ATTACHMENT D

Recommended Amendments to the
2012 International Plumbing Code
North Central Texas Council of Governments region

The following sections, paragraphs, and sentences of the *2012 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 2009 edition of the code and a triple asterisk identifies a new or revised amendment with the 2012 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 67

(Reason: Editorial change to make compatible with amendment to Section 714.1.)

*****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 13 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 amendments as well. Any reference to NFPA 70 or the ICC *Electrical Code* shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

*****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}*

(Reason: This calls to attention of local jurisdictions considering adoption that they need a fee schedule and a refund policy.)

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.

(Reason: Most jurisdictions already have an ordinance establishing and governing an appeals board for this code. This also calls to the attention of jurisdictions not having such a board that it needs to be established.)

Section 305.6.1; change to read as follows:

305.6.1 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.

(Reason: Provides sewer depth that is common in this region. Deleted reference to private sewage disposal because a private sewage disposal code is not typically adopted in this region.)

Section 305.9; change to read as follows:

305.9 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 would be exposed to damage shall be recessed into the wall or otherwise protected in an *approved* manner.

(Reason: Provide a common cutoff point to designate a general separation distance at which plumbing systems should be safe for consistency in enforcement.)

****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.

(Reason: Greater specificity in prohibited locations for condensate discharge. It is the intent of this amendment to send condensate discharge into a sanitary sewer drain. Consistent with regional amendment to IMC 307.2.3.)

****Section 314.2.2; change to read as follows:***

314.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, ~~polybutylene,~~ polyethylene, ABS, CPVC, or schedule 80 PVC pipe or tubing when exposed to ultra violet light. All components shall be selected for the pressure, ~~and~~ temperature and exposure rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 relative to the material type. Condensate

waste and drain line size shall not be less than ¾-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 314.2.2. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

(Reason: To provide greater flexibility of materials when exposed to ultra violet light. Polybutylene pipe is not allowed for use in this region.)

******Section 401.1; add a sentence to read as follows:***

401.1 Scope. This chapter shall govern the materials, design and installation of plumbing fixtures, faucets and fixture fittings in accordance with the type of *occupancy*, and shall provide for the minimum number of fixtures for various types of occupancies. The provisions of this Chapter coordinate with the provisions of the *Building Code*. Should any conflicts arise between the two chapters, the *Code Official* shall determine which provision applies.

(Reason: Gives discretion to Code Official in case of code conflict.)

*****Section 403.1; change to read as follows:***

403.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of *occupancy* and in the minimum number as follows:

1. Assembly Occupancies: At least one drinking fountain shall be provided at each floor level in an *approved* location.

2. Groups A, B, F, H, I, M and S Occupancies: Buildings or portions thereof where persons are employed shall be provided with at least one water closet for each sex except as provided for in Section 403.2.

3. Group E Occupancies: Shall be provided with fixtures as shown in Table 403.1.

4. Group R Occupancies: Shall be provided with fixtures as shown in Table 403.1.

It is recommended, but not required, that the minimum number of fixtures provided also comply with the number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the code official. The number of occupants shall be determined by the *International Building Code.* Occupancy classification shall be determined in accordance with the *International Building Code.*

*****Section 405.6; delete.***

(Reason: Texas State regulations cover plumbing in mental health centers. Consistent with regional amendment to IPC 1002.10.)

***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.

(Reason: Domestic dishwashing machines would be difficult to enforce and should already come equipped with backflow preventers. Consistent with regional amendments in IPC Section 608.)

***Section 412.4; change to read as follows:**

412.4 Required location ~~Public laundries and central washing facilities.~~ Floor drains shall be installed in the following areas.

1. In public coin-operated 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.

(Reason: To make more compatible with local health code practices.)

***Section 419.3; change to read as follows:**

419.3 Surrounding material. Wall and floor space to a point 2 feet (610 mm) in front of a urinal lip and 4 feet (1219 mm) above the floor and at least 2 feet (610 mm) to each side of the urinal shall be waterproofed with a smooth, readily cleanable, hard, nonabsorbent material.

(Reason: Match un-amended IBC 1209.)

***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.

502.6.1 Illumination and convenience outlet. Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 502.1.

(Reason: To provide safe access to water heaters and to provide lighting and receptacle for maintenance of equipment. Consistent with regional amendments to IFGC 306.7 and IMC 306.6. Note reference to amendment above.)

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 manufactures installation instructions and installed with those instructions.

5. Discharge ~~to the floor,~~ to ~~a~~ an indirect waste receptor or to the outdoors. Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.

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. Not terminate ~~l~~more less than 6 inches or more than 24 inches (152 mm) above grade ~~the floor~~ ~~or~~ nor more than 6 inches above 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.

(Reason: To provide a higher degree of safety.)

Section 604.4; add Section 604.4.1 to read as follows:

604.4.1 State maximum flow rate. Where the State mandated maximum flow rate is more restrictive than those of this section, the State flow rate shall take precedence.

(Reason: To recognize State standards.)

******Section 604.8; add Section 604.8.3 to read as follows:***

604.8.3 Thermal expansion control. An expansion tank or approved device shall be installed for the water heater with the addition of a pressure reducing valve or regulator creating a closed system.

(Reason: To allow for thermal expansion in closed systems..)

*****Section 606.1; delete items #4 and #5.***

(Reason: The code is too restrictive as written.)

*****Section 606.2; change to read as follows:***

606.2 Location of shutoff valves. Shutoff valves shall be installed in the following locations:

1. On the fixture supply to each plumbing fixture other than bathtubs and showers in one- and two-family residential occupancies, and other than in individual sleeping units that are provided with unit shutoff valves in hotels, motels, boarding houses and similar occupancies.

2. ~~On the water supply pipe to each sillcock~~.

3. ~~3.~~ On the water supply pipe to each appliance or mechanical equipment.

(Reason: To provide shut-off valves to every fixture.)

*****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 nonpotable 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.

(Reason: To recognize local requirements.)

*****Section 608.16.5; change to read as follows:***

608.16.5 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.

(Reason: To recognize regional practices.)

******Section 608.17; change to read as follows:***

608.17 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.

(Reason: To allow local requirements to govern.)

*****Section 610.1; add exception to read as follows:***

610.1 General. New or repaired potable water systems shall be purged of deleterious matter and disinfected prior to utilization. The method to be followed shall be that prescribed by the health authority or water purveyor having jurisdiction or, in the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this section. This requirement shall apply to "on-site" or "inplant" fabrication of a system or to a modular portion of a system.

1. The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.

2. The system or part thereof shall be filled with a water/chlorine solution containing at least 50 parts per million (50 mg/L) of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; or the system or part thereof shall be filled with a water/chlorine solution containing at least 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours.

3. Following the required standing time, the system shall be flushed with clean potable water until the chlorine is purged from the system.

4. The procedure shall be repeated where shown by a bacteriological examination that contamination remains present in the system.

   Exception: With prior approval the Code Official may wave this requirement when deemed un-necessary. ~~by the Code Official~~.

(Reason: May not always be needed)

******Section 712; change to read as follows:***

712.3.3.1 Materials. Pipe and fitting materials shall be constructed of brass, copper, CPVC, ductile iron, stainless steel, galvanized iron, PE, or PVC.

(Reason: To add the additional materials to the list.)

*****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.

(Reason: To address dual pump system. To provide reference for storm drainage systems.)

***Section 714, 714.1; change to read as follows:**

SECTION 714
ENGINEERED ~~COMPUTERIZED~~ DRAINAGE DESIGN

714.1 Design of drainage system. The sizing, design and layout of the drainage system shall be permitted to be designed by *approved* ~~computer~~ design methods.

(Reason: Code was too restrictive.)

***Section 802.4; add a sentence to the end of the paragraph to read as follows:**

802.4 Standpipes. Standpipes shall be… *{text unchanged}* …drains for rodding. No standpipe shall be installed below the ground.

(Reason: To make systems less susceptible to improper modifications.)

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

903.1 Roof extension. All open vent pipes that extend through a roof shall be terminated at least six (6) inches (152 mm) above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet (2134 mm) above the roof.

(Reason: To provide regional guideline on standard installation method for this area and address reference number correction.)

****Section 917 Single stack vent system. Delete entire section.**

(Reason: Not in conformance with regional practices.)

***Section 1002.10; delete.**

(Reason: Texas State regulations cover plumbing in mental health centers. Consistent with regional amendment to IPC 405.6.)

Section 1003; see note below:)

{Until the Health and Water Departments of the area can coordinate a uniform grease interceptor section, each city will have to modify this section individually.}

Section 1101.8; change to read as follows:

1101.8 Cleanouts required. Cleanouts or manholes shall be installed in the ~~building~~ storm drainage system and shall comply with the provisions of this code for sanitary drainage pipe cleanouts.

~~Exception:~~ ~~Subsurface drainage system~~

(Reason: To specify ~~that~~ where cleanouts are ~~only~~ required. ~~in the building~~.)

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~~.

(Reason: Specify the roof drain size normally used in the area.)

Section 1107.3; change to read as follows:

1107.3 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.

(Reason: Specify that overflow drainage is to be the same size as the normal roof drains.)

Section 1202.1; delete Exception 2.

(Reason: State law already specifies that vacuum systems must comply with NFPA 99C.)

END