

Exhibit “D”
2018 International Plumbing Code

The following sections, paragraphs, and sentences of the *2018 International Plumbing Code* are hereby amended as follows: Standard type is text from the IPC. Underlined type is text inserted. ~~Lined through type is deleted text from the IPC.~~ A double asterisk at the beginning of a section identifies an amendment carried over from the 2015 edition of the code and a triple asterisk identifies a new or revised amendment with the 2018 edition of the code.

Note: Historically NCTCOG has limited Chapter 1 amendments in order to allow each city to insert their local policies and procedures. We now have suggested certain items to be brought to the attention of cities considering adoption of the code that may be of concern to several jurisdictions. **It is still intended to be discretionary to each city to determine which Chapter 1 amendments to include.**

****Table of Contents, Chapter 7, Section 714; change to read as follows:**

714 Engineered Computerized Drainage Design 69

*****Section 102.8; change to read as follows:**

102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 15 and such codes, when specifically adopted, and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. Where the differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the adopted amendments. Any reference to NFPA 70 shall mean the Electrical Code as adopted.

****Sections 106.6.2 and 106.6.3; change to read as follows:**

106.6.2 Fee schedule. The fees for all plumbing work shall be as indicated in the following schedule: (JURISDICTION TO INSERT APPROPRIATE SCHEDULE) adopted by resolution of the governing body of the jurisdiction.

106.6.3 Fee Refunds. The code official shall establish a policy for authorize authorizing the refunding of fees as follows. *{Delete balance of section}*

****Section 109; delete entire section and insert the following:**

SECTION 109
MEANS OF APPEAL

109.1 Application for appeal. Any person shall have the right to appeal a decision of the code official to the board of appeals established by ordinance. The board shall be governed by the enabling ordinance.

*****Section 305; change to read as follows:**

305.1 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 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 approved material 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.

305.4.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of [number] inches (mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 12 inches (304 mm) below grade.

****Section 305.7; change to read as follows:**

305.7 Protection of components of plumbing system. Components of a plumbing system installed within 3 feet along alleyways, driveways, parking garages or other locations in a manner in which they could be exposed to damage shall be recessed into the wall or otherwise protected in an *approved* manner.

*****Section 306; change to read as follows:**

*****306.2.4 Plastic sewer and DWV piping installation.** Plastic sewer and DWV piping installed underground shall be installed in accordance with the manufacturer's installation instructions. Trench width shall be controlled to not exceed the outside the pipe diameter plus 16 inches or in a trench which has a controlled width equal to the nominal diameter of the diameter of the piping multiplied by 1.25 plus 12 inches. The piping shall be bedded in 4 inches of granular fill and then backfilled compacting the side fill in 6-inch layers on each side of the piping. The compaction shall be to minimum of 85 percent standard proctor density and extend to a minimum of 6 inches above the top of the pipe.

****Section 314.2.1; change to read as follows:**

314.2.1 Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. ... {text unchanged} ... Condensate shall not discharge into a street, alley, sidewalk, rooftop, or other areas so as to cause a nuisance.

****Section 409.2; change to read as follows:**

409.2 Water connection. The water supply to a commercial dishwashing machine shall be protected against backflow by an air gap or backflow preventer in accordance with Section 608. (Remainder of section unchanged).

****Section 413.4; change to read as follows:**

413.4 Required location for floor drains Public laundries and central washing facilities. Floor drains shall be installed in the following areas:

1. In public laundries and in the central washing facilities of multiple family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain

the entire floor area. Such drains shall have a minimum outlet of not less than 3 inches (76 mm) in diameter.

2. Commercial kitchens. In lieu of floor drains in commercial kitchens, the Code Official may accept floor sinks.
3. Public restrooms.

*****Section 502.3; change to read as follows:**

502.3 Water heaters installed in attics. Attics containing a water heater shall be provided . . . {bulk of paragraph unchanged} . . . side of the water heater. The clear access opening dimensions shall be not less than 20 inches by 30 inches (508 mm by 762 mm) where such dimensions are large enough to allow removal of the water heater. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull-down stair with a minimum 300 lb (136 kg) capacity.
3. An access door from an upper floor level.
4. Access Panel may be used in lieu of items 1, 2, and 3 with prior approval of the Code Official due to building conditions.

Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed... {remainder of text unchanged}

****Section 502.6; add Section 502.6 to read as follows:**

502.6 Water heaters above ground or floor. When the attic, roof, mezzanine or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A max 10-gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling and a water heater is installed is not more than ten (10) feet (3048 mm) above the ground or floor level and may be reached with a portable ladder.

*****Section 504.6; change to read as follows:**

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.

Exception: Multiple relief devices may be installed to a single T & P discharge piping system when approved by the administrative authority and permitted by the manufacture's installation instructions and installed with those instructions.

5. Discharge to the floor, to the pan serving the water heater or storage tank, to a waste receptor an approved location 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. Terminate not more than 6 inches above and not less than two times the discharge pipe diameter 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

****Section 504.7.1; change to read as follows:**

Section 504.7.1 Pan size and drain to read as follows: The pan shall be not less than 1 1/2 inches (38 mm) in depth and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe having a diameter of not less than 3/4 inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table 605.4. Multiple pan drains may terminate to a single discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

****Section 608.1; change to read as follows:**

608.1 General. A potable water supply system shall be designed, installed and maintained in such a manner so as to prevent contamination from non-potable liquids, solids or gases being introduced into the

potable water supply through cross-connections or any other piping connections to the system. Backflow preventer applications shall conform to applicable local regulations, Table 608.1, except and as specifically stated in Sections 608.2 through 608.16.10.

****Section 608.17.5; change to read as follows:**

608.17.5 Connections to lawn irrigation systems.

The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

****Section 608.18; change to read as follows:**

608.18 Protection of individual water supplies. An individual water supply shall be located and constructed so as to be safeguarded against contamination in accordance with applicable local regulations. Installation shall be in accordance with Sections 608.17.1 through 608.17.8.

Section 703.6; Delete

****Section 704.5; added to read as follows:**

704.5 Single stack fittings. Single stack fittings with internal baffle, PVC schedule 40 or cast iron single stack shall be designed by a registered engineer and comply to a national recognized standard.

****Section 712.5; add Section 712.5 to read as follows:**

712.5 Dual Pump System. All sumps shall be automatically discharged and, when in any "public use" occupancy where the sump serves more than 10 fixture units, shall be provided with dual pumps or ejectors arranged to function independently in case of overload or mechanical failure. For storm drainage sumps and pumping systems, see Section 1113.

****Section 713, 713.1; change to read as follows:**

SECTION 713

ENGINEERED COMPUTERIZED DRAINAGE DESIGN

713.1 Design of drainage system. The sizing, design and layout of the drainage system shall be permitted to be designed by a registered engineer using approved computer design methods.

****Section 803.3; added to read as follows:**

803.3 Special waste pipe, fittings, and components. Pipes, fittings, and components receiving or intended to receive the discharge of any fixture into which acid or corrosive chemicals are placed shall be constructed of CPVC, high silicone iron, PP, PVDF, chemical resistant glass, or glazed ceramic materials.

****Section 903.1; change to read as follows:**

903.1 Roof extension. Open vent pipes that extend through a roof shall terminate not less than six (6) inches (152 mm) above the roof. Where a roof is to be used for assembly or as a promenade, observation deck, sunbathing deck or similar purposes, open vent pipes shall terminate not less than 7 feet (2134 mm) above the roof.

*****Section 918.8; change to read as follows.**

918.8 Where permitted. Individual, branch and circuit vents shall be permitted to terminate with a connection to an individual or branch-type air admittance valve in accordance with Section 918.3.1. Stack vents and vent stacks shall be permitted to terminate to stack-type air admittance valves in accordance with Section 918.3.2. Air admittance valves shall only be installed with the prior approval of the building official.

1003.3.4.1 Grease interceptor capacity. Grease interceptors shall have the grease retention capacity indicated in Table 1003.3.4.1 for the flow-through rates below:

Minimum construction standards for food service establishments are required when:

1. A new building with a food service establishment is constructed and occupied;
2. Prior to the issuance of a certificate of occupancy for a new food service establishment in an existing structure which has not been previously used as a food service establishment within the last six (6) months, or has been used as a food service establishment without an adequately sized grease interceptor; or.
3. When a change to a more restrictive class of food service establishment occurs.

Heavy Food Preparation: shall mean any area in which foods are prepared utilizing a grill, griddle, deep-fat fryer, commercial type ovens, and/or any similar food preparation equipment; or any area subject to flooding type of wet cleaning procedures due to the cutting or processing of meat, poultry, fish or pork. Heavy food preparation includes but is not limited to: cafeterias, fast food restaurant, full service restaurants, pizza preparation, donut preparation, and meat and fish markets, etc. either a minimum 750-gallon grease interceptor is required for heavy food preparation establishments with *seating capacity for 50 or more; or a minimum 250-gallon grease interceptor is required for heavy food preparation establishments with a *seating capacity for less than 50 or take-out food service establishments; or the minimum size shall be established by the currently adopted International Plumbing Code; whichever is more stringent.

Light Food Preparation: shall mean any area in which foods are prepared exclusive of the use of fryers, grills or similar equipment. Light food preparation is usually limited to the preparation of hot dogs, sandwiches, salads or other similar foods and fountain-type cold drinks. Light food preparation includes, but is not limited to, sandwich shops, limited menu concession stands, etc. Either a minimum 250-gallon grease interceptor is required for light food preparation establishments with *seating capacity for 50 or more; or a minimum 20 gpm flow-through rating or 40-pound retention capacity grease trap is required for light food preparation establishments with a *seating capacity for less than 50 or take-out food service establishments; or the minimum size

shall be established by the currently adopted International Plumbing Code; whichever is more stringent.

No Food Preparation: shall mean any area in which foods are provided pre-wrapped, from an approved source, with microwave oven type heating being the maximum handling involved. No food preparation is limited to pre-packaged sandwiches or similar foods, candies and containerized beverages. A grease interceptor is not required for "no food preparation" establishments.

Food service establishments shall not share grease interceptors unless specifically authorized by the Building Official.

*Seating Capacity is measured using Section 1004.7 Fixed Seating and Table 1004.1.1 Maximum Floor Area Allowances per Occupant found in the currently adopted version of the International Building Code.

****Section 1106.1; change to read as follows:**

1106.1 General. The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on six (6) inches per hour the 100-year hourly rainfall rate indicated in Figure 1106.1 or on other rainfall rates determined from ~~approved local weather data~~.

****Section 1108.3; change to read as follows:**

1108.3 Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106 based on the rainfall rate for which the primary system is sized in Figure 1106.1 or on other rainfall rates determined from ~~approved local weather data~~. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

****Section 1109; delete this section.**

*****Section 1202.1; delete Exceptions 1 and 2.**