaces intended for public utilization, customers, patrons and visitors shall be provided with public toilet facilities in Employees associated with structures and tenalet facilities in Employees associated with structures and tenalet facilities spaces intended for public utilization-shall be provided with toilet facilities shall be provided in accordance with Section 403 for all users. Employees shall be provided with toilet facilities in all occupancies. Employee toilet facilities shall be either separate or combined employee and public toilet facilities.

2018 IPC Update

2018 IPC Chapter 4: Fixtures Faucets and Fixture Fittings, Continued						
Code S	Code Section Section Title Description of Change					
2018	2015	Section Title	Description of Change			
405.3.1 Clarification	405.3.1	Water closets, urinals, lavatories and bidets	The code language follows: A water closet, urinal, lavatory or bidet hall not be set closer than 15 inches (381 mm) from its center to any side wall, partition, vanity or other obstruction. Where partitions or other obstructions do not separate adjacent fixtures, shi fixtures shall not be set closer than 30 inches (762 mm) center to center between adjacent fixtures. There shall be not less than a 21-inch (533 mm) clearance in front of the a water closet, urinal, lavatory or bidet to any wall, fixture or door. Water closet compartments shall be not less than 30 inches (762 mm) in width and fost less than 60 inches (1624 mm) in depth for floor mounted water closets and not less than 30 inches (762 mm) in width and 56 inches (1422 mm) in depth for wall-hung water closets. Exception: An accessible children's water closet shall be set not closer than 12 inches from its center to the required partition or to the wall on one side.			
405.3.5 Clarification	405.3.5	Urinal partitions	The code language follows: Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. The width between walls or partitions at each urinal shall be not less than 30 inches (762 mm). The walls or partitions shall begin at a height not greater than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) or to a point not less than 6 inches (152 mm) beyond the outermost front lip of the urinal measured from the finished backwall surface, whichever is greater			
405.5 Addition	405.5	Plumbing fixtures with a pumped waste arrangement	The code language follows: Plumbing fixtures with pumped waste shall comply with ASME A112.3.4/CSA B45.9. The plumbing fixture with a pumped waste shall be installed in accordance with the manufacturer's instructions.			
409.1 Modification	409.1	Approval	The code language follows: Commercial dishwashing machines shall conform to ASSE 1004 and NSF 3. Residential dishwashers shall conform to NSF 184.			
409.4 Modification	Deletes 802.1.6	Residential dishwasher waste connection	The code language follows: The waste connection of a residential dishwasher shall connect directly to a wye branch fitting on the taliplece of the kitchen sink, directly to the dishwasher connection of a food waste disposer, or through an air break to a standpipe. The waste line of a residential dishwasher shall rise and be securely fastened to the underside of the sink rim or counter top.			
411.3 Addition		Water supply	The code language follows: Where hot and cold water is supplied to an emergency shower or eyewash station, the temperature of the water supply shall only be controlled by a temperature actuated mixing valve complying with ASSE 1071.			
412.7 Addition	424.7	Temperature- actuated, flow reduction valves devices for individual fixture fittings.	The code language follows: Temperature-actuated, flow reduction devices, where installed for individual fixture fittings, shall conform to ASSE 1062. A temperature-actuated, flow reduction device shall be an approved method for limiting the water temperature to not greater than 120° F (49° C) at the outlet of a faucet or fixture fitting. Such valves devices shall not be used alone as a substitute for the balanced-pressure, thermostatic or combination shower valves required in Section 442.4 3 12.3 or as a substitute for bathtub or whirlpool tub water-temperature limiting valves required in Section 412.5.			

CHANGE ADD IN THE 2021. THIS WAS ALWAYS IN THE IBC. IT WAS MOVED SO AS NOT TO BE OVERLOOKED.

410.3.2 MORE THAN THE MINIMUM NUMBER. WHERE MORE THAN THE MINIMUM NUMBER OF DRINKING FOUNTAINS SPECIFIED IN SECTION 410.3.1 IS PROVIDED, 50 PERCENT OF THE TOTAL NUMBER OF DRINKING FOUNTAINS PROVIDED SHALL COMPLY WITH THE REQUIREMENTS FOR PERSONS WHO USE A WHEELCHAIR AND 50 PERCENT OF THE TOTAL NUMBER OF DRINKING FOUNTAINS PROVIDED SHALL COMPLY WITH THE REQUIREMENTS FOR STANDING PERSONS.

EXCEPTIONS:

- 1. WHERE 50 PERCENT OF THE DRINKING FOUNTAINS YIELDS A FRACTION, 50 PERCENT SHALL BE PERMITTED TO BE ROUNDED UP OR DOWN, PROVIDED THAT THE TOTAL NUMBER OF DRINKING FOUNTAINS COMPLYING WITH THIS SECTION EQUALS 100 PERCENT OF THE DRINKING FOUNTAINS.
- 2. WHERE DRINKING FOUNTAINS ARE PRIMARILY FOR CHILDREN'S USE, DRINKING FOUNTAINS FOR PEOPLE USING WHEELCHAIRS SHALL BE PERMITTED TO COMPLY WITH THE CHILDREN'S PROVISIONS IN ICC A117.1 AND DRINKING FOUNTAINS FOR STANDING CHILDREN SHALL BE PERMITTED TO PROVIDE THE SPOUT AT 30 INCHES (762 MM) MINIMUM ABOVE THE FLOOR.

410.4 SUBSTITUTION. WHERE RESTAURANTS PROVIDE DRINKING WATER IN A CONTAINER FREE OF CHARGE, DRINKING FOUNTAINS SHALL NOT BE REQUIRED IN THOSE RESTAURANTS. IN OTHER OCCUPANCIES WHERE THREE OR MORE DRINKING FOUNTAINS ARE REQUIRED, WATER DISPENSERS SHALL BE PERMITTED TO BE SUBSTITUTED FOR NOT MORE THAN 50 PERCENT OF THE REQUIRED NUMBER OF DRINKING FOUNTAINS.

SUMMARY: AT LEAST THREE REQUIRED DRINKING FOUNTAINS MUST BE INSTALLED BEFORE 50% OF THE ADDITIONAL REQUIRED DRINKING FOUNTAINS CAN BE SUBSTITUTED WITH WATER DISPENSER.



2018-2021 CHANGE: CLARIFY CONFUSION

501.2 WATER HEATER AS SPACE HEATER.

WHERE A COMBINATION POTABLE WATER HEATING AND SPACE HEATING SYSTEM REQUIRES WATER FOR SPACE HEATING AT TEMPERATURES GREATER THAN 140°F (60°C), A MASTER THERMOSTATIC TEMPERATURE-ACTUATED MIXING VALVE COMPLYING WITH ASSE 1017 SHALL BE PROVIDED TO LIMIT THE WATER SUPPLIED TO THE POTABLE HOT WATER DISTRIBUTION SYSTEM TO A TEMPERATURE OF 140°F (60°C) OR LESS. THE POTABILITY OF THE WATER SHALL BE MAINTAINED THROUGHOUT THE SYSTEM.

•

(Ordinance)

SECTION 504.7.2 PAN DRAIN TERMINATION.

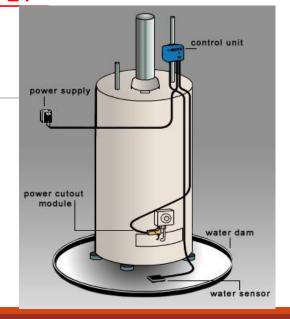
CHANGE LAST SENTENCE TO ADD WITH BUILDING OFFICIAL APPROVAL ONLY.

WHERE A PAN DRAIN WAS NOT PREVIOUSLY INSTALLED, A PAN DRAIN SHALL NOT BE REQUIRED FOR A REPLACEMENT WATER HEATER INSTALLATION WITH PRIOR APPROVAL FROM THE BUILDING OFFICIAL.

(Ordinance)

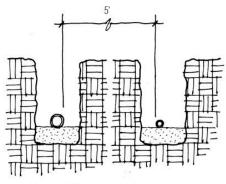
SECTION 504.7.3 PAN DRAIN TERMINATION.

ADD NEW SECTION TO SAY: "AN APPROVED WARNING AND WATER SERVICE SHUTOFF DEVICE SHALL BE REQUIRED WHERE THE PAN DRAIN TERMINATION IS NOT TAKEN TO THE OUTSIDE."



(Ordinance)
SECTION 603.2 SEPARATION OF WATER SERVICE AND BUILDING SEWER.

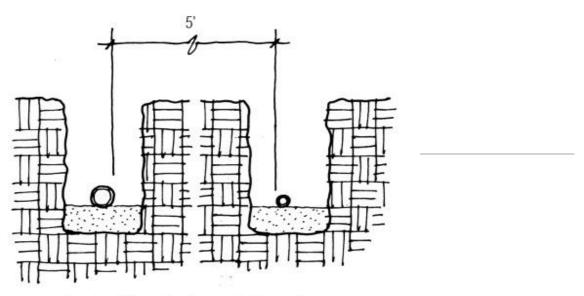
RST SENTENCE AND CHANGE TO READ: "THE



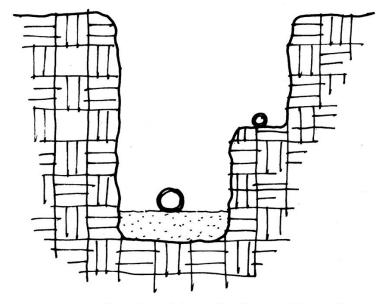
Service Lines in Separate Trenches

(Ordinance)

SECTION 603.2 SEPARATION OF WATER SERVICE AND BUILDING SEWER.



Service Lines in Separate Trenches



Service Lines in Same Trench

IPC Chapter 6 (Ordinance)

603 WATER SERVICE-ADD NEW SECTION 603.3

"EACH BUILDING TO WHICH DOMESTIC WATER SERVICE IS SUPPLIED SHALL BE SEPARATELY METERED. EACH TENANT SPACE OF A MULTI-OCCUPANCY BUILDING SHALL HAVE SEPARATE VALVES. UPON REQUEST FOR A METER SET, THE WATER SERVICE TAP SHALL BE IDENTIFIED AND EXPOSED BY THE OWNER OR HIS AGENT. ADJACENT GRADE AT THAT TIME SHALL BE AS CLOSE TO FINISHED GRADE AS POSSIBLE. SHOULD FINISHED GRADE LATER PROVE TO VARY CONSIDERABLY FROM THAT WHICH WAS ANTICIPATED UPON THE SETTING OF THE METER, IT SHALL BE THE OWNER'S SOLE RESPONSIBILITY TO ALTER THE GRADE OF THE WATER SERVICE TAP, THE METER, METER VAULT AND YARD LINE TO ACCOMMODATE THE GRADE CHANGE."

CHANGE 2015-2018 NO CHANGE IN THE 2021.

605 MATERIALS, JOINTS AND CONNECTIONS.

THE CODE CLARIFIED THAT <u>PUSH-FIT JOINTS</u> ARE RECOGNIZED BY THE CODE FOR COPPER, CPVC, PEX AND PE-RT TUBING AND THEY MUST CONFORM TO <u>ASSE 1061</u> AND BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

CHANGE IN 2018-2021: ADD SECTION TO INCLUDE SEPARATE TENET CUT OFF.

606.1 LOCATION OF FULL-OPEN VALVES. FULL-OPEN VALVES SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

- 1. ON THE BUILDING WATER SERVICE PIPE FROM THE PUBLIC WATER SUPPLY NEAR THE CURB.
- 2. ON THE WATER DISTRIBUTION SUPPLY PIPE AT THE ENTRANCE INTO THE STRUCTURE.
- 2.1. IN MULTIPLE-TENANT BUILDINGS, WHERE A COMMON WATER SUPPLY PIPING SYSTEM IS INSTALLED TO SUPPLY OTHER THAN ONE- AND TWO-FAMILY DWELLINGS, A MAIN SHUTOFF VALVE SHALL BE PROVIDED FOR EACH TENANT.

CHANGE 2015-2018 NO CHANGE IN THE 2021

TO CLARIFY THERMAL EXPANSION DEVICE RATHER THAN TANK.

607.3 THERMAL EXPANSION CONTROL.

WHERE A STORAGE WATER HEATER COLD WATER SUPPLY PASSES THROUGH A CHECK VALVE, PRESSURE REDUCING VALVE OR BACKFLOW PREVENTER, A THERMAL EXPANSION CONTROL DEVICE SHALL BE CONNECTED TO THE WATER HEATER COLD WATER SUPPLY.

CHANGE 2018-2021: ALLOWING FOR NEW TECHNOLOGIES IN WATER HEATERS.

607.1.2 TEMPERED WATER TEMPERATURE CONTROL. TEMPERED WATER SHALL BE SUPPLIED THROUGH A WATER TEMPERATURE CONTROLLED BY ONE THE FOLLOWING:

- 1. A LIMITING DEVICE THAT CONFORMS CONFORMING TO ASSE 1070/ASME A112.1070/CSA B125.70 AND SHALL LIMIT THE TEMPERED WATER TO NOT GREATER THAN 110°F (43°C). AND SET TO NOT GREATER THAN 110°F (43°C).
- 2. A THERMOSTATIC MIXING VALVE CONFORMING TO ASSE 1017.
- 3. A WATER HEATER CONFORMING TO ASSE 1082.
- 4. A WATER HEATER CONFORMING TO ASSE 1084.

IPC Chapter 6 (Ordinance)

SECTION 608.14 "LOCATION OF BACKFLOW PREVENTERS." ADD: "NO BACKFLOW DEVICES ARE TO BE LOCATED BELOW GRADE."

CHANGE FROM 2018-2021:

CHANGE: TO ALLOW PUSH-FIT DWV FITTINGS OF EITHER ABS OR PVC. SUCH FITTINGS DO NOT REQUIRE SOLVENTS.

705.2.4 PUSH-FIT JOINTS. PUSH-FIT DWV FITTINGS SHALL BE LISTED AND LABELED TO ASME A112.4.4 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

IPC Chapter 7 (Ordinance)

SECTION 705.11.2 "SOLVENT CEMENTING." <u>DELETE EXCEPTION</u>.

PVC PLASTIC JOINTS.

A PRIMER IS NOT REQUIRED WHERE BOTH OF THE FOLLOWING CONDITIONS APPLY:

- 1. THE SOLVENT CEMENT USED IS THIRD-PARTY CERTIFIED AS CONFORMING TO ASTM D2564.
- 2. THE SOLVENT CEMENT IS USED ONLY FOR JOINING PVC DRAIN, WASTE AND VENT PIPE AND FITTINGS IN NONPRESSURE APPLICATIONS IN SIZES UP TO AND INCLUDING 4 INCHES (102 MM) IN DIAMETER.

(Ordinance)

708.1.12-MINIMUM CLEANOUTS

A MINIMUM OF ONE (1) CLEAN-OUT CONFORMING WITH 708.1.3 AND ONE (1) CLEAN-OUT WITHIN 5' INSIDE OF THE PROPERTY LINE SHALL BE INSTALLED. WHERE A CLEAN-OUT IS IN CONFLICT WITH ANY EASEMENT, PUBLIC OR PRIVATE, THE PLACEMENT OF THE CLEAN-OUT SHALL BE COORDINATED WITH THE CITY BUILDING OFFICIAL.

IPC Chapter 7 (Ordinance)

712 .5 SUMPS AND EJECTORS

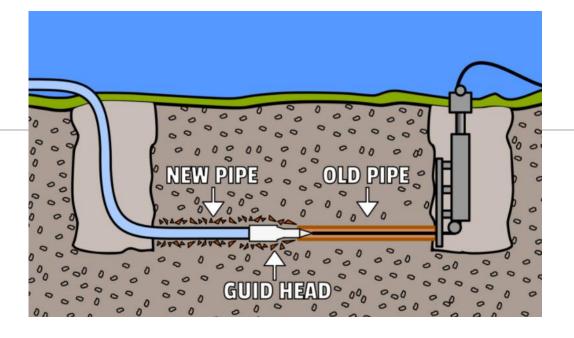
ADD NEW SUBSECTION 712.5, TO READ AS FOLLOWS: "ALL PORTIONS OF ANY EQUIPMENT ASSOCIATED WITH A SEWER SUMP OR EJECTOR SHALL BE INSTALLED OUT-OF-DOORS, AND NOT WITHIN ANY BUILDING INTENDED FOR HUMAN HABITATION."

CHANGE 2018-2021: ADDED SECTION FOR TRENCHLESS PIPE RESTORATION TECHNOLOGIES.

SECTION 717 RELINING BUILDING SEWERS AND BUILDING DRAINS

SECTION 718 REHABILITATION OF BUILDING SEWERS AND BUILDING

DRAINS



IPC Chapter 8 (Ordinance)

SECTION 802.1.4 SWIMMING POOLS. AMEND AS FOLLOWS:

"WASTEWATER FROM SWIMMING POOLS, BACKWATER FROM
FILTERS SHALL DISCHARGE TO THE NEAREST PUBLIC ROADWAY OR
APPROVED DRAINAGE RESERVES BY MEANS OF ADEQUATE PIPING."

CHANGE 2018-2021: ADDED TO ALLOW LOWER VENT TERMINATION FOR SOLAR PANELS

SECTION 903 VENT TERMINALS

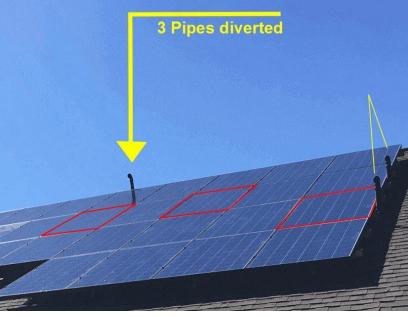
903.1.1 ROOF EXTENSION UNPROTECTED. OPEN VENT PIPES THAT EXTEND THROUGH A ROOF SHALL BE TERMINATED NOT LESS THAN 6" ABOVE THE ROOF. (CITY AMENDMENT)

903.1.3 PROTECTED VENT TERMINAL. WHERE AN OPEN VENT PIPE TERMINATES ABOVE A SLOPED ROOF AND IS COVERED BY EITHER A ROOF-MOUNTED PANEL (SUCH AS A SOLAR COLLECTOR OR PHOTOVOLTAIC PANEL MOUNTED OVER THE VENT OPENING) OR A ROOF ELEMENT (SUCH AS AN ARCHITECTURAL FEATURE OR A DECORATIVE SHROUD), THE VENT PIPE SHALL TERMINATE NOT LESS THAN 2 INCHES (51 MM) ABOVE THE ROOF SURFACE

CHANGE 2018-2021: ADDED TO ALLOW LOWER VENT TERMINATION FOR SOLAR PANELS

SECTION 903 VENT TERMINALS







903.1.3 PROTECTED VENT TERMINAL-CONTINUED.

ADVERSE EFFECTS OF SNOW ACCUMULATION AND WIND ON THE FUNCTION OF THE VENT. THE PLACEMENT OF A PANEL OVER A VENT PIPE AND THE DESIGN OF A ROOF ELEMENT COVERING THE VENT PIPE SHALL PROVIDE FOR AN OPEN AREA FOR THE VENT PIPE TO THE OUTDOORS THAT IS NOT LESS THAN THE AREA OF THE PIPE, AS CALCULATED FROM THE INSIDE DIAMETER OF THE PIPE. SUCH VENT TERMINALS SHALL BE PROTECTED BY A METHOD THAT PREVENTS BIRDS AND RODENTS FROM ENTERING OR BLOCKING THE VENT PIPE OPENING.

(Ordinance)

SECTION 904.1 REQUIRED VENT EXTENSION. ADD THE FOLLOWING SENTENCE:

"EVERY BUILDING IN WHICH PLUMBING IS INSTALLED SHALL HAVE AT LEAST ONE VENT, THE SIZE OF WHICH IS NOT LESS THAN 3 INCHES (76 MM)."

IPC Chapter 9 (Ordinance)

SECTION 918.1 AIR ADMITTANCE VALVES GENERAL.

ADD SUBSECTION 918.1.1 TO READ: "THE USE OF AIR ADMITTANCE VALVES MUST HAVE PRIOR APPROVAL BY THE BUILDING OFFICIAL."

IPC Chapter 10 (Ordinance)

SECTION 1003.3.4 GREASE TRAP AND GREASE INTERCEPTOR NOT REQUIRED.

ADD THE FOLLOWING EXCEPTION: "AN INTERCEPTOR MAY BE REQUIRED FOR AN INDIVIDUAL DWELLING UNIT OR PRIVATE LIVING QUARTERS, IF THERE IS REASONABLE CAUSE TO BELIEVE THAT INJURIOUS OR ILLEGAL MATERIALS ARE BEING DISCHARGED TO THE PUBLIC SEWER IN QUANTITIES REASONABLY CALCULATED TO CAUSE DAMAGE TO SEWAGE TREATMENT PLANTS AND/OR PROCESSES. NOTHING IN SUBSECTION 1003.1.1 ABOVE SHALL BE CONSTRUED TO RELIEVE A MULTI-OCCUPANT FACILITY, WHETHER HOUSING OR OTHERWISE, FROM INSTALLING A TRAP OR INTERCEPTOR, WHEN IT CAN BE REASONABLY SHOWN THAT THE CUMULATIVE DISCHARGE OF RELATIVELY SMALL AMOUNTS OF POTENTIALLY INJURIOUS MATERIALS BY INDIVIDUAL TENANTS IS SUFFICIENT TO ENDANGER THE PUBLIC SEWER SYSTEM. THE RESPONSIBILITY FOR INSTALLATION AND MAINTENANCE OF AN INTERCEPTOR IN THESE CIRCUMSTANCES IS UPON THE

IPC APPENDIX

APPENDIX A-PLUMBING PERMIT FEE SCHEDULE-NOT ADOPTED

APPENDIX B-RAINFALL RATES FOR VARIOUS CITIES-ADOPTED

APPENDIX C-STRUCTURAL SAFTEY-ADOPTED

APPENDIX D-DEGREE DAY AND DESIGN TEMPERATURES-ADOPTED

APPENDIX E-SIZING OF WATER PIPING SYSTEM-ADOPTED

APPENDIX F-BOARD OF APPEALS-NOT ADOPTED (DONE IN IPC 114)

Currently in 2015 IPC

606.1 LOCATION OF FULL-OPEN VALVES.

FULL-OPEN VALVES SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

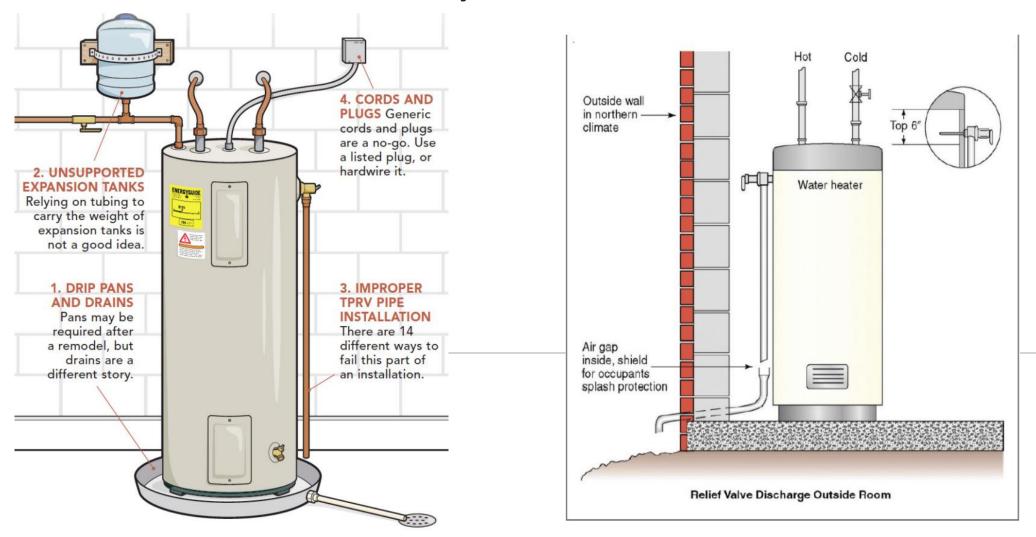
- 1.ON THE BUILDING WATER SERVICE PIPE FROM THE PUBLIC WATER SUPPLY NEAR THE CURB.
- 2.ON THE WATER DISTRIBUTION SUPPLY PIPE AT THE ENTRANCE INTO THE STRUCTURE.
- 3.ON THE DISCHARGE SIDE OF EVERY WATER METER.
- 4.ON THE BASE OF EVERY WATER RISER PIPE IN OCCUPANCIES OTHER THAN MULTIPLE-FAMILY RESIDENTIAL OCCUPANCIES THAT ARE TWO STORIES OR LESS IN HEIGHT AND IN ONE- AND TWO-FAMILY RESIDENTIAL OCCUPANCIES.
- 5.ON THE TOP OF EVERY WATER DOWN-FEED PIPE IN OCCUPANCIES OTHER THAN ONE- AND TWO-FAMILY RESIDENTIAL OCCUPANCIES.
- 6.ON THE ENTRANCE TO EVERY WATER SUPPLY PIPE TO A DWELLING UNIT, EXCEPT WHERE SUPPLYING A SINGLE FIXTURE EQUIPPED WITH INDIVIDUAL STOPS.
- 7. ON THE WATER SUPPLY PIPE TO A GRAVITY OR PRESSURIZED WATER TANK.
- 8.ON THE WATER SUPPLY PIPE TO EVERY WATER HEATER.

Currently in 2015 IPC

504.6 REQUIREMENTS FOR DISCHARGE PIPING. THE DISCHARGE PIPING SERVING A PRESSURE RELIEF VALVE, TEMPERATURE RELIEF VALVE OR COMBINATION THEREOF SHALL:

- 1. NOT BE DIRECTLY CONNECTED TO THE DRAINAGE SYSTEM.
- 2. DISCHARGE THROUGH AN AIR GAP LOCATED IN THE SAME ROOM AS THE WATER HEATER.
- 3. NOT BE SMALLER THAN THE DIAMETER OF THE OUTLET OF THE VALVE SERVED AND SHALL DISCHARGE FULL SIZE TO THE AIR GAP.
- 4. SERVE A SINGLE RELIEF DEVICE AND SHALL NOT CONNECT TO PIPING SERVING ANY OTHER RELIEF DEVICE OR EQUIPMENT.
- 5. DISCHARGE TO THE FLOOR, TO THE PAN SERVING THE WATER HEATER OR STORAGE TANK, TO A WASTE RECEPTOR OR TO THE OUTDOORS.
- 6. DISCHARGE IN A MANNER THAT DOES NOT CAUSE PERSONAL INJURY OR STRUCTURAL DAMAGE.
- 7. DISCHARGE TO A TERMINATION POINT THAT IS READILY OBSERVABLE BY THE BUILDING OCCUPANTS.
- 8. NOT BE TRAPPED.
- 9. BE INSTALLED SO AS TO FLOW BY GRAVITY.
- 10. <u>TERMINATE NOT MORE THAN 6 INCHES (152 MM) ABOVE AND NOT LESS THAN TWO TIMES THE DISCHARGE PIPE DIAMETER</u> ABOVE THE FLOOR OR FLOOD LEVEL RIM OF THE WASTE RECEPTOR.
- 11. NOT HAVE A THREADED CONNECTION AT THE END OF SUCH PIPING.
- 12. NOT HAVE VALVES OR TEE FITTINGS.
- 13. BE CONSTRUCTED OF THOSE MATERIALS LISTED IN SECTION 605.4 OR MATERIALS TESTED, RATED AND APPROVED FOR SUCH USE IN ACCORDANCE WITH ASME A112.4.1.
- 14. BE ONE NOMINAL SIZE LARGER THAN THE SIZE OF THE RELIEF VALVE OUTLET, WHERE THE RELIEF VALVE DISCHARGE PIPING IS INSTALLED WITH INSERT FITTINGS. THE OUTLET END OF SUCH TUBING SHALL BE FASTENED IN PLACE.

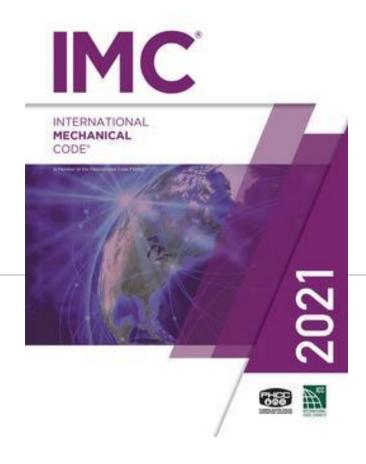
Currently in 2015 IPC



IPCQ&A



2021 MECHANICAL CODE



SECTION 304.3 "ELEVATION OF IGNITION SOURCE." DELETE EXCEPTION.

ELEVATION OF THE IGNITION SOURCE IS NOT REQUIRED FOR APPLIANCES THAT ARE LISTED AS FLAMMABLE VAPOR IGNITION RESISTANT.

307.2.1.1 CONDENSATE DISCHARGE. CHANGE FROM 2018-2021

CONDENSATE DRAINS SHALL NOT DIRECTLY CONNECT TO ANY PLUMBING DRAIN, WASTE OR VENT PIPE. CONDENSATE DRAINS SHALL NOT DISCHARGE INTO A PLUMBING FIXTURE OTHER THAN A FLOOR SINK, FLOOR DRAIN, TRENCH DRAIN, MOP SINK, HUB DRAIN, STANDPIPE, UTILITY SINK OR LAUNDRY SINK. CONDENSATE DRAIN CONNECTIONS TO A LAVATORY WYE BRANCH TAILPIECE OR TO A BATHTUB OVERFLOW PIPE SHALL NOT BE CONSIDERED AS DISCHARGING TO A PLUMBING FIXTURE. EXCEPT WHERE DISCHARGING TO GRADE OUTDOORS, THE POINT OF DISCHARGE OF CONDENSATE DRAINS SHALL BE LOCATED WITHIN THE SAME OCCUPANCY, TENANT SPACE OR DWELLING UNIT AS THE SOURCE OF THE CONDENSATE.

IMC CHAPTER 3 (CITY AMENDMENT)

307.2.1.1 CONDENSATE DISCHARGE: AFTER FIRST SENTENCE CHANGE TO READ "CONDENSATE DRAINS SHALL NOT DISCHARGE INTO A PLUMBING FIXTURE WITHOUT PRIOR APPROVAL FROM THE BUILDING OFFICIAL"

504.4.1 TERMINATION LOCATION. CHANGE 2018-2021

EXHAUST DUCT TERMINATIONS SHALL BE IN ACCORDANCE WITH THE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS. WHERE THE MANUFACTURER'S INSTRUCTIONS DO NOT SPECIFY A TERMINATION LOCATION, THE EXHAUST DUCT SHALL TERMINATE NOT LESS THAN 3 FEET (914 MM) IN ANY DIRECTION FROM OPENINGS INTO BUILDINGS, INCLUDING OPENINGS IN VENTILATED SOFFITS.

SECTION 905.1 FIREPLACE STOVES AND ROOM HEATERS: ADD IN THE 2021

NEW WOOD-BURNING RESIDENTIAL HYDRONIC HEATERS SHALL BE EPA CERTIFIED.

SECTION 929 UNVENTED ALCOHOL FUEL-BURNING DECORATIVE APPLIANCES. CHANGE FROM 2018-2021

929.1 GENERAL. UNVENTED ALCOHOL FUEL-BURNING DECORATIVE APPLIANCES SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL1370 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING, MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CHAPTER 3.

APPENDIX A CHIMNEY CONNECTOR PASS-THROUGHS-ADOPTED

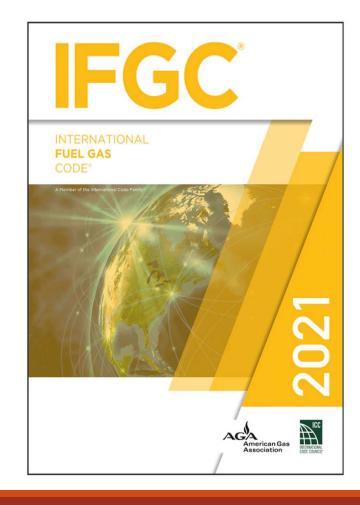
APPENDIX B RECOMMENDED PERMIT FEE SCHEDULE-NOT ADOPTED

APPENDIX C BOARD OF APPEALS-NOT ADOPTED

2021 IMC



2021 IFGC



307.2 FUEL-BURNING APPLIANCES. CHANGE FROM 2018-2021

LIQUID COMBUSTION BYPRODUCTS OF CONDENSING APPLIANCES SHALL BE COLLECTED AND DISCHARGED TO AN APPROVED PLUMBING FIXTURE OR DISPOSAL.....THE TERMINATION OF CONCEALED CONDENSATE PIPING SHALL BE MARKED TO INDICATE WHETHER THE PIPING IS CONNECTED TO THE PRIMARY DRAIN OR TO THE SECONDARY

(INFO 2021 307.2.3.3 IDENTIFICATION. THE TERMINATION OF CONCEALED CONDENSATE PIPING SHALL BE MARKED TO INDICATE WHETHER THE PIPING IS CONNECTED TO THE PRIMARY OR SECONDARY DRAIN)

CHANGED FROM 2018-2021

402.7 MAXIMUM OPERATING PRESSURE. THE MAXIMUM OPERATING PRESSURE FOR PIPING SYSTEMS LOCATED INSIDE BUILDINGS SHALL NOT EXCEED 5 POUNDS PER SQUARE INCH GAUGE (PSIG) (34 KPA GAUGE) EXCEPT WHERE ONE OR MORE OF THE FOLLOWING CONDITIONS ARE MET:

- 1. THE PIPING JOINTS ARE WELDED OR BRAZED.
- 2. THE PIPING IS JOINED BY FITTINGS LISTED TO ANSI LC-4/CSA6.32 AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

(ITEMS 3-9 UNCHANGED)



CHANGE IN THE 2021. CHANGE TO REQUIRE THE USE OF THREAD COMPOUND.

403.9.3403.8.3 THREAD THREADED JOINT SEALING COMPOUNDS. THREADED JOINTS SHALL BE MADE USING A THREAD JOINT SEALING MATERIAL. THREAD JOINT SEALING MATERIALS COMPOUNDS SHALL BE NON-HARDENING AND SHALL BE RESISTANT TO THE ACTION OF LIQUEFIED PETROLEUM GAS OR TO ANY OTHER CHEMICAL CONSTITUENTS OF THE GASES TO BE CONDUCTED THROUGH THE PIPING. THREAD JOINT SEALING MATERIALS SHALL BE COMPATIBLE WITH THE PIPE AND FITTING MATERIALS ON WHICH THE SEALING MATERIALS ARE USED.



CHANGE IN THE 2021 TO ALLOW PLUGS AND CAPS.

404.5 FITTINGS IN CONCEALED LOCATIONS. FITTINGS INSTALLED IN CONCEALED LOCATIONS SHALL BE LIMITED TO THE FOLLOWING TYPES:

- 1. THREADED ELBOWS, TEES, AND COUPLINGS, PLUGS AND CAPS.
- 2. BRAZED FITTINGS.
- 3. WELDED FITTINGS.
- 4. FITTINGS LISTED TO ANSI LC-1/CSA 6.26 OR ANSI LC-4/CSA 6.32.





CHANGE IN THE 2021. REMOVED EXCEPTION. WAS CONSIDERED OUTDATED.

503.5.6.1 CHIMNEY LINING. CHIMNEYS SHALL BE LINED IN ACCORDANCE WITH **NFPA 211**.

EXCEPTION: WHERE AN EXISTING CHIMNEY COMPLIES WITH SECTIONS
503.5.6 THROUGH 503.5.6.3 AND ITS SIZING IS IN ACCORDANCE WITH
SECTION 503.5.5, ITS CONTINUED USE SHALL BE ALLOWED WHERE THE
APPLIANCE VENTED BY SUCH CHIMNEY IS REPLACED BY AN APPLIANCE OF
SIMILAR TYPE. INPUT RATING AND EFFICIENCY.

ADD IN THE 2021. NEW TEXT ADDED TOT ADDRESS THE JUNCTURE OF APPLIANCE VENT CONNECTORS AND THE REQUIRED METHODS.

503.10.7 CONNECTOR JUNCTIONS. WHERE VENT CONNECTORS ARE JOINED TOGETHER, THE CONNECTION SHALL BE MADE WITH A TEE OR WYE FITTING.



ADDED IN THE 2021: UNNECESSARY EXCEPTION REMOVED.

623.2 PROHIBITED LOCATION. COOKING APPLIANCES DESIGNED, TESTED, LISTED AND LABELED FOR USE IN COMMERCIAL OCCUPANCIES SHALL NOT BE INSTALLED WITHIN DWELLING UNITS OR WITHIN ANY AREA WHERE DOMESTIC COOKING OPERATIONS OCCUR.

EXCEPTION:

1. APPLIANCES THAT ARE ALSO LISTED AS DOMESTIC COOKING APPLIANCES.

2. WHERE THE INSTALLATION IS DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. IN COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION

INSTRUCTÍONS.



2021 IFGC

