ORDINANCE NO. 2013 -07-_____

AN ORDINANCE OF THE CITY OF MCKINNEY, TEXAS, AMENDING CHAPTER 122 OF THE CODE OF ORDINANCES OF THE CITY OF MCKINNEY BY ADOPTING THE UPDATED VERSIONS OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL RESIDENTIAL CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, INTERNATIONAL FUEL GAS CODE, INTERNATIONAL ENERGY CONSERVATION CODE, AND NATIONAL ELECTRICAL CODE; AMENDING CERTAIN PROVISIONS OF THE CITY CODE TO UPDATE RELATED CODE PROVISIONS AND NATIONAL ELECTRICAL CODE REFERENCES; PROVIDING FOR THE REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE

WHEREAS, the City of McKinney, Texas (the "City") is a Home Rule City possessing the full power of local self-government pursuant to Article 11, Section 5 of the Texas Constitution, Section 51.072 of the Texas Local Government Code, and the City's Home Rule Charter; and

WHEREAS, the City Council possesses, pursuant to the Texas Local Government Code, the authority to regulate the construction of structures in the City and, where applicable, in the City's extraterritorial jurisdiction ("ETJ"); and

WHEREAS, the City Council finds that the adoption of the updated versions of the International Building Code, International Residential Code, International Mechanical Code, International Plumbing Code, International Fuel Gas Code, International Energy Conservation Code, and National Electrical Code, with certain modifications to related City Code provisions as specified in this Ordinance, is in the best interest of the health, safety and welfare of the citizens of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MCKINNEY, TEXAS, THAT:

Section 1. All of the above premises are found to be true and correct legislative determinations and are hereby incorporated into the body of this Ordinance as if copied in their entirety.

Section 2. The Code of Ordinances of the City of McKinney, Section 122-25, is hereby amended and shall read as follows:

"**Sec. 122-25. International Building Code and International Residential Codes adopted.**

The city council hereby adopts the 2012 edition of the International Building Code and the 2012 edition of the International Residential Code, excluding all references to the 2012 International Property Maintenance Code. Copies of the Codes, and the amendments thereto, as referenced in this chapter, are on file in the office of the city secretary for permanent record and inspection. The chief building official, or his authorized representative, is hereby authorized and directed to enforce all provisions of the International Building Code and International Residential Code, as adopted herein and as amended."

Section 3. The Code of Ordinances of the City of McKinney, Section 122-26, is hereby amended and shall read as follows:

"**Sec. 122-26. Amendments to building and residential codes.**

(a) The city council hereby adopts the Recommended Amendments to the 2012 International Building Code prepared by the North Central Texas

Council of Governments, dated June 26, 2013, which are attached to the Ordinance adopting these codes as attachment A. Attachment A is not set out herein, but is on file and available for inspection in the office of the city secretary. The amendments shall be further modified as follows:

(1) Section 903.2 of the building code shall exclude single-family residential structures; and

(2) Option B is hereby adopted as set forth in attachment A.

(b) The city council hereby adopts the Recommended Amendments to the 2012 International Residential Code prepared by the North Central Texas Council of Governments, dated March 2013, which are attached to the Ordinance adopting these codes as attachment B. Attachment B is not set out herein, but is on file and available for inspection in the office of the city secretary.

(c) Chapters 33 through 42 of the 2012 International Residential Code are hereby deleted, and replaced with the 2011 National Electrical Code."

Section 4. The Code of Ordinances of the City of McKinney, Section 122-30, is hereby amended and shall read as follows:

"**Sec. 122-30. International Mechanical Code adopted; amendments.**

The city council hereby adopts the 2012 edition of the International Mechanical Code. The city council further adopts the Recommended Amendments to the 2012 International Mechanical Code prepared by the North Central Texas Council of Governments, dated March 2013, which are attached to the Ordinance adopting this code as attachment C. Copies of the code, and the amendments thereto, as referenced herein, are on file in the office of the city secretary for permanent record and inspection. The chief building official or his authorized representative is hereby authorized and directed to enforce all provisions of the International Mechanical Code, as adopted herein and as amended."

Section 5. The Code of Ordinances of the City of McKinney, Section 122-31, is hereby amended and shall read as follows:

"**Sec. 122-31. International Plumbing Code adopted.**

The city council hereby adopts the 2012 edition of the International Plumbing Code. Copies of the code and the amendments thereto, as referenced in this chapter, are on file in the office of the city secretary for permanent record and inspection. The chief building official or his authorized representative is hereby authorized and directed to enforce all provisions of the International Plumbing Code, as adopted herein and as amended."

Section 6. The Code of Ordinances of the City of McKinney, Section 122-32, is hereby amended and shall read as follows:

"**Sec. 122-32. Amendments to plumbing code.**

The city council further adopts the Recommended Amendments to the 2012 International Plumbing Code prepared by the North Central Texas Council of Governments, dated March 2013, which are attached to the Ordinance adopting this code as attachment D. Attachment D is not set out herein, but is on file and available for inspection in the office of the city secretary."

Section 7. The Code of Ordinances of the City of McKinney, Section 122-34, is hereby amended and shall read as follows:

"**Sec. 122-34. International Fuel Gas Code adopted.**

The city council hereby adopts the 2012 edition of the International Fuel Gas Code. The city council further adopts the Recommended Amendments to the 2012 International Fuel Gas Code prepared by the North Central Texas Council of Governments, dated March 2013, which are attached to the Ordinance adopting this code as attachment E. Copies of the code and the amendments thereto, as referenced herein, are on file in the office of the city secretary for permanent record and inspection. The chief building official, or his authorized representative, is hereby authorized and directed to enforce all provisions of the International Fuel Gas Code, as adopted herein and as amended. In addition, all gas piping shall comply with the provisions of NFPA 54, National Fuel Gas Code, 2012 Edition, as amended. The International Fuel Gas Code shall be further modified to include the following:

The following language shall be added to *403.5.4 Corrugated Stainless Steel Tubing*:

CSST shall be installed according to NFPA 54, as amended, and manufacturer specifications.

Section 409.6 Excessive Gas Flow Shutoff Devices

Section 409.6.1 Definition. "Excessive Gas Flow Shutoff Device" shall mean those valves or devices activated by the rupture of gas supply piping on or within a structure, and designed to automatically shut off the gas supply when flow exceeds the design limits of the system or appliance served. These devices shall also be capable of automatically resetting when repairs have been completed and pressure is restored to the system.

Section 409.6.2 Approval. Excessive gas flow shutoff devices shall be certified by Underwriter's Laboratories (UL), International Association of Plumbing and Mechanical Officials (IAPMO), American Gas Association (AGA) or other recognized listing and testing agency, and shall be approved by the Building Official.

Section 409.6.3 Excessive Gas Flow Shutoff Device/Location. All gas piping systems must have at least one excessive gas flow shutoff device installed at the meter."

Section 8. The Code of Ordinances of the City of McKinney, Section 122-35, is hereby amended and shall read as follows:

"**Sec. 122-35. International Energy Conservation Code adopted.**

The city council hereby adopts the 2012 edition of the International Energy Conservation Code. Copies of the code and the amendments thereto, as referenced in this chapter, are on file in the office of the city secretary for permanent record and inspection. The chief building official, or his authorized representative, is hereby authorized and directed to enforce all provisions of the International Energy Conservation Code, as adopted herein and as amended."

Section 9. The Code of Ordinances of the City of McKinney, Section 122-36, is hereby amended and shall read as follows:

"**Sec. 122-36. Amendments to energy conservation code.**

The city council hereby adopts the Recommended Amendments to the 2012 International Energy Conservation Code prepared by the North Central Texas Council of Governments, dated March 2013, which are attached to the Ordinance adopting this code as attachment F. Attachment F is not set out herein, but is on file and available for inspection in the office of the city secretary.

The amendments are intended to comply with the National Appliance Energy Conservation Act of 1987 (42 U.S.C. §§ 6291-6309), as amended."

Section 10. The Code of Ordinances of the City of McKinney, Section 122-128, is hereby amended and shall read as follows:

"**Sec. 122-128. National Electrical Code adopted.**

The city council hereby adopts the 2011 edition of the National Electrical Code. Copies of the code and the amendments thereto, as referenced in this chapter, are on file in the office of the city secretary for permanent record and inspection. The chief building official, or his authorized representative, is hereby authorized and directed to enforce all provisions of the National Electrical Code, as adopted herein and as amended."

Section 11. The Code of Ordinances of the City of McKinney, Section 122-129, is hereby amended and shall read as follows:

"**Sec. 122-129. Amendments to electrical code.**

The city council hereby adopts the Recommended Amendments to the 2011 National Electrical Code prepared by the North Central Texas Council of Governments, dated November 18, 2010, which are attached to the Ordinance adopting this code as attachment G. Attachment G is not set out herein, but is on file and available for inspection in the office of the city secretary."

Section 12. The Code of Ordinances of the City of McKinney, Section 122-134, is hereby amended and shall read as follows:

"**Sec. 122-134. Wiring standards generally**.

See applicable standards and specifications set forth in the 2011 edition of the National Electrical Code."

Section 13. The Code of Ordinances of the City of McKinney, Section 122-135, is hereby amended and shall read as follows:

"**Sec. 122-135. Conduits.**

All electrical writing for electrical lights, heat or power installed after February 7, 1995, in schools, churches, theaters, and public storage buildings within the fire limits in the city shall be installed in approved steel tube conduits or flexible metal conduits."

Section 14. The Code of Ordinances of the City of McKinney, Section 122-136, is hereby amended and shall read as follows:

"**Sec. 122-136. Conductors.**

Beginning at the point where the utility service ends, the use of conductors shall be permitted according to the standards and specifications set forth in the 2011 edition of the National Electrical Code as adopted in this chapter and as amended. This requirement shall in no way be interpreted to control the utility company in its transmission."

Section 15. The Code of Ordinances of the City of McKinney, Section 122-138, is hereby amended and shall read as follows:

"**Sec. 122-138. Separation of signal wires and power wires carried on poles.**

See applicable standards and specifications set forth in the 2011 edition of the National Electrical Code."

Section 16. The Code of Ordinances of the City of McKinney, Section 122-139, is hereby amended and shall read as follows:

"**Sec. 122-139. Placement of material near wiring.**

See applicable standards and specifications set forth in the 2011 edition of the National Electrical Code."

Section 17. The following listed documents are hereby attached to this Ordinance and incorporated herein as set forth in the previous sections of this Ordinance, as if repeated herein verbatim. These documents are on file in the office of the city secretary for permanent record and inspection:

Attachment A: Recommended Amendments to the 2012 International Building Code, prepared by the North Central Texas Council of Governments, dated June 26, 2013.

Attachment B: Recommended Amendments to the 2012 International Residential Code, prepared by the North Central Texas Council of Governments, dated March 2013.

Attachment C: Recommended Amendments to the 2012 International Mechanical Code, prepared by the North Central Texas Council of Governments, dated March 2013.

Attachment D: Recommended Amendments to the 2012 International Plumbing Code, prepared by the North Central Texas Council of Governments, dated March 2013.

Attachment E: Recommended Amendments to the 2012 International Fuel Gas Code, prepared by the North Central Texas Council of Governments, dated March 2013.

Attachment F: Recommended Amendments to the 2012 International Energy Conservation Code, prepared by the North Central Texas Council of Governments, dated March 2013.

Attachment G: Recommended Amendments to the 2011 National Electrical Code, prepared by the North Central Texas Council of Governments, dated November 18, 2010.

Section 18. All ordinances, orders or resolutions heretofore passed and adopted by the City Council of the City of McKinney, Texas, are hereby repealed to the extent that said ordinances, orders or resolutions, or parts thereof, are in conflict herewith.

Section 19. If any section, subsection, clause, phrase or provision of this Ordinance, or the application thereof to any person or circumstance, shall to any extent be held by a court of competent jurisdiction to be invalid, void or unconstitutional, the remaining sections, subsections, clauses, phrases and provisions of this Ordinance, or the application thereof to any person or circumstance, shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

Section 20. This Ordinance shall take effect immediately from and after its passage.

DULY PASSED AND ADPPROVED BY THE CITY COUNCIL OF THE CITY OF MCKINNEY, TEXAS, ON THE 16th DAY OF JULY, 2013.

CITY OF McKINNEY, TEXAS

_____
BRIAN LOUGHMILLER
Mayor

CORRECTLY ENROLLED:

_____
SANDY HART, TRMC, MMC
City Secretary
BLANCA I. GARCIA
Deputy City Secretary

DATE: _____

APPROVED AS TO FORM:

_____
MARK S. HOUSER
City Attorney

ATTACHMENT A

Recommended Amendments to the 2012 International Building Code

North Central Texas Council of Governments Region

The following sections, paragraphs, and sentences of the *2012 International Building Code* are hereby amended as follows: Standard type is text from the IBC. Underlined type is text inserted. ~~Lined through type is deleted text from IBC.~~ 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 code.

Explanation of Options A and B:
Please note that as there is a wide range in fire fighting philosophies / capabilities of cities across the region, OPTION "A" and OPTION "B" are provided in the Fire and Building Code amendments. Jurisdictions should choose one or the other based on their fire fighting philosophies / capabilities when adopting code amendments.

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.**

Section 101.4; change to read as follows:

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.6 and referenced elsewhere in this code, when specifically adopted, shall be considered part of the requirements of this code to the prescribed extent of each such reference. 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 Electrical Code shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes. The former ICC Electrical Code is now Appendix K of this code but no longer called by that name.)

Section 101.4.7; add the following:

101.4.7 Electrical. The provisions of the Electrical Code shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

(Reason: This was dropped when ICC quit publishing the ICC Electrical Code, but the Electrical Code still should be referenced regardless of how it is adopted.)

Section 103 and 103.1 amend to insert the Department Name

SECTION 103
~~DEPARTMENT OF BUILDING SAFETY~~ [INSERT OFFICIAL BUILDING DEPARTMENT NAME OF JURISDICTION]

103.1 Creation of enforcement agency. The ~~Department of Building Safety~~ [INSERT OFFICIAL BUILDING DEPARTMENT NAME OF JURISDICTION] is hereby created and the official in charge thereof shall be known as the *building official*.

(Reason: Reminder to be sure ordinance reads the same as designated by the city.)

****Section 104.10.1; jurisdictions may consider the option to amend or delete depending on local enforcement and flood hazard ordinances.***

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

****Section 105.2; under sub-title entitled "Building" delete items 1, 2, 10 and 11 and re-number as follows:***

Building:

~~1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m_2).~~

~~2. Fences not over 7 feet (1829 mm) high.~~

~~3.~~ 1. (Unchanged)

~~4.~~ 2. (Unchanged)

~~5.~~ 3. (Unchanged)

~~6.~~ 4. (Unchanged)

~~7.~~ 5. (Unchanged)

~~8.~~ 6. (Unchanged)

~~9.~~ 7. (Unchanged)

~~10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.~~

~~11.~~ 8. (Unchanged)

~~12.~~ 9. (Unchanged)

~~13.~~ 10. (Unchanged)

(Reason: Item~~s~~ deleted are for one- and two-family dwellings regulated by the International Residential Code. Accessory structures, fences and shade cloth structures would require a permit for commercial properties to ensure compliance with local ordinance, egress, accessibility, flame spread of fabric, wind/snow design load, etc.).

*****Section 109; add Section 109.7 to read as follows:***

109.7 Re-inspection Fee. A fee as established by city council resolution may be charged when:

1. The inspection called for is not ready when the inspector arrives;

2. No building address or permit card is clearly posted;

3. City approved plans are not on the job site available to the inspector;

4. The building is locked or work otherwise not available for inspection when called;

5. The job site is red-tagged twice for the same item;

6. The original red tag has been removed from the job site.

7. Failure to maintain erosion control, trash control or tree protection.

Any re-inspection fees assessed shall be paid before any more inspections are made on that job site.

(Reason: This fee is not a fine or penalty but is designed to compensate for time and trips when inspections are called for when not ready.)

*****Section 109; add Section 109.8, 109.8.1, 109.8.2 and 109.9 to read as follows:***

109.8 Work without a permit.

109.8.1 Investigation. Whenever work for which a permit is required by this code has been commenced without first obtaining a permit, a special investigation shall be made before a permit may be issued for such work.

109.8.2 Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code or the city fee schedule as applicable. The payment of such investigation fee shall not exempt the applicant from compliance with all other provisions of either this code or the technical codes nor from penalty prescribed by law.

109.9 Unauthorized cover up fee. Any work concealed without first obtaining the required inspection in violation of Section 110 shall be assessed a fee as established by the city fee schedule.

(Reason: This fee is not a fine or penalty but is designed to compensate for time and to remove incentive to attempt to evade permits and code compliance. Text taken from former Uniform Administrative Code.)

*****Section 110.3.5; jurisdiction has the option to delete depending on local inspection policies.***

(Reason: Lath or gypsum board inspections are not normally performed in this area.)

*****Section 202; amend definition of Ambulatory Care Facility as follows:***

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to individuals who are rendered incapable of self-preservation by the services provided. This group may include but not be limited to the following:

- Dialysis centers

- Sedation dentistry
- Surgery centers
- Colonic centers
- Psychiatric centers

*(Reason: To clarify the range of uses included in the definition. [Explanatory note related to **Ambulatory Care Facilities**: This group of uses as defined in Chapter 2 includes a medical or dental office where persons are put under for dental surgery or other services. Section 903.2.2 will now require such uses to be sprinklered if on other than the floor of exit discharge or if four or more persons are put under on the level of exit discharge. Recommend (1.) jurisdictions document any pre-existing non-conforming conditions prior to issuing a new C of O for a change of tenant and, (2.) On any medical or dental office specify on C of O the maximum number of persons permitted to be put under general anesthesia. It is recommended that before a Certificate of Occupancy is issued, a letter of intended use from the business owner shall be included and a C of O documenting the maximum number of care recipients incapable of self preservation allowed.)*

******Section 202; add definition of Assisting Living Facilities to read as follows.***

ASSISTED LIVING FACILITIES. *A building or part thereof housing persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff.*

(Reason: The code references Assisted Living facilities and definition was deleted)

*****Section 202; change definition of "Atrium" as follows:***

ATRIUM. An opening connecting ~~two~~ three or more stories… *{Balance remains unchanged}*

(Reason: Accepted practice in the region based on legacy codes. Section 1009 permits unenclosed two story stairways under certain circumstances.)

Option A

*****Section 202;*** *{No amendment necessary}*

Option B

*****Section 202; amend definition to read as follows:***

HIGH-RISE BUILDING. A building with an occupied floor located more than ~~75~~ 55 feet ~~(22 860 mm)~~ (16 764 mm) above the lowest level of fire department vehicle access.

(Reason: To define high-rise, as it influences sprinkler requirement thresholds based on the fire fighting capabilities of a jurisdiction. This correction needed for Option B and C cities only as a basic definition of High Rise is now provided.)

******Section 303.1.3; add a sentence to read as follows:***

303.1.3 Associated with Group E occupancies. A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy. except when applying the assembly requirements of Chapter 10 and 11.

(Reason: To clarify that egress and accessibility requirements are applicable for assembly areas, i.e. cafeteria, auditoriums, etc.)

*****Section 304.1; add the following to the list of occupancies:***

Fire stations
Police stations with detention facilities for 5 or less

(Reason: Consistent with regional practice dating back to the legacy codes.)

*****Section 307.1; add the following sentence to Exception 4:***

4. Cleaning establishments… *{text unchanged}* …with Section 707 or 1-hour horizontal assemblies constructed in accordance with Section 711 or both. See also IFC Chapter 12, Dry Cleaning Plant provisions.

(Reason: To call attention to detailed requirements in the Fire Code.)

***Section 403.1, Exception 3; change to read as follows:**

3. Open air portions of buildings ~~Buildings~~ with a Group A-5 occupancy in accordance with Section 303.6.

(Reason: To clarify enclosed portions are not exempt.)

***Section 403.3, Exception; delete item 2.**

(Reason: To provide adequate fire protection to enclosed areas.)

***Section 404.5; delete Exception.**

(Reason: Consistent with amended atrium definition.)

***Section 406.3.2; add item 3 to read as follows:**

3. A separation is not required between a Group R-2 and U carport provided that the carport is entirely open on all sides and that the distance between the two is at least 10 feet (3048 mm).

(Reason: Simplifies the fire separation distance and eliminates the need to obtain opening information on existing buildings when adding carports in existing apartment complexes. Consistent with legacy codes in effect in region for years and no record of problems with car fires spreading to apartments as a result.)

***Section 406.8; add a second paragraph to read as follows:**

This occupancy shall also include garages involved in minor repair, modification and servicing of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement and other such minor repairs.

(Reason: To further clarify types of service work allowed in a repair garage, as well as to correspond with definition in the IFC.)

***Section 506.2.2; add sentence to read as follows:**

506.2.2 Open Space Limits. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane. In order to be considered as accessible, if not in direct contact with a street or fire lane, a minimum 10-foot wide pathway meeting fire department access from the street or approved fire lane shall be provided.

(Reason: To define what is considered accessible. Consistent with regional amendment to IFC 504.1.)

***Section 712.1.8, change item 5 to* read *as follows:**

5. Is not open to a corridor in Group I and ~~R~~ H occupancies.

(Reason: To be consistent with regionally accepted practices.)

***Section 713.14.1 Elevator Lobby. Exceptions: 4.3 change to read as follows:**

Option A

***Section 713.14.1; Exception 4.3** *{No amendment necessary}*

Option B

***Section 713.14.1; Exception 4.3** Elevators serving floor levels over ~~75~~ 55 feet ~~(22 860 mm)~~ (16 764 mm) above the lowest level of fire department vehicle access in high rise buildings.

(Reason: This correction needed for Option B and C cities only as a basic definition of High Rise is now provided.)

***Section 903.1.1; change to read as follows:**

[F] 903.1.1 Alternative protection. Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted in ~~lieu of~~ addition to automatic sprinkler protection where recognized by the applicable standard ~~and~~, or as *approved* by the *fire code official*.

(Reason: Such alternative systems do not provide the reliability of automatic sprinkler protection in general. An applicant could pursue an Alternate Method request to help mitigate the reliability issues with these alternative systems with the fire code official if so desired, or there may be circumstances in which

the fire code official is acceptable to allowing an alternate system in lieu of sprinklers, such as kitchen hoods or paint booths. This also meets with local practices in the region.)

***Section 903.2; add the following:**

[F] 903.2 Where required. *Approved automatic sprinkler systems* in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12. Automatic Sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances. Storage shall not be allowed within the elevator machine room. Signage shall be provided at the entry doors to the elevator machine room indicating "ELEVATOR MACHINERY – NO STORAGE ALLOWED."

(Reason: Firefighter and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3006.5 for the purpose of elevator passenger and firefighter safety. This amendment is contingent on the Building Code amendment eliminating the Exceptions to Section 3006.4, such that passive fire barriers for these areas are maintained. This also meets with local practices in the region.)

***Section 903.2; delete the exception.**

(Reason: The exception deletion is due to the fact that such telecom areas pose an undue fire risk to the structural integrity of the building. This also meets with local practices in the region.)

Options A and B

Section 903.2.1.2; No Change.

***Section 903.2.9; add Section 903.2.9.3 to read as follows:**

[F] 903.2.9.3 Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

Exception: One-story self-service storage facilities that have no interior corridors, with a one-hour fire barrier separation wall installed between every storage compartment.

(Reason: Fire departments are unable to inspect these commercial occupancies and are unaware of the contents being stored. This also meets with local practices in the region.)

Option A

***Section 903.2.11; change 903.2.11.3 and add 903.2.11.7, and 903.2.11.8, as follows:**

[F] 903.2.11.3 Buildings 55 feet or more in height. An automatic sprinkler system shall be installed throughout buildings with a floor level, other than penthouses in compliance with Section 1509 of the *International Building Code*, ~~having an occupant load of 30 or more~~ that is located 55 feet (16 764 mm) or more above the lowest level of fire department vehicle access.

Exceptions:

~~1. Airport control towers.~~

~~2.~~ Open parking structures in compliance with Section 406.5 of the Building Code.

~~3. Occupancies in Group F-2.~~

903.2.11.7 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4572 mm), see IFC Chapter 32 to determine if those provisions apply.

903.2.11.8 Spray Booths and Rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

Option B

***Section 903.2.11; change 903.2.11.3 and add 903.2.11.7, 903.2.11.8, and 903.2.11.9 as follows:**

903.2.11.3 Buildings 35 feet or more in height. An automatic sprinkler system shall be installed throughout buildings with a floor level, other than penthouses in compliance with Section 1509 of the *International Building Code*, ~~having an occupant load of 30 or more~~ that is located ~~55~~ 35 feet (~~16 764~~ 10 668mm) or more above the lowest level of fire department vehicle access.

Exceptions:

~~1. Airport control towers.~~

~~2.~~ Open parking structures in compliance with Section 406.5 of the *International Building Code*.

~~3. Occupancies in Group F-2.~~

903.2.11.7 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4572 mm), see IFC Chapter 32 to determine if those provisions apply.

903.2.11.8 Spray Booths and Rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

903.2.11.9 Buildings Over 6,000 sq.ft. An automatic sprinkler system shall be installed throughout all buildings with a building area over 6,000 sq.ft. For the purpose of this provision, fire walls shall not define separate buildings.

Exception: Open parking garages in compliance with Section 406.5 of the *International Building Code*.

(Reason: Reflects regional practices.)

******Section 903.3.1.1.1; change to read as follows:***

[F] 903.3.1.1.1 Exempt locations. When approved by the *fire code official*, automatic sprinklers shall not be required in the following rooms or areas where such *...{text unchanged}…* because it is damp, of fire-resistance-rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the code official.
3. Generator and transformer rooms, under the direct control of a public utility, separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. ~~In rooms or areas that are of noncombustible construction with wholly noncombustible contents.~~
5. ~~Fire service access~~ Elevator machine rooms, machinery spaces, and hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.
6. {Delete.}

(Reason: Gives more direction to code official. Exception 4 deleted to provide protection where fire risks are poorly addressed. Amendment 903.2 addresses Exception 5 above relative to the elimination of sprinkler protection in these areas to avoid the shunt trip requirement.)

******Section 903.3.1.2.2; add the following**:*

[F]Section 903.3.1.2.2 Attics, Open Breezeways, and Attached Garages. Sprinkler protection is required in attic spaces of such buildings two or more stories in height, open breezeways, and attached garages.

(Reason: Open breezeways already require sprinkler protection in Section 1026.6, Exception 4. Attic protection is required in accordance with existing regional practice and issues with fire exposure via soffit vents, as well as firefighter safety. Attached garages already require sprinkler via NFPA 13R – re-emphasis.)

*****Section 903.3.1.3; add the following:***

[F] 903.3.1.3 NFPA 13D sprinkler systems. *Automatic sprinkler systems* installed in one- and two-family *dwellings*, Group R-3 and R-4 congregate living facilities and *townhouses* shall be permitted to be installed throughout in accordance with NFPA 13D or in accordance with state law.

(Reason: To allow the use of the Plumbing section of the IRC and recognize current state stipulations in this regard.)

Section 903.3.5 Water Supplies; add a second paragraph to read as follows:

[F] Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective standards; however, every fire protection system shall be designed with a 10 psi safety factor. Reference Section IFC 507.4 for additional design requirements.

(Reason: To define uniform safety factor.)

Section 903.4 Sprinkler system supervision and alarms; add a second paragraph after the exceptions to read as follows:

[F] Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

(Reason: To avoid significant water losses. Consistent with amendment to IFC 905.9.)

Section 903.4.2 Alarms; add second paragraph to read as follows:

[F] The alarm device required on the exterior of the building shall be a weatherproof horn/strobe notification appliance with a minimum 75 candela strobe rating, installed as close as practicable to the fire department connection.

(Reason: Fire department connections are not always located at the riser; this allows the fire department faster access.)

Section 905.2 Installation standard; change to read as follows:

[F] 905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14. Manual dry standpipe systems shall be supervised with a minimum of 10 psig and a maximum of 40 psig air pressure with a high/low alarm.

(Reason: To define manual dry standpipe supervision requirements. Helps ensure the integrity of the standpipe system via supervision, such that open hose valves will result in a supervisory low air alarm.)

****Add Section 905.3.9 and exception to read as follows:***

[F] 905.3.9 Building area. In buildings exceeding 10,000 square feet in area per story, Class I automatic wet or manual wet standpipes shall be provided where any portion of the building's interior area is more than 200 feet (60960 mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access.

Exception: Automatic dry and semi-automatic dry standpipes are allowed as provided for in NFPA 14.

(Reason: Allows for the rapid deployment of hoselines to the body of the fire.)

Section 905.4, item 5; change to read as follows:

[F] 5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a two-way ~~a~~ hose connection ~~shall be~~ located to serve the roof or at the highest landing of a stairway with stair access to the roof provided in accordance with Section 1009.16. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.

(Reason: Maintains previously adopted amendment for the following purpose. Reduced the amount of pressure required to facilitate testing, and provides backup protection for fire fighter safety.)

Section 905.4 Location of Class I standpipe hose connections; add the following item 7:

[F] 7. When required by this Chapter, standpipe connections shall be placed adjacent to all required exits to the structure and at two hundred feet (200') intervals along major corridors thereafter.

(Reason: Allows for the rapid deployment of hoselines to the body of the fire.)

Section 905.9 Valve supervision; add a second paragraph after the exceptions to read as follows:

[F] Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

(Reason: To avoid significant water losses. Consistent with amendment to IFC 903.4.)

***Add Section 907.1.4 to read as follows:**

[F] 907.1.4 Design standards. All alarm systems new or replacement shall be addressable. Alarm systems serving more than 20 smoke detectors shall be analog addressable.

Exception: Existing systems need not comply unless the total building remodel or expansion initiated after the effective date of this code, as adopted, exceeds 30% of the building. When cumulative building remodel or expansion exceeds 50% of the building must comply within 18 months of permit application.

(Reason: Consistent with local practice and emerging technology. Reduces need for panel replacement in the future.)

***Section 907.2.1; change to read as follows:**

[F] 907.2.1 Group A. A manual fire alarm system that activates the occupant notification system in accordance with new Section 907.6 shall be installed in Group A occupancies having an occupant load of 300 or more persons or more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.9 of the *International Building Code* shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

Exception: {unchanged.}

Activation of fire alarm notification appliances shall:

1. Cause illumination of the *means of egress* with light of not less than 1 foot-candle (11 lux) at the walking surface level, and
2. Stop any conflicting or confusing sounds and visual distractions.

(Reason: Increases the requirement to be consistent with Group B requirement. Also addresses issue found in Group A occupancies of reduced lighting levels and other A/V equipment that distracts from fire alarm notification devices. Also reflects regional practice.)

***Section 907.2.3; change to read as follows:**

[F] 907.2.3 Group E. A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E educational occupancies. When *automatic sprinkler systems* or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system. An approved smoke detection system shall be installed in Group E day care occupancies. Unless separated by a minimum of 100' open space, all buildings, whether portable buildings or the main building, will be considered one building for alarm occupant load consideration and interconnection of alarm systems.

(Reason: To distinguish educational from day care occupancy minimum protection requirements. Further, to define threshold at which portable buildings are considered a separate building for the purposes of alarm systems.)

***Section 907.2.3; add exception 1.1 to read as follows:**

[F] Exceptions:

1. A manual fire alarm system is not required in Group E educational and day care occupancies with an occupant load of 30 or less when provided with an approved automatic sprinkler system.

   1.1. Residential In-Home day care with not more than 12 children may use interconnected single station detectors in all habitable rooms. (For care of more than five children 2 1/2 or less years of age, see Section 907.2.6.)

(Reason: Consistent with Texas State laws concerning day care facility requirements.)

**** Section 907.4.2 Manual fire alarm boxes to read as follows:**

[F] {Text unchanged}……Sections 907.4.2.1 through 907.4.2. ~~6~~. **7**

(Reason: Added number 907.4.2.7*.)*

****Add Section 907.4.2.7 to read as follows:**

[F] 907.4.2.7 Type. Manual alarm initiating devices shall be an approved double action type.

(Reason: Helps to reduce false alarms. Consistent with regional requirements.)

Add Section 907.6.1.1 to read as follows:

[F] 907.6.1.1 Wiring Installation. All fire alarm systems shall be installed in such a manner that a failure of any single initiating device or single open in an initiating circuit conductor will not interfere with the normal operation of other such devices. All signaling line circuits (SLC) shall be installed in such a way that a single open will not interfere with the operation of any addressable devices (Class A). Outgoing and return SLC conductors shall be installed in accordance with NFPA 72 requirements for Class A circuits and shall have a minimum of four feet separation horizontal and one foot vertical between supply and return circuit conductors. The initiating device circuit (IDC) from an addressable input (monitor) module may be wired Class B, provided the distance from the addressable module to the initiating device is ten feet or less.

(Reason: To provide uniformity in system specifications and guidance to design engineers. Improves reliability of fire alarm devices and systems.)

Add Section 907.6.5.3 to read as follows:

[F] 907.6.5.3 Communication requirements. All alarm systems, new or replacement, shall transmit alarm, supervisory and trouble signals descriptively to the approved central station, remote supervisory station or proprietary supervising station as defined in NFPA 72, with the correct device designation and location of addressable device identification. Alarms shall not be permitted to be transmitted as a General Alarm or Zone condition.

(Reason: To assist responding personnel in locating the emergency event.)

Section 910.1; change Exception 2 to read as follows:

[F] 2. Where areas of buildings are equipped with early suppression fast-response (ESFR) sprinklers, ~~automatic~~ only manual smoke and heat vents shall ~~not~~ be required within these areas. Automatic smoke and heat vents are prohibited.

(Reason: Allows the fire department to control the smoke and heat during and after a fire event.)

***** Section 910.2 Where required to read as follows:***

[F] {Text unchanged}……Sections 910.2.1 ~~and~~ through 910.2.~~2~~ **4**

(Reason: Added numbers 910.2.3 and 910.2.4)

Add subsections 910.2.3 with exceptions to read as follows:

[F] 910.2.3 Group H. Buildings and portions thereof used as a Group H occupancy as follows:

1. In occupancies classified as Group H-2 or H-3, any of which are more than 15,000 square feet (1394 m^2) in single floor area.

   Exception: Buildings of noncombustible construction containing only noncombustible materials.

2. In areas of buildings in Group H used for storing Class 2, 3, and 4 liquid and solid oxidizers, Class 1 and unclassified detonable organic peroxides, Class 3 and 4 unstable (reactive) materials, or Class 2 or 3 water-reactive materials as required for a high-hazard commodity classification.

   Exception: Buildings of noncombustible construction containing only noncombustible materials.

(Reason: Provides an acceptable alternative for large storage and manufacturing occupancies, rather than requiring interior rated exit passageways, as has been allowed for many years.)

Add subsections 910.2.4 to read as follows:

[F] 910.2.4 Exit access travel distance increase. Buildings and portions thereof used as a Group F-1 or S-1 occupancy where the maximum exit access travel distance is increased in accordance with Section 1016.2.2.

(Reason: Provides an acceptable alternative for large storage and manufacturing occupancies, rather than requiring interior rated exit passageways, as has been allowed for many years.)

Table 910.3; Change the title of the first row of the table from "Group F-1 and S-1" to include "Group H" and to read as follows:

Group H, F-1 and S-1

(Reason: Consistency with the amendment 910.2.3 to include Group H.)

***Add Section 912.2.3 to read as follows:**

[F] 912.2.3 Hydrant distance. An approved fire hydrant shall be located within 100 feet of the fire department connection as the fire hose lays along an unobstructed path.

(Reason: Consistent with regional practices.)

***Section 913.1; add second paragraph and exception to read as follows:**

[F] When located on the ground level at an exterior wall, the fire pump room shall be provided with an exterior fire department access door that is not less than 3 ft. in width and 6 ft. – 8 in. in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by IFC Section 506.1.

> **Exception:** When it is necessary to locate the fire pump room on other levels or not at an exterior wall, the corridor leading to the fire pump room access from the exterior of the building shall be provided with equivalent fire resistance as that required for the pump room, or as approved by the *fire code official*. Access keys shall be provided in the key box as required by IFC Section 506.1.

(Reason: This requirement allows fire fighters safer access to the fire pump room. The requirement allows access without being required to enter the building and locate the fire pump room interior access door during a fire event. The exception recognizes that this will not always be a feasible design scenario for some buildings, and as such, provides an acceptable alternative to protect the pathway to the fire pump room.)

***Section 1004.1.2; delete exception:**

1004.1.2 Areas without fixed seating. The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2. For areas without fixed seating, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the occupant load factor assigned to the function of the space as set forth in Table 1004.1.2. Where an intended function is not listed in Table 1004.1.2, the building official shall establish a function based on a listed function that most nearly resembles the intended function.

> ~~**Exception:** Where approved by the building official, the actual number of occupants for whom each occupied space, floor or building is designed, although less than those determined by calculation, shall be permitted to be used in the determination of the design occupant load.~~

(Reason: Authority having jurisdiction (AHJ) already has this authority. Technical substantiation is required to support deviation from table values.)

***Section 1007.1; add the following Exception 4:**

> **Exceptions:**
>
> *{previous exceptions unchanged}*
>
> 4. Buildings regulated under State Law and built in accordance with State registered plans, including any variances or waivers granted by the State, shall be deemed to be in compliance with the requirements of Section 1007.

(Reason: To accommodate buildings regulated under Texas State Law and to be consistent with amendments to Chapter 11.)

***** Section 1007.5; Platform lifts, amend to read as follows:**

1007.5 Platform lifts. Platform (wheelchair) lifts . . . required *accessible route* in Section 1109.~~7~~ 8, Items 1 through ~~9~~ 10. Standby power . . {remainder unchanged}

(*Reason: Editorial.*)

***Section 1008.1.9.4; amend exceptions 3 and 4 as follows:**

Exceptions:

> 3. Where a pair of doors serves an *occupant load* of less than 50 persons in a Group B, F, M or S occupancy. {*Remainder unchanged*}

4. Where a pair of doors serves a Group A, B, F, M or S occupancy. {*Remainder unchanged*}

(Reason: Application to M occupancies reflects regional practice; No. 4 expanded to Group A due to it being a similar scenario to other uses; No. 4 was regional practice.)

***Section 1008.1.9.9; change to read as follows:**

1008.1.9.9 Electromagnetically locked egress doors. Doors in the *means of egress* in buildings with an occupancy in Group A, B, E, I-1, I-2, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, I-1, I-2, M, R-1 or R-2 shall be permitted to be electromagnetically locked if equipped with *listed* hardware that incorporates a built-in switch and meet the requirements below: *{remaining text unchanged}*

(Reason: Regional practice to permit such locks due to the presence of trained staff.)

***Section 1015; add new section 1015.7 to read as follows:**

1015.7 Electrical Rooms. For electrical rooms, special exiting requirements may apply. Reference the electrical code as adopted.

(Reason: Cross reference necessary for coordination.)

****Section 1016; add new section 1016.2.2 to read as follows:**

1016.2.2 Group F-1 and S-1 increase. The maximum exit access travel distance shall be 400 feet (122 m) in Group F-1 or S-1 occupancies where all of the following are met:

1. The portion of the building classified as Group F-1 or S-1 is limited to one story in height;
2. The minimum height from the finished floor to the bottom of the ceiling or roof slab or deck is 24 feet (7315 mm); and
3. The building is equipped throughout with an automatic fire sprinkler system in accordance with Section 903.3.1.1.

(Reason: Past regional practice allowed smoke and heat vents to be utilized to increase travel distance, which resulted in problems when utilizing ESFR systems. This amendment adopts wording from the upcoming 2015 IBC, which has been approved by final action via the ICC code development process but is not yet published.)

****Section 1018.1; add exception 6 to read as follows:**
{previous text unchanged}

6. In Group B office buildings, corridor walls and ceilings within single tenant spaces need not be of fire-resistive construction when the tenant space corridor is provided with system smoke detectors tied to an approved automatic fire alarm. The actuation of any detector shall activate alarms audible in all areas served by the corridor.

(Reason: To reduce redundant requirements in a single tenant situation. Intended to be consistent with regional amendment to IFC.

***Section 1018.6; amend to read as follows:**

1018.6, Corridor Continuity. ~~Fire-Resistance-Rated~~ All corridors shall be continuous from the point of entry to an *exit,* and shall not be interrupted by intervening rooms. {*Remainder unchanged*}

{Exception unchanged}
(Reason: Once in corridor, corridor should not be interrupted or discontinuous.)

***Section 1026.6; amend exception 4 to read as follows:**

Exceptions: *{Exceptions 1 through 3 unchanged}*

4. Separation from the ~~interior~~ open-ended *corridors* of the building… *{remaining text unchanged}*

(Reason: To clarify that Section 1022.7, i.e., the 180 degree rule is applicable; and is further reinforced by new Exception 4.4.)

****Section 1028.1.1.1; delete.**

(*Reason: Unenforceable*.)

****Section 1029.1; amend to read as follows:**

1029.1 General. In addition to the *means of egress* required by this chapter, provisions shall be made for *emergency escape and rescue openings* in Group R and I-1 ~~Group R-2~~ occupancies ~~in accordance with Tables 1021.2(1) and 1021.2(2) and Group R-3 occupancies~~. {*Remainder unchanged*}

Exceptions:

{Exceptions 1 through 3 unchanged.}

4. In other than Group R-3 occupancies, buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

(Reason: Maintains legacy language to ensure egress from residential type occupancies and maintain exception for residential occupancies where an NFPA 13 or 13R sprinkler system is installed, but not for a 13D system.)

****Section 1101.2; Add exception to read as follows:**

Exceptions: Projects registered with the Architectural Barriers Division of the Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this Chapter.

(Reason: To accommodate buildings regulated under state law.)

*****Section 1203.1; amend to read as follows:**

*****1203.1 General.** Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the *International Mechanical Code*.

Where air infiltration rate in a *dwelling unit* is ~~less than~~ 5 air changes or less per hour when tested with a blower door at a pressure 0.2 inch w.c. (50 Pa) in accordance with Section 402.4.1.2 of the *International Energy Conservation Code*, the *dwelling unit* shall be ventilated by mechanical means in accordance with Section 403 of the *International Mechanical Code*.

(Reason: See IECC change to performance testing. Whole-house ventilation is recognized as necessary).

******Table 1505.1; delete footnote c and replace footnote b with the following:***

b. Non-classified roof coverings shall be permitted on buildings of U occupancies having not more than 120 sq. ft. of protected roof area. When exceeding 120 sq. ft. of protected roof area, buildings of U occupancies may use non-rated non-combustible roof coverings.

~~c.~~ [delete]

(Reason: Conforms to regional practice affording increased fire protection.)

****Section 1505.7; delete the section**

(Reason: Conforms to regional practice.)

*****Section 1510.1; add a sentence to read as follows:***

1510.1 General. Materials and methods of applications used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15. All individual replacement shingles or shakes shall be in compliance with the rating required by Table 1505.1.

{text of exception unchanged}

(Reason: Relocated the text to more appropriate place. Previously was footnote "b" to Table 1505.1)

*****Section 2901.1; add a sentence to read as follows:***

[P] 2901.1 Scope. {*existing text to remain*} The provisions of this Chapter are meant to work in coordination with the provisions of Chapter 4 of the International Plumbing Code. Should any conflicts arise between the two chapters, the Building Official shall determine which provision applies.

(Reason: Gives building official discretion.)

*****Section 2902.1; add a second paragraph to read as follows:***

In other than E Occupancies, the minimum number of fixtures in Table 2902.1 may be lowered, if requested in writing, by the applicant stating reasons for a reduced number and approved by the Building Official.

(Reason: To allow flexibility for designer to consider specific occupancy needs.)

Table 2902.1; change footnote f to read as follows:

f. Drinking fountains are not required in M Occupancies with an occupant load of 100 or less, B Occupancies with an occupant load of 25 or less, and for dining and/or drinking establishments.

(Reason: Adjustment meets the needs of specific occupancy types.)

*****Section 2902.1.3; add new Section 2902.1.3 to read as follows:**

2902.1.3 Additional fixtures for food preparation facilities. In addition to the fixtures required in this Chapter, all food service facilities shall be provided with additional fixtures set out in this section.

2902.1.3.1 Hand washing lavatory. At least one hand washing lavatory shall be provided for use by employees that is accessible from food preparation, food dispensing and ware washing areas. Additional hand washing lavatories may be required based on convenience of use by employees.

2902.1.3.2 Service sink. In new or remodeled food service establishments, at least one service sink or one floor sink shall be provided so that it is conveniently located for the cleaning of mops or similar wet floor cleaning tool and for the disposal of mop water and similar liquid waste. The location of the service sink(s) and/or mop sink(s) shall be approved by the **<Jurisdiction's>** health department.

(Reason: Coordinates Health law requirements with code language for consistent regional practice.)

Section 3006.1; change to read as follows:

3006.1, General. ~~Access~~ Elevator machine rooms shall be provided. *{Remainder unchanged.}*

(Reason: An elevator machine room is necessary to provide a protected space for elevator equipment that is used by the fire service, the disabled, and in the future, building occupant evacuations.)

Section 3006.4 {3006.5 if previous amendment adopted}; add a sentence to read as follows and delete exceptions 1 and 2:

[F] 3006.4. Machine Rooms and Machinery Spaces: *{text unchanged}…* Storage shall not be allowed within the elevator machine room. Provide approved signage at each entry door to the elevator machine room stating "*Elevator Machinery – No Storage Allowed*."

(Reason: Firefighter and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3006.5 for the purpose of elevator passenger and firefighter safety. This amendment is contingent on the Building Code amendment eliminating the Exceptions to Section 3006.4, such that passive fire barriers for these areas are maintained. This also meets with local practices in the region.)

Section 3109.1; change to read as follows:

3109.1 General. Swimming pools shall comply with the requirements of sections 3109.2 through 3109.5 and other applicable sections of this code and complying with applicable state laws.

(Reason: To recognize "state requirements".)

*****Section 3401.~~6~~ 5 Alternative Compliance.** Work performed in accordance with the *International Existing Building Code* shall be deemed to comply with the provisions of this chapter with prior approval from the *Building Official*.

(Reason: Correct typo and align with referenced standards.)

*****Section 3401.~~5~~ 6 Dangerous Conditions.** *{Remainder unchanged.}*

(Reason: Correct typo and align with referenced standards.)

ATTACHMENT B

Recommended Amendments to the 2012 International Residential Code

North Central Texas Council of Governments region

The following sections, paragraphs, and sentences of the *2012 International Residential Code* are hereby amended as follows: Standard type is text from the IRC. Underlined type is text inserted. ~~Lined through type is deleted text from IRC.~~ 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 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.**

The energy provisions in Chapter 11 of the International Residential Code (IRC) now mirror the requirements of the International Energy Conservation Code (IECC). As such, there is no difference between Chapter 11 of the 2012 IRC and the 2012 IECC. **Reference the 2012 IECC for NCTCOG recommended amendments to that code.**

*****Section R102.4; change to read as follows:***

R102.4 Referenced codes and standards. The *codes*, when specifically adopted, and standards referenced in this *code* shall be considered part of the requirements of this *code* to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2. 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 made to NFPA 70 or the *Electrical Code* shall mean the *Electrical Code* as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes. Note: the former ICC Electrical Code is now Appendix K of the IBC, but no longer called by that name. If adopting in that location, be sure to include language that includes structures under IRC and IBC.)

*****Section R110 (R110.1 through R110.5); delete the section.***

(Reason: Issuing CO's for residences is not a common practice in the area.)

*****Section R112.2.1 & R112.2.2; delete the sections.***

(Reason: Floodplain provisions are addressed locally.)

*****Section R202; change definition of "Townhouse" to read as follows:***

TOWNHOUSE. A single-family dwelling unit constructed in a group of three or more attached units separated by property lines in which each unit extends from foundation to roof and with a *yard* or *public way* on at least two sides.

(Reason: Consistent with terminology commonly used in this region.)

***Table R301.2(1); fill in as follows:**

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY[f]
	SPEED[d] (mph)	Topographic Effects[k]	
5 lb/ft^2	90 (3-sec-gust)/76 fastest mile	No	A

SUBJECT TO DAMAGE FROM		
Weathering[a]	Frost line depth[b]	Termite[c]
moderate	6"	very heavy

WINTER DESIGN TEMP[e]	ICE BARRIER UNDER-LAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
22°F	No	local *code*	150	64.9°F

{No change to footnotes}

(Reason: To promote regional uniformity.)

***Section R302.1; add exception #6 to read as follows:**

Exceptions: *{previous exceptions unchanged}*

6. Open non-combustible carport structures may be constructed when also approved within adopted ordinances.

(Reason: Refers to other ordinances, such as zoning ordinances.)

****Section R302.2, Exception; change to read as follows:**

Exception: A common two-hour fire-resistance-rated wall assembly, or one-hour fire-resistance-rated wall assembly when equipped with a sprinkler system… *{remainder unchanged}*

(Reason: Consistent with regional practice.)

****Section R302.2.4, Exception 5; change to read as follows:**

Exception: *{previous exceptions unchanged}*

5. Townhouses separated by a common ~~1-hour~~ fire-resistance-rated wall as provided in Section R302.2.

(Reason: Consistent with regional practice.)

****Section R302.3; add Exception #3 to read as follows:**

Exceptions:

1. *{existing text unchanged}*

2. *{existing text unchanged}*

3. Two-family dwelling units that are also divided by a property line through the structure shall be separated as required for townhouses.

(Reason: Provide guidance for a common construction method in this area. Correlates with amendment to IRC Section R202 Townhouse definition.)

****Section R302.5.1; change to read as follows:**

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors ~~equipped with a self-closing device~~.

(Reason: Consistent with common local practice. Absence of data linking self-closing devices to increased safety. Self-closing devices often fail to close the door entirely.)

Section R303.3, Exception; amend to read as follows:

Exception: The glazed areas {remainder unchanged} unless the space contains only a water closet, a lavatory, or water closet and a lavatory may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

(Reason: Consistent with common local practice.)

*****R303.4 Mechanical Ventilation*; change to read as follows:***

Where the air infiltration rate of a dwelling unit is ~~less than~~ 5 air changes per hour ~~or less~~ when tested with a blower door at a pressure of 0.2 inch w.c. (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with Section M1507.3.

(Reason:See IECC change to performance testing. Whole-house ventilation is recognized as necessary).

*****Section R315.3, *amend and add exceptions as follows*:**

Where required in existing dwellings. Where work requiring a *permit* for an addition or an alteration that occurs in existing dwellings, that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.1:

Exceptions:

1. Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, or the *addition* or replacement of windows or doors, or the *addition* of a porch or deck, are exempt from the requirements of this section.

2. Installation, *alteration* or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

(Reason: Consistent with exceptions in Section R314.3.1)

*****Section R401.2, amended by adding a new paragraph following the existing paragraph to read as follows.**

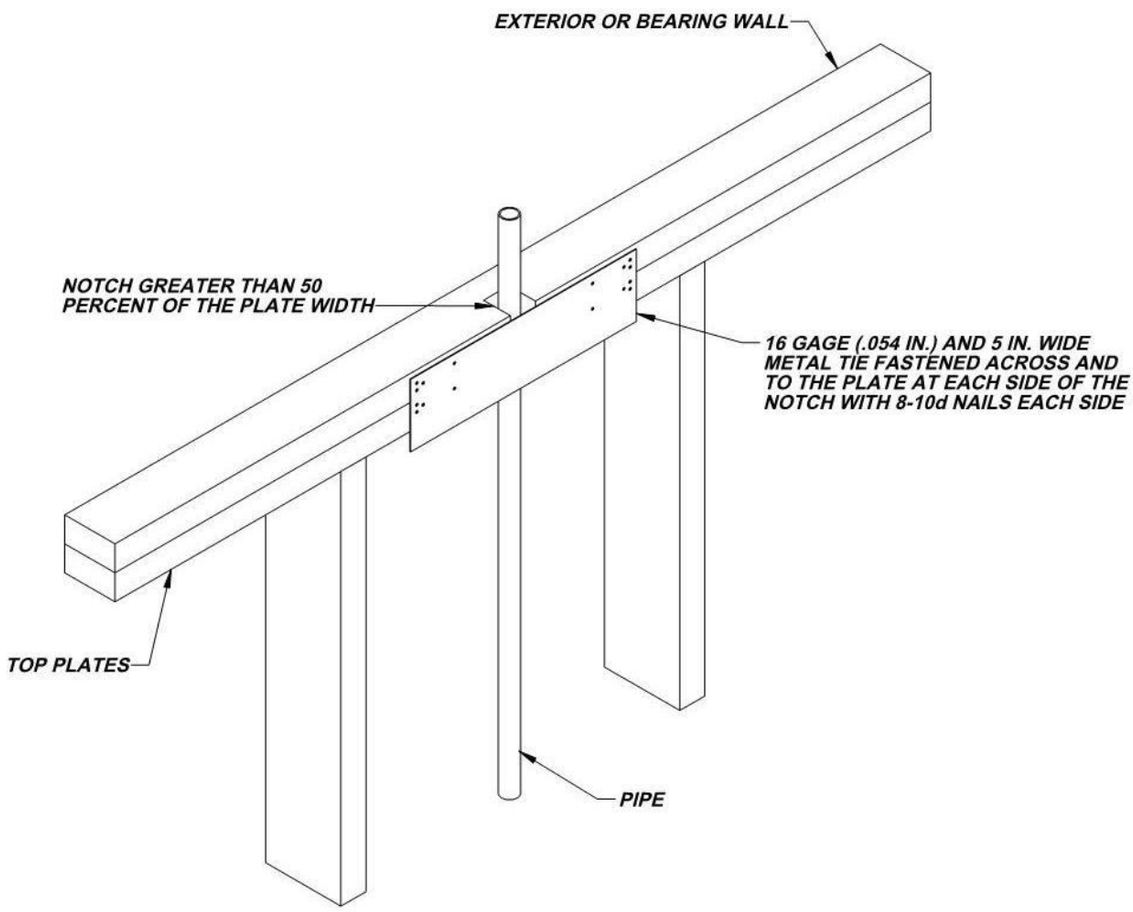
Section R401.2. Requirements. *{existing text unchanged} …*
Every foundation and/or footing, or any size addition to an existing post-tension foundation, regulated by this code shall be designed and sealed by a Texas-registered engineer.
(Reason: reflects regional practice.)

Section 602.6.1; amend the following:

R602.6.1 Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 Ga) and ~~1 ½ inches (38) mm~~ 5 inches (127 mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) having a minimum length of 1 ½ inches (38 mm) at each side or equivalent. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening. See figure R602.6.1. {remainder unchanged}

(Reason: reflects regional practice and to comply with P2603.2.1. Also provides additional assurance of maintaining the integrity of the framing by spreading the nailing pattern.)

Figure R602.6.1; delete the figure and insert the following figure:



(Reason: reflects regional practice and to comply with P2603.2.1. Also provides additional assurance of maintaining the integrity of the framing by spreading the nailing pattern.)

***Section R703.7.4.1; add a second paragraph to read as follows:**

In stud framed exterior wall**s**, all ties shall be anchored to studs as follows:

1. When studs are 16 in (407 mm) o.c., stud ties shall be spaced no further apart than 24 in (737 mm) vertically starting approximately 12 in (381 mm) from the foundation; or

2. When studs are 24 in (610 mm) o.c., stud ties shall be spaced no further apart than 16 in (483 mm) vertically starting approximately 8 in (254 mm) from the foundation.

(Reason: Provide easy to install and inspect dimensions to clarify how to anchor and to distinguish "studs" from other types of construction.)

***Section R902.1; Amend and add exception #3 to read as follows:**

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B, or C roofing shall be installed ~~in areas designated by law as requiring their use or when the edge of the roof is less than 3 feet from a lot line~~. *{remainder unchanged}*

Exceptions:

1. *{text unchanged}*

2. *{text unchanged}*

3. *{text unchanged}*

4. Non-classified roof coverings shall be permitted on one-story detached *accessory structures* used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed (area defined by jurisdiction).

(Reason: Consistent with regional practice. Language fits better in this section. Aligned the area and description of the building to be consistent with the item #1 to Section R105.2)

Part IV – Energy Conservation - Chapter 11 [RE] *** insert text to read as follows:

Residential Provisions for Energy Efficiency

(Reason: To remain consistent with IECC residential provisions.)

******Section M1305.1.3; change to read as follows:***

M1305.1.3 Appliances in attics. *Attics* containing *appliances* requiring access shall be provided *. . . {bulk of paragraph unchanged} . . .* sides of the *appliance* where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger and large enough to allow removal of the largest *appliance*. A walkway to an appliance shall be rated as a floor as approved by the building official. 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* can be serviced and removed through the required opening.
   2. Where the passageway is unobstructed*…{remaining text unchanged}*

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IFGC and IMC 306.3.)

*****Section M1411.3; change to read as follows:***

M1411.3 Condensate disposal. Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to ~~an *approved* place of disposal~~ a sanitary sewer through a trap, by means of a direct or indirect drain. *{remaining text unchanged}*

(Reason: Reflects regional practice and to reduce excessive runoff into storm drains.)

*****Section M1411.3.1, Items 3 and 4; add text to read as follows:***

M1411.3.1 Auxiliary and secondary drain systems. *{bulk of paragraph unchanged}*

1. *{text unchanged}*
2. *{text unchanged}*
3. An auxiliary drain pan… *{bulk of text unchanged}…* with Item 1 of this section. A water level detection device may be installed only with prior approval of the *building official*.
4. A water level detection device… *{bulk of text unchanged}…* overflow rim of such pan. A water level detection device may be installed only with prior approval of the *building official*.

(Reason: Reflects standard practice in this area.)

*****Section M1411.3.1.1; add text to read as follows:***

M1411.3.1.1 Water-level monitoring devices. On down-flow units …*{bulk of text unchanged}*… installed in the drain line. A water level detection device may be installed only with prior approval of the *building official.*

(Reason: Reflects standard practice in this area.)

***M1503.4 Makeup Air Required Amend and add exception as follows:**

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m3/s) shall be provided with makeup air at a rate approximately equal to the difference between the exhaust air rate and 400 cubic feet per minute. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Exception: Where all appliances in the house are of sealed combustion, power-vent, unvented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute (0.28 m3/s) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m3/s) shall be provided with a makeup air at a rate approximately equal to the difference between the exhaust air rate and 600 cubic feet per minute.

(Reason:
Exception requires makeup air equaling the amount above and beyond 400 cfm for larger fan which will address concerns related to "fresh" air from the outdoors in hot humid climates creating a burden on HVAC equipment and negative efficiency impacts from backdrafting and wasted energy.

***Section M2005.2; change to read as follows:**

M2005.2 Prohibited locations. Fuel-fired water heaters shall not be installed in a room used as a storage closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that *combustion air* will not be taken from the living space. Access to such enclosure may be from the bedroom or bathroom when through a solid door, weather-stripped in accordance with the exterior door air leakage requirements of the *International Energy Conservation Code* and equipped with an *approved* self-closing device. Installation of direct-vent water heaters within an enclosure is not required.

(Reason: Corresponds with the provisions of IFGC Section 303, exception #5.)

c

***Section G2408.3 (305.5); delete.**

Reason: This provision does not reflect standard practice in this area.)

***Section G2415.2.1 (404.2.1); add a second paragraph to read as follows:**

Both ends of each section of medium pressure gas piping shall identify its operating gas pressure with an *approved* tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

"WARNING
1/2 to 5 psi gas pressure
Do Not Remove"

(Reason: To protect homeowners and plumbers.)

***Section G2415.2.2 (404.2.2); add an exception to read as follows:**

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/2" (18 EDH).

(Reason: Pipe less than 1/2" has a history in this region of causing whistling.)

***Section G2415.12 (404.12); change to read as follows:**

G2415.12 (404.12) Minimum burial depth. Underground *piping systems* shall be installed a minimum depth of ~~12 inches (305 mm)~~ 18 inches (457 mm) below grade, except as provided for in Section G2415.12.1.

(Reason: To provide increased protection to piping systems.)

****Section G2415.12.1 (404.12.1); change to read as follows:**

G2415.12.1) Individual outside appliances. Individual lines to outside lights, grills or other appliances shall be installed a minimum of ~~8~~ 12 inches (203 mm) below finished grade…. Rest unchanged.

(Reason: To provide increased protection to piping systems.)

***Section G2417.1 (406.1); change to read as follows:**

G2417.1 (406.1) General. Prior to acceptance and initial operation, all *piping* installations shall be inspected and *pressure tested* to determine that the materials, design, fabrication, and installation practices comply with the requirements of this *code*. The *permit* holder shall make the applicable tests prescribed in Sections 2417.1.1 through 2417.1.5 to determine compliance with the provisions of this *code*. The *permit* holder shall give reasonable advance notice to the *building official* when the *piping system* is ready for testing. The *equipment*, material, power and labor necessary for the inspections and test shall be furnished by the *permit* holder and the *permit* holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

(Reason: To utilize language used in the IPC regarding who is responsible for testing procedures.)

***Section G2417.4; change to read as follows:**

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the *pressure test* period. The source of pressure shall be isolated before the *pressure tests* are made. ~~Mechanical gauges~~ Gauges used to measure… *{remainder unchanged}*

(Reason: To require the use of more accurate diaphragm gauges. Spring gauges do not provide accurate measurement below approximately 17 psig.)

***Section G2417.4.1; change to read as follows:**

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be not less than ~~one-and-one-half times the proposed maximum working pressure, but not less than~~ 3 psig (20 kPa gauge), or at the discretion of the *Building Official*, the *piping* and *valves* may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. ~~irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the *piping* greater than 50 percent of the specified minimum yield strength of the *pipe*.~~ For tests requiring a pressure of 3 psig, ~~mechanical~~ gauges ~~used to measure test pressures~~ shall utilize a dial with a minimum diaphragm diameter of three and one half inches (3 ½"), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, ~~mechanical~~ diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 ½"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. ~~have a range such that the highest end of the scale is not greater than five times the test pressure.~~

For welded *piping*, and for *piping* carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For *piping* carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

(Reason: To provide for lesser pressures to coordinate with the use of more accurate diaphragm gauges.)

***Section G2417.4.2; change to read as follows:**

G2417.4.2 (406.4.2) Test duration. The test duration shall be held for a length of time satisfactory to the *Building Official*, but in no case for ~~be not~~ less than ~~10~~ fifteen (15) minutes. For welded *piping*, and for *piping* carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the *Building Official*, but in no case for less than thirty (30) minutes.

(Reason: To comply with accepted regional practices.)

***Section G2420.1 (406.1); add Section G2420.1.4 to read as follows:**

G2420.1.4 Valves in CSST installations. Shutoff *valves* installed with corrugated stainless steel (CSST) *piping systems* shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the *valves*, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12-inches from the center of the *valve*. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's *piping*, fittings, and *valves* between anchors. All *valves* and supports shall be designed and installed so they will not be disengaged by movement of the supporting *piping*.

(Reason: To provide proper security to CSST valves. These standards were established in this region in 1999 when CSST was an emerging technology.)

***Section G2420.5.1 (409.5.1); add text to read as follows:**

G2420.5.1 (409.5.1) Located within the same room. The shutoff valve …*{bulk of paragraph unchanged}*… in accordance with the appliance manufacturer's instructions. A secondary shutoff valve must be installed within 3 feet (914 mm) of the firebox if appliance shutoff is located in the firebox.

(Reason: Reflects regional practice and provides an additional measure of safety.)

***Section G2421.1 (410.1); add text and Exception to read as follows:**

G2421.1 (410.1) Pressure regulators. A line *pressure regulator* shall be … *{bulk of paragraph unchanged}… approved* for outdoor installation. Access to *regulators* shall comply with the requirements for access to *appliances* as specified in Section M1305.

> **Exception:** A passageway or level service space is not required when the *regulator* is capable of being serviced and removed through the required *attic* opening.

(Reason: To require adequate access to regulators.)

***Section G2422.1.2.3 (411.1.3.3); delete Exception 1 and Exception 4.**

(Reason: To comply with accepted regional practices.)

***Section G2445.2 (621.2); add Exception to read as follows:**

G2445.2 (621.2) Prohibited use. One or more *unvented room heaters* shall not be used as the sole source of comfort heating in a *dwelling unit*.

> **Exception:** Existing *approved unvented room heaters* may continue to be used in *dwelling units*, in accordance with the *code* provisions in effect when installed, when *approved* by the *Building Official* unless an unsafe condition is determined to exist as described in *International Fuel Gas Code* Section 108.7 of the Fuel Gas Code.

(Reason: Gives code official discretion

***Section G2448.1.1 (624.1.1); change to read as follows:**

G2448.1.1 (624.1.1) Installation requirements. The requirements for *water heaters* relative to access, sizing, *relief valves*, drain pans and scald protection shall be in accordance with this *code.*

(Reason: To clarify installation requirements. Also corresponds with amendments regarding water heater access.)

***Section P2801.6; add Exception to read as follows:**

> **Exceptions:**
>
> 1. Electric Water Heater.

(Reason: To coordinate with Section 2408.2 of the IRC, which recognizes this exception.)

***Section P2902.5.3; change to read as follows:**

P2902.5.3 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 provide clarity.)

***Section P3005.2.6; change to read as follows:**

P3005.2.6 ~~Base of stacks~~ Upper Terminal. ~~A cleanout shall be provided at the base of each waste or soil stack.~~ Each horizontal drain shall be provided with a cleanout at its upper terminal.

> **Exception:** Cleanouts may be omitted on a horizontal drain less than five (5) feet (1524 mm) in length unless such line is serving sinks or urinals.

(Reason: To eliminate the requirement for excessive cleanouts.)

***Section P3111; delete.**

(Reason: A combination waste and vent system is not approved for use in residential construction.)

***Section P3112.2; delete and replace with the following:**

P3112.2 Installation. Traps for island sinks and similar equipment shall be roughed in above the floor and may be vented by extending the vent as high as possible, but not less than the drainboard height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wye-branch fitting and shall, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest partition and then through the roof to the open air or may be connected to other vents at a point not less than six (6) inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings shall be used on all parts of the vent below the floor level and a minimum slope of one-quarter (1/4) inch per foot (20.9 mm/m) back to the drain shall be maintained. The return bend used under the drainboard shall be a one (1) piece fitting or an assembly of a forty-five (45) degree (0.79 radius), a ninety (90) degree (1.6 radius) and a forty-five (45) degree (0.79 radius) elbow in the order named. Pipe sizing shall be as elsewhere required in this Code. The island sink drain, upstream of the return vent, shall serve no other fixtures. An accessible cleanout shall be installed in the vertical portion of the foot vent.

(Reason: To clarify the installation of island venting and to provide a regional guideline on a standard installation method for this region.)

END

ATTACHMENT C

Recommended Amendments to the 2012 International Mechanical Code

North Central Texas Council of Governments region

The following sections, paragraphs, and sentences of the *2012 International Mechanical Code* are hereby amended as follows: Standard type is text from the IMC. Underlined type is text inserted. ~~Lined through type is deleted text from the IMC.~~ 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.**

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

102.8 Referenced codes and standards. The codes and standards referenced herein shall be those that are listed in Chapter 15 and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. 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.)

*****Section 304.6; delete.***

(Reason: This provision does not reflect standard practice in this area. Consistent with regional amendment to IFGC 305.5.)

~~******Section 306.3; change to read as follows:***~~

306.3 Appliances in attics. Attics containing appliances requiring *access* shall be provided *. . . {bulk of paragraph unchanged} . . .* side of the appliance. The clear *access* opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the largest appliance. A walkway to an appliance shall be rated as a floor as approved by the building official. As a minimum, for *access* to the attic space, provide one of the following:

5. A permanent stair.
6. A pull down stair with a minimum 300 lb (136 kg) capacity.
7. An *access* door from an upper floor level.
8. *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 section unchanged}*

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IFGC 306.3.)

******Section 306.5; change to read as follows:***

306.5 Equipment and appliances on roofs or elevated structures. . Where *equipment* requiring *access* or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access, ~~an~~ a permanent interior or exterior means of access shall be provided. Permanent exterior ladders providing roof *access* need not extend closer than ~~8~~ 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the *equipment* and appliances' level service space. Such *access* shall . . . *{bulk of section to read the same}*. . . on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). ... *{bulk of section to read the same}*.

(Reason: To assure safe access to roof appliances and provide a greater level of security for equipment locate more than 16 feet above grade. Consistent with IFGC amendments.)

***Section 306.5.1; change to read as follows:**

306.5.1 Sloped roofs. Where appliances, *equipment*, fans or other components that require service are installed ~~on a roof having a slope of 3 units vertical in 12 units horizontal (25-percent slope) or greater~~ on roofs having slopes greater than 4 units vertical in 12 units horizontal and having an edge more than 30 inches (762 mm) above grade at such edge, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof *access* to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which *access* is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.

(Reason: To assure safe access to roof appliances. Consistent with IFGC amendments.)

***Section 306; add Section 306.6 to read as follows:**

306.6 Water heaters above ground or floor. When the 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.
>
> **306.6.1** 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 306.3.1.

(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 IPC 502.5.)

***Section 307.2.2; change to read as follows:**

307.2.2 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. {*Remaining language unchanged}*

(Reason: To provide greater flexibility of materials when exposed to ultra violet light.)

***Section 307.2.3; amend item 2 to read as follows:**

2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.

(Reason: Greater specificity in prohibited locations for condensate discharge. Consistent with regional amendment to IPC 314.2.1.)

Section 403.2.1; add an item 5 to read as follows:

5. Toilet rooms within private dwellings that contain only a water closet, lavatory or combination thereof may be ventilated with an *approved* mechanical recirculating fan or similar device designed to remove odors from the air.

(Reason: Consistent with common regional practice. Consistent with regional amendment to IRC R303.3.)

Section 501.2; add an exception to read as follows:

501.2 Exhaust discharge. The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a nuisance and not less than the distances specified in Section 501.2.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic or crawl space.

Exceptions:

1. Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of dwelling units having private attics.

2. Commercial cooking recirculating systems.

3. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

(Reason: Provide a reasonable alternative in areas where a large volume of outside air is present.)

Section 607.5.1; change to read as follows:

607.5.1 Fire Walls. Ducts and air transfer openings permitted in fire walls in accordance with Section 705.11 of the International Building Code shall be protected with listed fire dampers installed in accordance with their listing**.** For hazardous exhaust systems see Section 510.1-510.9 IMC.

(Reason: Correspond with unamended IBC 710.7.)

END

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 ~~l~~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.~~ 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

ATTACHMENT E
Recommended Amendments to the
2012 International Fuel Gas Code
North Central Texas Council of Governments region

The following sections, paragraphs, and sentences of the *2012 International Fuel Gas Code* are hereby amended as follows: Standard type is text from the IFGC. Underlined type is text inserted. ~~Lined through type is deleted text from IFGC.~~ 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 code.

***Section 101.2**
{Local amendments to Section 101.2 may be necessary to correspond with the State Plumbing Licensing Law.}

***Section 102.2; add an exception to read as follows:**

Exception: Existing dwelling units shall comply with Section 621.2.

(Reason: Previous code provisions made unvented heater provisions retroactive except as provided for in local amendment. This amendment and amendment to IFGC 621.2 better clarify what the code already states: existing systems may stay unless considered unsafe.)

***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 8 and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. 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.)

***Section 304.10; change to read as follows:**

304.10 Louvers and grilles. The required size of openings for combustion, ventilation and dilution air shall be based on the net free area of each opening. Where the free area through a design of louver, grille or screen is known, it shall be used in calculating the size opening required to provide the free area specified. Where the design and free area of louvers and grilles are not known, it shall be assumed that wood louvers will have 25-percent free area and metal louvers and grilles will have ~~75~~ 50-percent free area. Screens shall have a mesh size not smaller than ¼ inch (6.4 mm). Nonmotorized louvers and grilles shall be fixed in the open position. Motorized louvers shall be interlocked with the appliance so that they are proven to be in the full open position prior to main burner ignition and during main burner operation. Means shall be provided to prevent the main burner from igniting if the louvers fail to open during burner start-up and to shut down the main burner if the louvers close during operation.

(Reason: This is the generally accepted practice in the region.)

***Section 304.11; change #8 to read as follows:**

304.11 Combustion air ducts. Combustion air ducts shall comply with all of the following:

1. Ducts shall be constructed of galvanized steel complying with Chapter 6 of the International Mechanical Code or of a material having equivalent corrosion resistance, strength and rigidity.

   Exception: Within dwellings units, unobstructed stud and joist spaces shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.

2. Ducts shall terminate in an unobstructed space allowing free movement of combustion air to the appliances.

3. Ducts shall serve a single enclosure.

4. Ducts shall not serve both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air.

5. Ducts shall not be screened where terminating in an attic space.

6. Horizontal upper combustion air ducts shall not slope downward toward the source of combustion air.

7. The remaining space surrounding a chimney liner, gas vent, special gas vent or plastic piping installed within a masonry, metal or factory-built chimney shall not be used to supply combustion air.

   Exception: Direct-vent gas-fired appliances designed for installation in a solid fuel-burning fireplace where installed in accordance with the manufacturer's instructions.

8. Combustion air intake openings located on the exterior of a building shall have the lowest side of such openings located not less than 12 inches (305 mm) vertically from the adjoining ground level or the manufacturer's recommendation, whichever is more restrictive***.***

(Reason: To recognize the manufacturer's installation requirements.)

*****Section 305.5; delete the section.***

(Reason: This provision does not reflect standard practice in this area. Consistent with regional amendment to IMC 304.6.)

******Section 306.3; change to read as follows:***

[M] 306.3 Appliances in attics. Attics containing appliances requiring *access* shall be provided *. . . {bulk of paragraph unchanged} . . .* side of the *appliance*. The clear *access* opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), ~~and~~ or larger where such dimensions are not large enough to allow removal of the largest *appliance.* A walkway to an appliance shall be rated as a floor as approved by the building official. As a minimum, for *access* to the attic space, provide one of the following:

9. A permanent stair.

10. A pull down stair with a minimum 300 lb (136 kg) capacity.

11. An *access* door from an upper floor level.

12. *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 through the required opening.

2. Where the passageway is not less than …*{bulk of section to read the same}*.

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IMC 306.3.)

******Section 306.5; change to read as follows:***

[M] 306.5 Equipment and appliances on roofs or elevated structures. Where *equipment* requiring *access* or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access, ~~an~~ a permanent interior or exterior means of access shall be provided. Permanent exterior ladders providing roof *access* need not extend closer than ~~8~~ 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the *equipment* and appliances' level service space. Such *access* shall *. . . {bulk of section to read the same}. . .* on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). ... *{bulk of section to read the same}*.

(Reason: To assure safe access to roof appliances. Consistent with IMC amendments.)

*****Section 306.5.1; change to read as follows:***

[M] 306.5.1 Sloped roofs. Where appliances, *equipment*, fans or other components that require service are installed ~~on a roof having a slope of 3 units vertical in 12 units horizontal (25-percent slope) or greater~~ on roofs having slopes greater than 4 units vertical in 12 units horizontal and having an edge more than 30 inches (762 mm) above grade at such edge, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof *access* to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which *access* is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.

(Reason: To assure safe access to roof appliances. Consistent with IMC amendments.)

*****Section 306; add Section 306.7with exception and subsection 306.7.1 to read as follows:***

306.7 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 when approved by the *code official*) 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.

306.7.1. 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 306.3.1.

(Reason: To provide more stringent safe access to water heaters. Consistent with regional amendments to IPC 502.5 and IMC 306.6.)

*****Section 401.5; add a second paragraph to read as follows:***

Both ends of each section of medium pressure corrugated stainless steel tubing (CSST) shall identify its operating gas pressure with an *approved* tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

"WARNING
1/2 to 5 psi gas pressure
Do Not Remove"

(Reason: To protect homeowners and plumbers.)

*****Section 402.3; add an exception to read as follows:***

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/2" (18 EHD).

(Reason: Pipe less than 1/2" has a history in this region of causing whistling.)

******Section 404.12; change to read as follows:***

404.12 Minimum burial depth. Underground piping systems shall be installed a minimum depth of ~~12~~ 18 inches (~~305~~ 458 mm) top of pipe below grade~~, except as provided for in Section 404.10.1~~.

(Reason: To provide increased protection to piping systems and address reference number change.)

******Section 404.12.1; change to read as follows:***

***404.12.1 Individual outside appliances**. Individual lines to outside lights, grills or other appliances shall be installed a minimum of ~~8~~ 12 inches (203 mm)* top of pipe *below finished grade, provided that such installation is approved and is installed in locations not susceptible to physical damage.*

(Reason: To provide increased protection to piping systems and address reference number change.)

*****Section 406.1; change to read as follows:***

406.1 General. Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections 406.1.1 through 406.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the code official when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

(Reason: To utilize language used in the IPC regarding who is responsible for testing procedures.)

*****Section 406.4; change to read as follows:***

406.4 Test pressure measurement. Test pressure shall be measured with a monometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. ~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~

(Reason: To require the use of more accurate diaphragm gauges. Spring gauges do not provide accurate measurement below approximately 17 psig.)

***Section 406.4.1; change to read as follows:**

406.4.1 Test pressure. The test pressure to be used shall be no less than ~~1 1/2 times the proposed maximum working pressure, but no less than 3~~ 3 psig (20 kPa gauge), or at the discretion of the Code Official, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. ~~irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.~~ For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one half inches (3 ½"), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 ½"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

(Reason: To provide for lesser pressures to coordinate with the use of more accurate diaphragm gauges.)

***Section 406.4.2; change to read as follows:**

406.4.2 Test duration. Test duration shall be held for a length of time satisfactory to the Code Official, but in no case for less than fifteen (15) minutes. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the Code Official, but in no case for less than thirty (30) minutes. *(Delete remainder of section.)*

(Reason: To comply with accepted regional practices.)

***Section 409.1; add Section 409.1.4 to read as follows:**

409.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an *approved* termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12-inches from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings, and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping.

(Reason: To provide proper security to CSST valves. These standards were established in this region in 1999 when CSST was an emerging technology.)

***Section 410.1; add a second paragraph and exception to read as follows:**

Access to regulators shall comply with the requirements for *access* to appliances as specified in Section 306.

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.

(Reason: To require adequate access to regulators.)

***Section 621.2; add exception as follows:**

621.2 Prohibited use. One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.

Exception: Existing *approved* unvented heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when *approved* by the Code Official unless an unsafe condition is determined to exist as described in Section 108.7.

(Reason: Gives code official discretion.)

*****Section 624.1.1; change to read as follows:***

624.1.1 Installation requirements. The requirements for water heaters relative to *access*, sizing, relief valves, drain pans and scald protection shall be in accordance with the *International Plumbing Code.*

(Reason: To clarify installation requirements. Also corresponds with amendments regarding water heater access.)

END

ATTACHMENT F

Recommended Amendments to the 2012 International Energy Conservation Code

North Central Texas Council of Governments Region
(Climate Zone 3 of the IECC)

The following sections, paragraphs, and sentences of the *2012 International Energy Conservation Code* (IECC) are hereby amended as follows: Standard type is text from the IECC. Underlined type is text inserted. ~~Lined through type is deleted text from IECC.~~ 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 2009 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.**

The 2012 IECC contains separate provisions for commercial buildings (preceded by "C" for Commercial) and for residential buildings (preceded by "R" for residential buildings) 3 stories or less. Each set of provisions are separately applied to buildings within their respective scope. Each set of provisions also contains a Scope and Administration chapter, a Definitions chapter, a General Requirements chapter and a chapter containing energy efficiency requirements applicable to building within their respective scope.

Recommended amendments that match sections in each of the respective provisions ("C" and "R") are written to represent both sections rather than duplicating the recommended amendment in this document.

Sections N1101.2 through N1105 of the 2012 *International Residential Code (*IRC) are noted to be extracted from the 2012 IECC. The Building and Residential Advisory Board (BRAB) recommends amending Chapter 11 [RE] ENERGY EFFICIENCY of the 2012 IRC to refer to the residential provisions of the 2012 IECC.

As of the date of the recommendations the State Energy Conservation Office (SECO) has not adopted the 2012 IECC. Consequently the recommended amendments to the 2012 IECC have been analyzed for stringency with the current Texas Building Energy Performance Standards (TBEPS) which is the 2009 Edition of the IECC and the energy provisions of the IRC. Some amendments below are noted that if/when SECO does by rule adopt the 2012 IECC as the TBEPS, the proposed amendment would be deemed less stringent and therefore would not be considered a recommended amendment.

*****Section C101.4.2 and R101.4.2; change to read as follows:***

C101.4.2/R101.4.2 Historic Buildings. Any building or structure that is listed in the State or National Register of Historic Places; designated as a historic property under local or state designation law or survey; certified as a contributing resource with a National Register listed or locally designated historic district; or with an opinion or certification that the property is eligible to be listed on the National or State Registers of
Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer of the Keeper of the National Register of Historic Places, ~~are exempt from~~ shall comply with all of the provisions of this code.

> **Exception:** Whenever a provision or provisions shall invalidate or jeopardize the historical designation or listing, that provision or provisions may be exempted.

(Reason: This is less restrictive than the legislative mandates. It is reasonable to expect compliance with duct sealing, replacement lighting and the installation of insulation, for example, when possible.)

*****Section C102/R102; add Section C102.1.2 and R102.1.2 to read as follows:***

C102.1.2/R102.1.2 Alternative compliance. A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance.

(Reason: this amendment is added to allow alternative compliance in accordance with Texas HB 1365, 78th Legislature.)

****Section C202 and R202; *add the following definition:***

GLAZING AREA. Total area of the glazed fenestration measured using the rough opening and including sash, curbing or other framing elements that enclose conditioned space. Glazing area includes the area of glazed fenestration assemblies in walls bounding conditioned basements. For doors where the daylight opening area is less that 50 percent of the door area, the glazing area is the daylight opening area. For all other doors, the glazing area is the rough opening area for the door including the door and the frame.

(Reason: Since the window to floor area ratios have been added to the prescriptive tables, it is necessary to define glazing area.)

******Section R402.2.2; amend the section to read as follows:***

R402.2.2 Ceilings without attic spaces. Where Section R402.1.1 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section R402.1.1 shall be limited to 500 square feet (46 m^2) ~~or 20 percent of the total insulated ceiling area, whichever is less~~. This reduction shall not apply to the U -factor alternative approach in Section R402.1.3 and the total UA alternative in Section R402.1.4.

(Reason: Retains the current 2009 language to eliminate confusion and limit the area to 500 square feet maximum)

****** Table R402.1.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT; Amend by changing the WOOD FRAME WALL R-VALUE for CLIMATE ZONE 3 to read as follows:***

13

(Reason: Retain the values in the 2009 code.)

If/when SECO does by rule adopt the 2012 IECC, this proposed amendment would be deemed less stringent and therefore would not be considered a recommended amendment.

****** Table R402.1.3 EQUIVALENT U-FACTORS; Amend by changing the WOOD FRAME WALL U-FACTOR for CLIMATE ZONE 3 to read as follows:***

0.082

(Reason: Retain the values in the 2009 code.)

If/when SECO does by rule adopt the 2012 IECC, this proposed amendment would be deemed less stringent and therefore would not be considered a recommended amendment.

******R402.4.1.2 Testing; Add a last paragraph to read as follows:***

Testing may only be performed by individuals that are certified HERS Raters or Rating Field Inspectors by RESNET or Performance Verification Technicians certified by Texas HERO, or other certifications as may be approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

(Reason: The 2012 International Residential Code (IRC) and International Energy Conservation Code (IECC) include enhanced emphasis on envelope infiltration and duct leakage. Significant changes in the residential energy requirements include more frequent requirement of performance testing for leakage. Residential Duct systems must be tested unless all ducts and equipment are located within the conditioned space. Envelope testing is required to demonstrate compliance with maximum allowable leakage rate unless a detailed air barrier and insulation inspection has been performed to field verify component criteria. This language puts the regulatory authority on notice that the testing requires specialized credentials and establishes a conflict of interest baseline).

******Section R402.4.1.2 Testing; modify the first paragraph to read as follows:***

R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour in ~~Climate Zones 1 and 2, and 3 air changes per hour in~~ Climate Zone~~s~~ 3 ~~through 8~~. *{Remainder of text unchanged}*

(Reason: The 2012 IECC will require mandatory door blower testing on each dwelling unit. The visual inspection is no longer an option to performance testing. This change will give some time for those builders not currently using a performance approach to adapt construction practices.)

If/when SECO does by rule adopt the 2012 IECC, this proposed amendment would be deemed less stringent and therefore would not be considered a recommended amendment.

******R403.2.2 Sealing (Mandatory); Add a last paragraph to read as follows:***

Testing may only be performed by individuals that are certified HERS Raters or Rating Field Inspectors by RESNET or Performance Verification Technicians certified by Texas HERO, or other certifications as may be approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that installed the duct system.

(Reason: The 2012 International Residential Code (IRC) and International Energy Conservation Code (IECC) include enhanced emphasis on envelope infiltration and duct leakage. Significant changes in the residential energy requirements include more frequent requirement of performance testing for leakage. Residential Duct systems must be tested unless all ducts and equipment are located within the conditioned space. Envelope testing is required to demonstrate compliance with maximum allowable leakage rate unless a detailed air barrier and insulation inspection has been performed to field verify component criteria. This language puts the regulatory authority on notice that the testing requires specialized credentials and establishes a conflict of interest baseline).

****** Section R403.2.2; Amend to read as follows:***

R403.2.3 Building cavities (Mandatory). Building framing cavities shall not be used as <u>supply</u> ducts ~~and plenums~~. <u>Building framing wall cavities in the exterior thermal envelope shall not be used as return ducts</u>

(Reason: Continue the practice in the regions and to insure that the building thermal envelope is not compromised.)

*****Section C402.2.9/R402.2; Add Section C402.2.9 and R402.2.13 to read as follows:***

<u>Section C402.2.9/R402.2 Insulation installed in walls.</u> <u>To insure that insulation remains in place, insulation batts installed in walls shall be totally secured by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.</u>

(Reason: This will increase the performance of the insulation by ensuring that the batt insulation stays in place.)

******Section R405.6.2; add the following sentence to the end of paragraph:***

Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.

(Reason: These performance software tools are accredited by RESNET at the time of recommendation.)

******Section C101.4.3 Additions, alterations, renovations or repairs; add exception #9 to read as follows:***

9. Replacement of existing fenestration, provided, however, that the area of the replacement fenestration does not exceed 25% of the total fenestration area of an existing building and that the U-factor and SHGC will be equal to or lower than before the fenestration replacement.

(Reason: Provide some level of consideration for existing buildings, matches ASHRAE 90.1-2010 Exception "g" to Section 5.1.3.)

If/when SECO does by rule adopt the 2012 IECC, this proposed amendment would be deemed less stringent and therefore would not be considered a recommended amendment.

END

ATTACHMENT G

Recommended Amendments to the 2011 National Electrical Code

North Central Texas Council of Governments Region

The following articles, paragraphs, and sentences of the *2011 National Electrical Code (NEC)* are hereby amended as follows: Standard type is text from the NEC. Underlined type is text inserted. ~~Lined through type is deleted text from NEC.~~ A double asterisk (**) at the beginning of an article identifies an amendment carried over from the 2008 edition of the code and a triple asterisk (***) identifies a new or revised amendment with the 2011 code.

******Article 100, Part I; amend the following definition:***

Intersystem Bonding Termination. A device that provides a means for connecting bonding conductors for communication systems and other systems such as metallic gas piping systems to the grounding electrode system.

(REASON FOR CHANGE: To allow for a termination point for other bonding conductors in addition to communication systems that are required by the various model codes.)

******Article 110.2; change the following to read as follows:***

110.2 Approval. The conductors and equipment required or permitted by this *Code* shall be acceptable only if approved. Approval of equipment may be evident by listing and labeling of equipment by a Nationally Recognized Testing Lab (NRTL) with a certification mark of that laboratory or a qualified third party inspection agency approved by the AHJ.

Exception: Unlisted equipment that is relocated to another location within a jurisdiction or is field modified is subject to the approval by the AHJ. This approval may be by a field evaluation by a NRTL or qualified third party inspection agency approved by the AHJ.

Manufacturer's self-certification of any equipment shall not be used as a basis for approval by the AHJ.

Informational Note: See 90.7, Examination of Equipment for Safety, and 110.3, Examination, Identification, Installation, and Use of Equipment. See definitions of *Approved*, *Identified*, *Labeled*, and *Listed*.

(REASON FOR CHANGE: To add clarity and provide more positive options for enforcement and approval of unlisted equipment.)

***Article 230.71(A); add the following exception:**

Exception: Multi-occupant buildings. Individual service disconnecting means is limited to six for each occupant. The number of individual disconnects at one location may exceed six.

(REASON FOR CHANGE: This is currently the accepted installation practice of the region. No noteworthy complaints have surfaced. It is more reasonable than the current NEC requirements. It allows more than six disconnects grouped at one location. This also allows designers more flexibility in the placement of electrical meters and main service disconnects.)

****Article 240.91; delete the Article.**

(REASON FOR CHANGE: Present day equipment is not listed and has not been evaluated for the use. Removing this article may prevent both installers and AHJ's from misapplying the Code.)

***Article 300.11; add the following exception:**

Exception: Ceiling grid support wires may be used for structural supports when the associated wiring is located in that area, not more than two raceways or cables supported per wire, with a maximum nominal metric designation 16 (trade size 1/2").

(REASON FOR CHANGE: To provide limited support of raceways and cables by ceiling grid support wire.)

***Article 310.15(B)(7); change to read as follows:**

(7) 120/240-Volt, 3-Wire, Single-Phase Dwelling Services and Feeders. For dwelling units, conductors, as listed in Table 310.15(B)(7), shall be…*{text unchanged}*…provided the requirements of 215.2, 220.61, and 230.42 are met. This Article shall not be used in conjunction with 220.82.

(REASON FOR CHANGE: To provide a more reasonable margin of safety for dwelling service and feeder conductor allowable ampacities.)

Article 500.8(A)(3); change to read as follows:

500.8 Equipment. Articles 500 through 504 require equipment construction and installation standards that ensure safe performance under conditions of proper use and maintenance.

> Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to installation and maintenance.
>
> Informational Note No. 2: Since there is no consistent relationship between explosion properties and ignition temperature, the two are independent requirements.
>
> Informational Note No. 3: Low ambient conditions require special consideration. Explosion proof or dust-ignition proof equipment may not be suitable for use at temperatures lower than -25°C (-13°F) unless they are identified for low-temperature service. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified as Class I, Division 1 at normal ambient temperature.

(A) Suitability. Suitability of identified equipment shall be determined by one of the following:

(1) Equipment listing or labeling

(2) Evidence of equipment evaluation from a qualified testing laboratory or inspection agency concerned with product evaluation

(3) Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or an ~~owner's~~ engineering judgment signed and sealed by a qualified Licensed Professional Engineer.

> Informational Note: Additional documentation for equipment may include certificates demonstrating compliance with applicable equipment standards, indicating special conditions of use, and other pertinent information. Guidelines for certificates may be found in ANSI/ISA 12.00.02, *Certificate Standard for AEx Equipment for Hazardous (Classified) Locations*.

(REASON FOR CHANGE: To better define the qualifications for an engineering judgment.)

Article 505.7(A) changed to read as follows:

505.7 Special Precaution. Article 505 requires equipment construction and installation that ensures safe performance under conditions of proper use and maintenance.

> Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to the installation and maintenance of electrical equipment in hazardous (classified) locations.
>
> Informational Note No. 2: Low ambient conditions require special consideration. Electrical equipment depending on the protection techniques described by 505.8(A) may not be suitable for use at temperatures lower than -20°C (-4°F) unless they are identified for use at lower temperatures. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified Class I, Zones 0, 1, or 2 at normal ambient temperature.

(A) Implementation of Zone Classification System. Classification of areas, engineering and design, selection of equipment and wiring methods, installation, and inspection shall be performed by a qualified ~~persons~~ Licensed Professional Engineer.

(REASON FOR CHANGE: To better identify who is qualified to implement Zone Classification Systems.)

Article 680.25(A) changed to read as follows:

680.25 Feeders. These provisions shall apply to any feeder on the supply side of panelboards supplying branch circuits for pool equipment covered in Part II of this article and on the load side of the service equipment or the source of a separately derived system.

(A) Wiring Methods.

(1) Feeders. Feeders shall be installed in rigid metal conduit or intermediate metal conduit. The following wiring methods shall be permitted if not subject to physical damage:
(1) Liquidtight flexible nonmetallic conduit
(2) Rigid polyvinyl chloride conduit
(3) Reinforced thermosetting resin conduit
(4) Electrical metallic tubing where installed on or within a building
(5) Electrical nonmetallic tubing where installed within a building
(6) Type MC cable where installed within a building and if not subject to corrosive environment
(7) Nonmetallic-sheathed cable
(8) Type SE cable

Exception: An existing feeder between an existing remote panelboard and service equipment shall be permitted to run in flexible metal conduit or an approved cable assembly that includes an equipment grounding conductor within its outer sheath. The equipment grounding conductor shall comply with 250.24(A)(5).

(REASON FOR CHANGE: To allow for more flexibility of wiring methods associated with this type of installation.)

END