

ORDINANCE NO. 3181

AN ORDINANCE OF THE CITY OF CARROLLTON; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL BUILDING CODE; PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS THERETO; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL FIRE CODE; PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS THERETO; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL PLUMBING CODE; PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS THERETO; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL MECHANICAL CODE, PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS THERETO; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL FUEL GAS CODE; PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS THERETO; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE; PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS THERETO; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE; PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS THERETO; PROVIDING FOR REGISTRATION AND LICENSE REQUIREMENTS FOR BUILDING, PLUMBING AND MECHANICAL CONTRACTORS, AMENDING THE AUTHORITY OF THE CONSTRUCTION ADVISORY AND APPEALS BOARD; REPEALING SECTION 3.040 (C)(3); PROVIDING FOR A PENALTY OF \$2000 PER DAY, PROVIDING THAT THIS ORDINANCE IS CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; AND ESTABLISHING THE EFFECTIVE DATE OF JANUARY 1, 2008.

WHEREAS, the City Council, after determining all legal requirements of notice and hearing have been met, has further determined the following amendments to the construction codes would provide for and would be in the best interest to safeguard life, health, property and public welfare.

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

SECTION 1.

That Section 150.020 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.020. THE 2006 EDITION OF THE INTERNATIONAL BUILDING CODE ADOPTED.

- (a) The International Building Code, 2006 Edition, as published by the International Code Council, is hereby adopted, and designated as the building code of the City of Carrollton, and is made a part hereof, as amended.
- (b) One (1) copy of the 2006 edition of the International Building Code, marked Exhibit "A", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.
- (c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between

said International Building Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former.

SECTION 2.

That Section 150.021 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.021. AMENDMENTS.

IBC CHAPTER 1.

*****Section 101.2, exception No. 2; change to read as follows:**

2. Existing buildings undergoing repair, alterations or additions, and change of occupancy shall be permitted to comply with the *International Existing Building Code* with prior approval of the Building Official. Otherwise see chapter 34.

*****Section 101.4; change to read as follows:**

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.7 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 ICC *Electrical Code* shall mean the Electrical Code as adopted.

*****Section 105.2, item #2; change to read as follows:**

2. Fences less than 20 feet in length.

*****Section 105.2, item #6; change to read as follows:**

6. Structures, sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade and not over any basement or story below.

*****Section 105.2, item #14; change to read as follows:**

14. Satellite dishes with a maximum diameter of 2 ½ feet or less.

*****Section 105.2, item #15; add as follows:**

15. Foundation repairs with a valuation less than \$3000.00.

*****Section 105.3.1; change to read as follows:**

105.3.1 Action on application. The building official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the building official shall reject such application. If the building official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the building official shall issue a permit therefore as soon as practicable.

****Section 108.4; change to read as follows:*

108.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to an investigation fee established by the building official that shall be in addition to the required permit fees. Such investigation fee shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by the city fee schedule. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

****Section 109.3.5; delete.*

****Section 114.2; change to read as follows:*

114.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease.

IBC CHAPTER 2.

****Section 202; add a new definition to read as follows:*

HIGH-RISE BUILDING. A building having any floor used for human occupancy located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

IBC CHAPTER 3.

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

Fire stations
Police stations with detention facilities for 5 or less

IBC CHAPTER 4.

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

403.1 Applicability. The provisions of this section shall apply to buildings having any occupied floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

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

3. Open air portions of buildings with an occupancy in Group A-5 in accordance with Section 303.1

*****Section 403.2, exception #2; delete.**

*****Section 404.1.1; change definition of “Atrium” as follows:**

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

*****Section 406.1.4; add item #4 to read as follows:**

4. 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).

*****Section 406.2.7; change to read as follows:**

406.2.7 Mixed Separation. Parking garages shall be separated from other occupancies in accordance with Section 508.

*****Section 406.6.1; add a second paragraph to read as follows:**

This occupancy shall include garages involved in servicing of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement and other such non-major repair. When the repair garage is only involved in such minor repair, it need not comply with Section 406.6.2.

IBC CHAPTER 5.

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

In order to be considered as accessible, if not in direct contact with a street or fire lane, a minimum 10-foot wide pathway from the street or approved fire lane must be provided. (See *International Fire Code* Section 503.1.1 for hose lay measurement pathway requirements.)

*****Section 508.2.1; change to read as follows:**

508.2.1 Occupancy Classification. An incidental use area shall be classified in accordance with the occupancy of that portion of the building in which it is located.

Exception: Incidental use areas within and serving a dwelling unit are not required to comply with this section.

*****Section 508.3.1 Exception #2: To read as follows:**

Assembly areas that are accessory to Group E Occupancies are considered separate occupancies except when applying the assembly occupancy requirements of Chapters 10 and 11.

IBC CHAPTER 6.

*****Table 602; amend footnote b by the addition of the following sentence:**

- b. Group R-3 and Group U when used as accessory to Group R-3, as applicable in 101.2 shall not be required to have a fire-resistance rating where fire separation distance is 3 feet or more. Group R-2 and Group U carport, as applicable in 406.1.4, exception 4 shall be required to have a fire-resistance rating where fire separation distance is 10 feet or less.

IBC CHAPTER 7.

*****Section 705.11; change the exception to read as follows:**

Exception: For other than hazardous exhaust ducts, penetrations by ducts and air transfer openings of . . . {remainder of exception unchanged}.

*****Section 706.3.8; add to the end of the exception as follows:**

706.3.8 Separation of mixed occupancies. The fire barrier or horizontal assembly, or both, separating a mixed occupancy into different fire areas the most restrictive value indicated in Table 706.3.9 shall apply to the entire building or portion thereof.

*****Section 707.2; change exception number 7 as follows:**

7. In other than Groups I-2 and I-3, a shaft enclosure is not required for a floor opening or an air transfer opening that complies with the following:
 - 7.1. Does not connect more than two stories.
 - 7.2. Is not part of the required means of egress system, except as permitted in Section 1020.1.
 - 7.3. Is not concealed within the building construction.
 - 7.4 Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.
 - 7.5 Is limited to the same smoke compartment.

*****Section 716.5.2; add exception #4 to read as follows:**

4. In the duct penetration of the separation between the private garage and its residence when constructed in accordance with Section 406.1.4, exception #2.

IBC CHAPTER 9.

Section 901.6.1.1 Standpipe Testing; add section to read as follows:

901.6.1.1 Standpipe Testing. Building owners/managers must utilize a licensed fire protection contractor to test and certify standpipe systems. In addition to the testing and maintenance requirements of NFPA 25 applying to standpipe systems, the following additional requirements shall be applied to the testing that is required every 5 years:

1. The piping between the Fire Department Connection (FDC) and the standpipe shall be hydrostatically tested for all FDC's on any type of standpipe system. Hydrostatic testing shall also be conducted in accordance with NFPA 25 requirements for the different types of standpipe systems.
2. For any manual (dry or wet) standpipe system not having an automatic water supply capable of flowing water through the standpipe, the contractor shall connect hose from a fire hydrant or portable pumping system (as approved by the fire code official) to each FDC, and flow water through the standpipe system to the roof outlet to verify that each inlet connection functions properly. There is no required pressure criteria at the outlet. Verify that check valves function properly and that there are no closed control valves on the system.
3. Any pressure relief, reducing, or control valves shall be tested in accordance with the requirements of NFPA 25.
4. If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDC's. Contact the Fire Marshal for additional information.
5. Upon successful completion of standpipe test, the contractor shall place a blue tag (as per "Texas Administrative Code, Title 28. Insurance, Part I. Texas Department of Insurance, Chapter 34. State Fire Marshal, Subchapter G. Fire Sprinkler Rules, 28 TAC § 34.720. Inspection, Test and Maintenance Service (ITM) Tag") at the bottom of each standpipe riser in the building. An example of this tag is located at the end of this SOP. The tag shall be check-marked as "Fifth Year" for Type of ITM, and the note on the back of the tag shall read "5 Year Standpipe Test" at a minimum.
6. The contractor shall follow the procedures as required by "Texas Administrative Code, Title 28. Insurance, Part I. Texas Department of Insurance, Chapter 34. State Fire Marshal, Subchapter G. Fire Sprinkler Rules, 28 TAC" with regard to Yellow Tags and Red Tags or any deficiencies noted during the testing, including the required notification of the local Authority Having Jurisdiction (Fire Marshal).
7. Additionally, records of the testing shall be maintained by the owner and contractor, as required by the State Rules mentioned above and NFPA 25.

8. Standpipe system tests where water will be flowed external to the building shall not be conducted during freezing conditions or during the day prior to expected night time freezing conditions.
9. Contact the Fire Marshal for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this fire fighting equipment. All standpipe hose valves must remain in place and be provided with an approved cap and chain when approval is given to remove hose by the fire code official.

*****Section 901.7; change to read as follows:**

901.7 Systems out of service. Where a required fire protection system is out of service or in the event of an excessive number of activations, the fire department and the code official shall be notified immediately and, where required by the code official, the building shall either be evacuated or an approved fire watch shall be provided for all occupants left unprotected by the shut down until the fire protection system has been returned to service.

*****Section 902.1; under "Standpipe, Types of" definition; amend "Manual dry" by adding a sentence to read as follows:**

The system must be supervised as specified in Section 905.9.

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

*****Add Section 903.2.8.3 to read as follows:**

903.2.8.3 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.

***** Amend the title of Section 903.2.10 to read "All occupancies except R-3 and U".**

*****Section 903.2.10; delete exception.**

*****Section 903.2.10; amend 903.2.10.3 and add 903.2.10.4, 903.2.10.5, and 903.2.10.6 as follows:**

903.2.10.3 Buildings more than 35 feet 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*, that is located 35 feet (10 668mm) or more above the lowest level of fire department vehicle access.

Exception:

Open parking structures in compliance with Section 406.3 of the *International Building Code*.

903.2.10.4 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4572 mm), see Chapter 23 to determine if those provisions apply.

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

903.2.10.6 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.

Exceptions:

1. Open parking garages in compliance with Section 406.3 of the International Building Code.
2. Group A-5 occupancies.

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

903.3.1.1.1 Exempt locations. When approved by the code official, automatic sprinklers shall not be required in the following rooms or areas where such . . . *{bulk of section 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.

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

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.

*****Section 903.4; add a second paragraph after the exceptions to read as follows:**

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.

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

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.

*****Add Section 903.6.2 to read as follows:**

903.6.2 Spray booths and rooms. New and existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system in accordance with IFC Section 1504.

*****Section 905.2; change to read as follows:**

905.2 Installation standards. 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.

*****Add Section 905.3.8; 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.

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

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 hose connection located either . . . *{remainder of paragraph unchanged}* . . .

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

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.

*****Add Section 907.1.3 to read as follows:**

907.1.3 Design Standards. All alarm systems new or replacement serving 20 or more alarm actuating devices shall be addressable fire detection systems. Alarm systems serving more than 40 smoke detectors or more than 100 total alarm activating devices shall be analog intelligent addressable fire detection systems.

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.

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

907.2.1 Group A. A manual fire alarm system 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. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

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

907.2.3 Group E. A manual fire alarm system 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.

***** Section 907.2.3; change exception #1 and add exception #1.1 to read as follows:**

1. Group E educational and day care occupancies with an occupant load of less than 50 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.)

*****Section 907.2.12; change to read as follows:**

907.2.12 High-rise buildings. Buildings having any floor used for human occupancy located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communications system in accordance with Section 907.2.12.2.

*****Section 907.2.12, exception #3; change to read as follows:**

3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1, when used for open air seating; however, this exception does not apply to accessory uses including but not limited to sky boxes, restaurants and similarly enclosed areas.

*****Section 907.4; add a second paragraph to read as follows:**

Manual alarm actuating devices shall be an approved double action type.

*****Add Section 907.6.1 to read as follows:**

907.6.1 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 initiating circuit conductors shall be Class “A” wired with a minimum of six feet separation between supply and return circuit conductors. IDC – Class “A” Style D; SLC - Class “A” Style 6; NAC - Class “B” Style Y. The IDC from an addressable device used to monitor the status of a suppression system may be wired Class B, Style B provided the distance from the addressable device is within 10-feet of the suppression system device.

*****Section 907.8.2; change to read as follows:**

907.8.2 High-rise buildings. In buildings that have any floor located more than 55 feet (16 764 mm) above the . . . {remainder of section unchanged}.

Section 910.1; Amend exception 2 to read as follows:

910.1 Exception 2: Where areas of buildings are equipped with early suppression fast-response (ESFR) sprinklers, only manual smoke and heat vents shall be required within these areas.

Section 910.2.4; Add Section 910.2.4 Group H to read as follows:

910.2.4 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 m²) 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.

Table 910.3; Change the title of the first row of the table to read as follows:

[F] TABLE 910.3
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS^a

OCCUPANCY GROUP AND COMMODITY CLASSIFICATION	DESIGNATED STORAGE HEIGHT (feet)	MINIMUM DRAFT CURTAIN DEPTH (feet)	MAXIMUM AREA FORMED BY DRAFT CURTAINS (square feet)	VENT-AREA TO-FLOOR-AREA RATIO ^c	MAXIMUM SPACING OF VENT CENTERS (feet)	MAXIMUM DISTANCE TO VENTS FROM WALL OR DRAFT CURTAINS ^b (feet)
Group F-1, H and S-1	—	$0.2 \times H_d$ but ≥ 4	50,000	1:100	120	60
<i>(Balance of table remains unchanged)</i>						

*****Section 910.3.2.2; Add second paragraph to read as follows:**

The automatic operating mechanism of the smoke and heat vents shall operate at a temperature rating at least 100 degrees (F) (approximately 38 degrees Celsius) greater than the temperature rating of the sprinklers installed.

*****Section 913.1; Add paragraph to read as follows:**

When located on the ground level, 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 Section 506.1.

IBC CHAPTER 10.

*****Section 1004.1.1; Delete exception**

*****Section 1017.1; add an exception #5 to read as follows:**

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

*****Section 1020.1.7; change to read as follows:**

1020.1.7 Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves stories where ~~the~~ any floor surface is located more than 55 feet (16 764 mm) above the lowest level of fire . . . *{remainder of section unchanged}*.

IBC CHAPTER 11.

****Section 1101.2; add an exception to read as follows:*

Exception: Buildings regulated under State Law and built in accordance with State certified plans, including any variances or waivers granted by the State, shall be deemed to be in compliance with the requirements of this Chapter.

****Section 1109.2.1; change to read as follows:*

1109.2.1 Unisex toilet and bathing rooms. In assembly and mercantile occupancies, an accessible unisex toilet room shall be provided where an aggregate of six or more male or female water closets is provided. In buildings of mixed occupancy, only those water closets . . . {remainder of section unchanged}.

IBC CHAPTER 12.

****Section 1210.2, exception #2; change to read as follows:*

2. Toilet rooms that are not accessible to the public and which have not more than one water closet; provided that walls around urinals comply with the minimum surrounding material specified by Section 419.3 of the *International Plumbing Code*.

IBC CHAPTER 15.

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

- b. All individual replacement shingles or shakes shall be in compliance with the rating required by this table.
- c. Non-classified roof coverings shall be permitted on buildings of U occupancies having not more than 120 sq.ft. of projected roof area. When exceeding 120 sq.ft of projected roof area, buildings of U occupancies may use non-rated non-combustible roof coverings.

****Section 1505.7; delete.*

IBC CHAPTER 23.

****Add Section 2308.2.3 to read as follows:*

2308.2.3 Application to engineered design. When accepted by the Building Official, any portion of this section is permitted to apply to buildings that are otherwise outside the limitations of this section provided that:

1. The resulting design will comply with the requirements specified in Chapter 16;
2. The load limitations of various elements of this section are not exceeded; and
3. The portions of this section which will apply are identified by an engineer in the construction documents.

IBC CHAPTER 29

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

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.

***** Section 2902.1, 2902.1.1 and 2902.1.2; change to read as follows and add sub sections:**

2902.1 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.

Exception: A drinking fountain need not be provided in a drinking or dining establishment.

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 2902.2.
3. Group E Occupancies: Shall be provided with fixtures as shown in Table 2902.1.
4. Group R Occupancies: Shall be provided with fixtures as shown in Table 2902.1.

It is recommended, but not required, that the minimum number of fixtures provided also comply with the number shown in Table 2902.1. Types of occupancies not shown in Table 2902.1 shall be considered individually by the code official. The number of occupants shall be determined by this code. Occupancy classification shall be determined in accordance with Chapter 3.

*****Add Section 2902.6 to read as follows:**

2902.6 Finish material. Finish materials shall comply with Section 1210.

*****Add Section 3109.1 to read as follows:**

3109.1 General. Swimming pools shall comply with the requirements of this section and other applicable sections of this code. Provisions of this section shall not be deemed to nullify any provisions of state law or state code.

END

SECTION 3.

That Section 150.090 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.090. THE 2006 EDITION OF THE INTERNATIONAL FIRE CODE ADOPTED.

That Section 150.090 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

- (a) The International Fire Code, 2006 Edition, as published by the International Code Council, is hereby adopted, and designated as the fire code of the City of Carrollton, and is made a part hereof, as amended. Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding.
- (b) One (1) copy of the 2006 edition of the International Fire Code, marked Exhibit "B", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.
- (c) In the event a conflict is determined to exist between said International Fire Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former.

SECTION 4.

That Section 150.091 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.091. AMENDMENTS.

Note: Fire sprinkler code provisions for single-family dwellings and duplexes may be found in the International Residential Code.

IFC CHAPTER 1.

Section 102.1: Applicability (Add #5):

Section 102.1: 5. The provisions of this code apply to buildings built under the IRC and IBC.

*****Section 102.4; change to read as follows:**

102.4 Application of other codes. The design and construction of new structures shall comply with this code, and other codes as applicable, and any alterations, additions, changes in use or

changes in structures required by this code, which are within the scope of the *International Building Code*, shall be made in accordance therewith.

*****Section 102.6; change to read as follows:**

102.6 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 45 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 the 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.

106.2.1 Inspection requests. It shall be the duty of the permit holder or their duly authorized agent to notify the fire code official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

106.2.2 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the fire code official. The fire code official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the fire code official.

IFC CHAPTER 2.

*****Section 202; amend definition of Fire Watch as follows:**

FIRE WATCH. A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals or standby personnel when required by the fire code official, for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department.

*****Section 202; add a new definition to read as follows:**

HIGH-RISE BUILDING. A building having any floors used for human occupancy located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

*****Section 202; add definitions as follows:**

ADDRESSABLE FIRE DETECTION SYSTEM. Any system capable of providing identification of each individual alarm-initiating device. The identification shall be in plain English and as descriptive as possible to specifically identify the location of the device in alarm. The

system shall have the capability of alarm verification.

ANALOG INTELLIGENT ADDRESSABLE FIRE DETECTION SYSTEM. Any system capable of calculating a change in value by directly measurable quantities (voltage, resistance, etc.) at the sensing point. The physical analog may be conducted at the sensing point or at the main control panel. The system shall be capable of compensating for long-term changes in sensor response while maintaining a constant sensitivity. The compensation shall have a preset point at which a detector maintenance signal shall be transmitted to the control panel. The sensor shall remain capable of detecting and transmitting an alarm while in maintenance alert.

SELF-SERVICE STORAGE FACILITY. Real property designed and used for the purpose of renting or leasing individual storage spaces to customers for the purpose of storing and removing personal property on a self-service basis.

STANDBY PERSONNEL. Qualified fire service personnel, approved by the Fire Chief. When utilized, the number required shall be as directed by the Fire Chief. Charges for utilization shall be as normally calculated by the jurisdiction.

IFC CHAPTER 3.

*****Section 307.2; change to read as follows:**

307.2 Permit required. A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or open burning. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

Examples of state or local law, or regulations referenced elsewhere in this section may include but not be limited to the following:

1. Texas Commission on Environmental Quality guidelines and/or restrictions.
2. State, County or Local temporary or permanent bans on open burning.
3. Local written policies as established by the Code Official.

*****Section 307.4; change to read as follows:**

307.4 Location. The location for open burning shall not be less than 300 feet (91 440 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 300 feet (91 440 mm) of any structure.

(exceptions unchanged)

*****Add Section 307.4.3 to read as follows:**

307.4.3 Trench Burns. Trench burns shall be conducted in air curtain trenches and in accordance with Section 307.2.

***Section 307.5; change to read as follows:

307.5 Attendance. Open burning, trench burns, bonfires or recreational fires shall be constantly attended until the . . . {remainder of section unchanged}.

***Section 308.3.1; change to read as follows:

308.3.1 Open-flame cooking and heating devices. Open flame cooking devices, charcoal grills, outdoor fireplaces and other similar devices used for cooking, heating or any other purpose, shall not be located or used on any combustible balcony, deck, or within 10 feet (3048 mm) of any combustible construction.

Exceptions:

1. One- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an approved automatic sprinkler system

***Section 308.3.1.1; amended to add the following exceptions:

Exception:

- 1) One- and two-family dwellings, may have containers with a water capacity not greater than 20 pounds (9.08 kg) [nominal 8 pound (3.632 kg) LP-gas capacity], with an aggregate capacity not to exceed 100 lbs (5 containers).
- 2) Other residential occupancies where buildings, balconies and decks are protected by an approved automatic sprinkler system, may have containers with a water capacity not greater than 20 pounds (9.08 kg) [nominal 8 pound (3.632 kg) LP-gas capacity], with an aggregate capacity not to exceed 40 lbs (2 containers).

IFC CHAPTER 4.

***401.3.4 Fire Alarms and Nuisance Alarms. False alarms and nuisance alarms shall not be given, signaled or transmitted or caused or permitted to be given, signaled or transmitted in any manner.

IFC CHAPTER 5.

***Section 503.1.1; add the following sentence to the first paragraph:

Except for single- or two-family residences, the path of measurement shall be along a minimum of a ten feet (10') wide unobstructed pathway around the external walls of the structure.

***Section 503.2.1; change to read as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 24 feet (7315mm), except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 14 feet (4267 mm).

Exception: Vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance when approved.

*****Section 503.2.2; change to read as follows:**

503.2.2 Authority. The fire code official shall have the authority to require an increase in the minimum access widths and vertical clearances where they are inadequate for fire or rescue operations.

*****Section 503.3; change to read as follows:**

503.3 Marking. Striping, signs, or other markings, when approved by the code official, shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Striping, signs and other markings shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

(1) Striping – Fire apparatus access roads shall be marked by painted lines of red traffic paint six inches (6”) in width to show the boundaries of the lane. The words “NO PARKING FIRE LANE” or “FIRE LANE NO PARKING” shall appear in four inch (4”) white letters at 25 feet intervals on the red border markings along both sides of the fire lanes. Where a curb is available, the striping shall be on the vertical face of the curb.

(2) Signs – Signs shall read “NO PARKING FIRE LANE” or “FIRE LANE NO PARKING” and shall be 12” wide and 18” high. Signs shall be painted on a white background with letters and borders in red, using not less than 2” lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6’6”) above finished grade. Signs shall be spaced not more than fifty feet (50’) apart. Signs may be installed on permanent buildings or walls or as approved by the Fire Chief.

*****Section 503.4; change to read as follows:**

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 and any area marked as a fire lane as described in Section 503.3 shall be maintained at all times.

*****Section 503.6 is amended to read as follows:**

Section 503.6 Security Gates. Where security fencing is necessary, the owner shall provide gates or openings which may be secured. Gates when provided must open fully in either direction or be of a sliding or raised arm type. The main entry gates serving Group R & I occupancies shall be equipped with an approved automatic entry system. All other entry points along the fire lane must

be automated or Knox compatible as approved by the Fire Chief, to permit immediate access by fire personnel and equipment in the event of fire or emergency.

*****Amend Section 505.1 to read as follows**

505.1 Premises Identification. Approved numerals of a minimum 10” height and of a color contrasting with the background designating the address shall be placed on all new and existing buildings or structures in a position as to be plainly visible and legible from the street or road fronting the property and from all rear alleyways / access.

Where buildings do not immediately front a street, approved 6 inch height building numerals or addresses and 3-inch height suite / apartment numerals of a color contrasting with the background of the building shall be placed on all new and existing buildings or structures. Numerals or addresses shall be posted on a minimum 20 inch by 30 inch background on border.

Address numbers shall be Arabic numerals or alphabet letters. The minimum stroke width shall be 0.5 inches.

Exception 1. R-3 Single Family occupancies shall have approved numerals of a minimum 4 inches in height and a color contrasting with the background clearly visible and legible from the street fronting the property and rear alleyway where such alleyway exists.

*****Add Section 505.1.1 Utility Shut-Off Identification**

Section 505.1.1 Utility shut-off identification. Approved numerals of minimum one-inch height and of a color contrasting with the background shall be placed on gas and electrical meters serving all new and existing buildings or structures except R-3 occupancies

*****Add Section 511 Emergency Radio Communications to read as follows:**

Section 511. Emergency Radio Communications.

In all new and existing buildings in which the type of construction or distance from an operational emergency services antenna or dispatch site does not provide adequate frequency or signal strength as determined by the code official, the building owner shall be responsible for providing the equipment, installation and maintenance of said equipment in a manner to strengthen the radio signal. The radio signal shall meet the minimum input / output strengths according to the emergency radio system’s provider and system manager.

IFC CHAPTER 7.

*****Section 704.1; change to read as follows:**

704.1 Enclosure. Interior vertical shafts, including but not limited to stairways, elevator hoistways, service and utility shafts, that connect two or more stories of a building shall be enclosed or protected in accordance with the codes in effect at the time of construction but, regardless of when constructed, not less than as specified in Table 704.1.

IFC CHAPTER 8.

****Section 807.4.3.2 and Section 807.4.4.2; add an exception to read as follows:*

Exception: Corridors protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be limited to 50 percent of the wall area.

IFC CHAPTER 9.

****Section 901.6.1.1 Standpipe Testing; add section to read as follows:*

901.6.1.1 Standpipe Testing. Building owners/managers must utilize a licensed fire protection contractor to test and certify standpipe systems. In addition to the testing and maintenance requirements of NFPA 25 applying to standpipe systems, the following additional requirements shall be applied to the testing that is required every 5 years:

10. The piping between the Fire Department Connection (FDC) and the standpipe shall be hydrostatically tested for all FDC's on any type of standpipe system. Hydrostatic testing shall also be conducted in accordance with NFPA 25 requirements for the different types of standpipe systems.
11. For any manual (dry or wet) standpipe system not having an automatic water supply capable of flowing water through the standpipe, the contractor shall connect hose from a fire hydrant or portable pumping system (as approved by the fire code official) to each FDC, and flow water through the standpipe system to the roof outlet to verify that each inlet connection functions properly. There is no required pressure criteria at the outlet. Verify that check valves function properly and that there are no closed control valves on the system.
12. Any pressure relief, reducing, or control valves shall be tested in accordance with the requirements of NFPA 25.
13. If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDC's. Contact the Fire Marshal for additional information.
14. Upon successful completion of standpipe test, the contractor shall place a blue tag (as per "Texas Administrative Code, Title 28. Insurance, Part I. Texas Department of Insurance, Chapter 34. State Fire Marshal, Subchapter G. Fire Sprinkler Rules, 28 TAC § 34.720. Inspection, Test and Maintenance Service (ITM) Tag") at the bottom of each standpipe riser in the building. An example of this tag is located at the end of this SOP. The tag shall be check-marked as "Fifth Year" for Type of ITM, and the note on the back of the tag shall read "5 Year Standpipe Test" at a minimum.
15. The contractor shall follow the procedures as required by "Texas Administrative Code, Title 28. Insurance, Part I. Texas Department of Insurance, Chapter 34. State Fire Marshal, Subchapter G. Fire Sprinkler Rules, 28 TAC" with regard to Yellow Tags and Red Tags or

- any deficiencies noted during the testing, including the required notification of the local Authority Having Jurisdiction (Fire Marshal).
16. Additionally, records of the testing shall be maintained by the owner and contractor, as required by the State Rules mentioned above and NFPA 25.
 17. Standpipe system tests where water will be flowed external to the building shall not be conducted during freezing conditions or during the day prior to expected night time freezing conditions.
 18. Contact the Fire Marshal for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this fire fighting equipment. All standpipe hose valves must remain in place and be provided with an approved cap and chain when approval is given to remove hose by the fire code official.

*****Section 901.7; change to read as follows:**

901.7 Systems out of service. Where a required fire protection system is out of service or in the event of an excessive number of activations, the fire department and the code official shall be notified immediately and, where required by the code official, the building shall either be evacuated or an approved fire watch shall be provided for all occupants left unprotected by the shut down until the fire protection system has been returned to service.

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

*****Add Section 903.2.8.3 to read as follows:**

903.2.8.3 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.

*****Amend the title of Section 903.2.10 to read “All occupancies except R-3 and U”.**

*****Section 903.2.10; amend 903.2.10.3 and add 903.2.10.4, 903.2.10.5, and 903.2.10.6 as follows:**

903.2.10.3 Buildings more than 35 feet 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*, that is located 35 feet (10 668mm) or more above the lowest level of fire department vehicle access.

Exception:
Open parking structures in compliance with Section 406.3 of the *International Building Code*.

903.2.10.4 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4572 mm), see Chapter 23 to determine if those provisions apply.

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

903.2.10.6 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.

Exceptions:

1. Open parking garages in compliance with Section 406.3 of the *International Building Code*.
2. Type A-5.

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

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

4. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
5. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the code official.
6. 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.

****903.3.1.2; Change to read as follows:**

903.3.1.2 NFPA 13R sprinkler systems. Where allowed in buildings of Group R, up to and including four stories in height, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R. However, sprinkler protection is required in attic spaces of such buildings three or more stories in height.

903.3.1.2.1 Balconies. Sprinkler protection shall be provided for exterior balconies and ground floor patios. Side wall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch to 6 inches below the structural members, and a maximum distance of 14 inches below the deck of the exterior balconies that are constructed of open wood joist construction.

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

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.

*****Section 903.4; add a second paragraph after the exceptions to read as follows:**

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.

903.4.2 – Add second paragraph to read as follows:

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.

*****Add Section 903.6.2 to read as follows:**

903.6.2 Spray booths and rooms. New and existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system in accordance with Section 1504.

*****Section 905.2; change to read as follows:**

905.2 Installation standards. 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.

*****Add Section 905.3.8: 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.

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

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 hose connection located either . . .
{remainder of paragraph unchanged} . . .

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

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.

*****Add Section 907.1.3 to read as follows:**

907.1.3 Design Standards. All alarm systems new or replacement serving 50 or more alarm actuating devices shall be addressable fire detection systems. Alarm systems serving more than 75 smoke detectors or more than 200 total alarm activating devices shall be analog intelligent addressable fire detection systems.

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.

907.2.1 Group A. A manual fire alarm system 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. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

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

907.2.3 Group E. A manual fire alarm system 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.

*****Section 907.2.3; change exception #1 and add exception #1.1 to read as follows:**

2. Group E educational and day care occupancies with an occupant load of less than 50 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.)

*****Section 907.2.12; change to read as follows:**

907.2.12 High-rise buildings. Buildings having any floors used for human occupancy located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communications system in accordance with Section 907.2.12.2.

*****Section 907.2.12, exception #3; change to read as follows:**

3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code*, when used for open air seating; however, this exception does not apply to accessory uses including but not limited to sky boxes, restaurants and similarly enclosed areas.

*****Section 907.4; add a second paragraph to read as follows:**

Manual alarm actuating devices shall be an approved double action type.

*****Add Section 907.6.1 to read as follows:**

907.6.1 Installation. All fire alarm systems shall be installed in such a manner that the failure of any single alarm-actuating or alarm-indicating device will not interfere with the normal operation of any other such devices. All systems shall be Class “A” wired with a minimum of six feet separation between supply and return loops. IDC – Class “A” style – D – SLC Class “A” Style 6 – notification Class “B” Style Y.

*****Section 907.9.2; change to read as follows:**

907.9.2 High-rise buildings. In buildings that have any floor located more than 55 feet (16 764 mm) above the . . . {remainder of section unchanged}.

907.20.6 Replacement of Smoke Alarms in R-Occupancies. Unless otherwise recommended by the manufacturer, single and multiple station smoke alarms installed in R occupancies shall be replaced when they fail to respond to operability tests, but shall not remain in service longer than 10 years from the date of manufacture.

*****Section 910.1; amend exception 2 to read as follows:**

910.1 Exception 2: Where areas of buildings are equipped with early suppression fast-response (ESFR) sprinklers, only manual smoke and heat vents shall be required within these areas.

*****Section 910.2.4; add Section 910.2.4 Group H, to read as follows:**

910.2.4 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 m²) 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.

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, S-1

Section 910.3.2.2; Add second paragraph to read as follows:

The automatic operating mechanism of the smoke and heat vents shall operate at a temperature rating at least 100 degrees (F) (approximately 38 degrees Celsius) greater than the temperature rating of the sprinklers installed.

*****Section 913.1 – add paragraph to read as follows:**

When located on the ground level, 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 Section 506.1.

IFC CHAPTER 10.

*****Section 1017.1; add an exception #5 to read as follows:**

5. In Group B office buildings, corridor walls and ceilings need not be of fire-resistive construction within office spaces of a single tenant when the space is equipped with an approved automatic fire alarm system with corridor smoke detection. The actuation of any detector shall activate alarms audible in all areas served by the corridor. The smoke-detection system shall be connected to the building’s fire alarm system where such a system is provided.

*****Section 1020.1.7; change to read as follows:**

1020.1.7 Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves stories where any floor surface is located more than 55 feet (16 764 mm) above the lowest level of fire . . . *{remainder of section unchanged}*.

1028.2 Reliability; change to read as follows:

1028.2 Reliability. Required exit accesses, exits or exit discharges shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency. Security devices affecting means of egress shall be subject to approval of the fire code official.

IFC CHAPTER 15.

*****Section 1504.4; change to read as follows:**

1504.4 Fire Protection. New and existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system ... *[remainder of section unchanged]* ...

IFC CHAPTER 22.

2204.1 Supervision of Dispensing. The dispensing of fuel at motor fuel-dispensing facility shall be in accordance with the following:

1. Conducted by a qualified attendant; and/or,
2. Shall be under the supervision of a qualified attendant; and/or
3. Shall be an unattended self-service facility in accordance with Section 2204.3.

At any time the qualified attendant of item #1 or #2 above is not present, such operations shall be considered as an Unattended self-service facility and shall also comply with Section 2204.3.

IFC CHAPTER 23.

*****Section 2302; add a second paragraph to the definition of “High-Piled Combustible Storage” to read as follows:**

Any building exceeding 6,000 sq. ft. that has a clear height in excess of 12 feet, making it possible to be used for storage in excess of 12 feet, shall be considered to be high-piled storage and shall comply with the provisions of this section. When a specific product cannot be identified, a fire protection system shall be installed as for Class IV commodities, to the maximum pile height.

Table 2306.2 Footnote J is amended as follows:

Where areas of buildings are equipped with early suppression fast-response (ESFR) sprinklers, only manual smoke and heat vents shall be required within these areas.

IFC CHAPTER 33.

*****Section 3301.1.3; change to read as follows:**

3301.1.3 Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

Exceptions:

1. Only when approved for fireworks displays, storage and handling of fireworks as provided in Section 3304 and 3308.
2. The use of fireworks for approved display as permitted in Section 3308.

*****Section 3302; change the definition of “fireworks” to read as follows:**

FIREWORKS. Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration, ~~and~~ detonation, and/or activated by ignition with a match or other heat producing device that meets the definition of 1.4G fireworks or 1.3G fireworks as set forth herein.

IFC CHAPTER 34.

*****Section 3403.6; add a sentence to read as follows:**

An approved method of secondary containment shall be provided for underground tank and piping systems.

*****Section 3404; add exception to read as follows:**

Above ground storage tanks 250 gallons or greater shall be UL listed, Protected Above Ground Tanks.

*****Section 3404.2.11.5; add a sentence to read as follows:**

An approved method of secondary containment shall be provided for underground tank and piping systems.

*****Section 3404.2.11.5.2; change to read as follows:**

3404.2.11.5.2 Leak detection. Underground storage tank systems ... [*bulk of provision unchanged*] ... and installed in accordance with NFPA 30 and as specified in Section 3404.2.11.5.3.

*****Add Section 3404.2.11.5.3 to read as follows:**

3404.2.11.5.3 Dry sumps. Approved sampling tubes of a minimum 6 inches in diameter shall be installed in the backfill material of each underground flammable or combustible liquid storage tank. The tubes shall extend from a point 12 inches below the average grade of the excavation to ground level and shall be provided with suitable surface access caps. Each tank site shall provide a sampling sump at the corners of the excavation with a minimum of 4 sumps. Sampling tubes shall be placed in the product line excavation within 10 feet of the tank excavation and one every 50 feet routed along product lines towards the dispensers, a minimum of two are required.

*****Delete Section 3406.5.4.5 and replace with the following:**

3406.5.4.5 Commercial, industrial, governmental or manufacturing. Dispensing of Class II and III motor vehicle fuel from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments is allowed where permitted, provided such dispensing operations are conducted in accordance with Sections 3406.5.4.5.1 through 3406.5.4.5.3.

3406.5.4.5.1 Site requirements.

1. Dispensing may occur at sites that have been permitted to conduct mobile fueling.
2. A detailed site plan shall be submitted with each application for a permit. The site plan must indicate:
 - a. all buildings, structures, and appurtenances on site and their use or function;
 - b. all uses adjacent to the property lines of the site;
 - c. the locations of all storm drain openings, adjacent waterways or wetlands;
 - d. information regarding slope, natural drainage, curbing, impounding and how a spill will be retained upon the site property; and,
 - e. The scale of the site plan.
3. The Code Official is authorized to impose limits upon: the times and/or days during which mobile fueling operations are allowed to take place and specific locations on a site where fueling is permitted.
4. Mobile fueling operations shall be conducted in areas not generally accessible to the public.
5. Mobile fueling shall not take place within 15 feet (4.572 m) of buildings, property lines, or combustible storage.

3406.5.4.5.2 Refueling Operator Requirements.

1. The owner of a mobile fueling operations shall provide to the jurisdiction a written response plan which demonstrates readiness to respond to a fuel spill, carry out appropriate mitigation measures, and to indicate its process to properly dispose of contaminated materials when circumstances require.
2. The tank vehicle shall comply with the requirements of NFPA 385 and Local, State and Federal requirements. The tank vehicle's specific functions shall include that of supplying fuel to motor vehicle fuel tanks. The vehicle and all its equipment shall be maintained in good repair.
3. Signs prohibiting smoking or open flames within 25 feet (7.62 m) of the tank vehicle or the point of fueling shall be prominently posted on 3 sides of the vehicle including the back and both sides.
4. A fire extinguisher with a minimum rating of 40:BC shall be provided on the vehicle with signage clearly indicating its location.
5. The dispensing nozzles and hoses shall be of an approved and listed type.
6. The dispensing hose shall not be extended from the reel more than 100 feet (30.48m) in length.
7. Absorbent materials, non-water absorbent pads, a 10 foot (3.048 m) long containment boom, an approved container with lid, and a non-metallic shovel shall be provided to mitigate a minimum 5-gallon fuel spill.
8. Tanker vehicles shall be equipped with a fuel limit switch such as a count-back switch, limiting the amount of a single fueling operation to a maximum of 500 gallons (1893 L) between resettings of the limit switch.

Exception: Tankers utilizing remote emergency shut-off device capability where the operator constantly carries the shut-off device which, when activated, immediately causes flow of fuel from the tanker to cease.

9. Persons responsible for dispensing operations shall be trained in the appropriate mitigating actions in the event of a fire, leak, or spill. Training records shall be maintained by the

dispensing company and shall be made available to the Code Official upon request.

10. Operators of tank vehicles used for mobile fueling operations shall have in their possession at all times an emergency communications device to notify the proper authorities in the event of an emergency.

3406.5.4.5.3 Operational Requirements.

1. The tank vehicle dispensing equipment shall be constantly attended and operated only by designated personnel who are trained to handle and dispense motor fuels.
2. Prior to beginning dispensing operations, precautions shall be taken to assure ignition sources are not present.
3. The engines of vehicles being fueled shall be shut off during dispensing operations.
4. Night time fueling operations shall only take place in adequately lighted areas.
5. The tank vehicle shall be positioned with respect to vehicles being fueled so as to preclude traffic from driving over the delivery hose and between the tank vehicle and the motor vehicle being fueled.
6. During fueling operations, tank vehicle brakes shall be set, chock blocks shall be in place and warning lights shall be in operation.
7. Motor vehicle fuel tanks shall not be topped off.
8. The dispensing hose shall be properly placed on an approved reel or in an approved compartment prior to moving the tank vehicle.
9. The Code Official and other appropriate authorities shall be notified when a reportable spill or unauthorized discharge occurs.

IFC CHAPTER 38.

*****Add Section 3803.2.1.8 to read as follows:**

3803.2.1.8 Jewelry Repair, Dental Labs and Similar Occupancies. Where natural gas service is not available, portable LP-Gas containers are allowed to be used to supply approved torch assemblies or similar appliances. Such containers shall not exceed 20-pound (9.0 kg) water capacity. Aggregate capacity shall not exceed 60-pound (27.2 kg) water capacity. Each device shall be separated from other containers by a distance of not less than 20 feet.

*****Section 3804.2; add an exception #2 to read as follows:**

Exceptions:

1. *{existing exception unchanged}*
2. Except as permitted in 308.3 and 3804.3.2, LP-gas containers are not permitted in residential areas.

*****Add Section 3804.3.2 to read as follows:**

3804.3.2 Spas, Pool Heaters and other listed devices. Where natural gas service is not available, LP-Gas containers are allowed to be used to supply spa and pool heaters or other listed devices. Such containers shall not exceed 250-gallon water capacity. See Table 3804.3 for location of containers.

END

SECTION 5.

That Section 150.045 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.045. THE 2006 EDITION OF THE INTERNATIONAL PLUMBING CODE ADOPTED.

- (a) The International Plumbing Code, 2006 Edition, as published by the International Code Council, is hereby adopted, and designated as the building code of the City of Carrollton, and is made a part hereof, as amended.
- (b) One (1) copy of the 2006 edition of the International Plumbing Code, marked Exhibit “C”, is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.
- (c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Plumbing Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former.

SECTION 6.

That Section 150.046 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.046. AMENDMENTS.

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

Section 714	Engineered Drainage Design	62
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IPC CHAPTER 1.

*****Section 101.2; change exceptions 1 and 2 as follows:**

101.2 Scope (Paragraph unchanged)

Exceptions:

- 1. Detached one and two- family dwellings . . . (unchanged) . . . *International Residential Code* as adopted.
- 2. Plumbing systems in existing buildings . . . (unchanged) . . . *International Existing Building Code* or the provisions for existing buildings in the *International Building Code* as adopted.

*****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.

*****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 adopted by resolution of the governing body of the jurisdiction.

106.6.3 Fee Refunds. The code official shall establish a policy for authorizing the refunding of fees. *(Delete balance of section)*

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

SECTION 109 MEANS OF APPEAL

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

IPC CHAPTER 3.

*****Section 305.6.1; change to read as follows:**

305.6.1 Sewer depth. Building sewers shall be a minimum of 12 inches (304 mm) below grade.

*****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.

*****Section 310.4; delete.**

*****Sections 312.9.1 and 312.9.2; change to read as follows:**

312.9.1 Inspections. Annual inspections shall be made of all backflow prevention assemblies and air gaps to determine whether they are operable. In the absence of local provisions, the owner is responsible to ensure that testing is performed.

312.9.2 Testing. Reduced pressure principle backflow preventer assemblies, double check-valve assemblies, pressure vacuum breaker assemblies, reduced pressure detector fire protection backflow prevention assemblies, double check detector fire protection backflow prevention assemblies, hose connection backflow preventers, and spill-proof vacuum breakers shall be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure shall be performed in accordance with applicable local provisions. In the absence of local provisions, the owner is responsible to ensure that testing is done in accordance with one of the following standards:

{list of standards unchanged}

*****Section 314.2.1; modify second sentence 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. Condensate shall not discharge into a street, alley, sidewalk, rooftop, or other areas so as to cause a nuisance.

*****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 PVC pipe or tubing. All components shall be selected for the pressure, temperature, and exposure rating of the installation. *{Remainder unchanged}*

IPC CHAPTER 4.

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

The provisions of this Chapter are meant to work in coordination with the provisions of the Building Code. Should any conflicts arise between the two chapters, the Code Official shall determine which provision applies.

*****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:

5. Assembly Occupancies: At least one drinking fountain shall be provided at each floor level in an approved location.
Exception: A drinking fountain need not be provided in a drinking or dining establishment.
6. 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.
7. Group E Occupancies: Shall be provided with fixtures as shown in Table 403.1.
 8. 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*.

****Add Section 403.1.2 to read as follows:*

403.1.2 Finish material. Finish materials shall comply with Section 1209 of the *International Building Code*.

****Section 405.6; delete.*

****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.

****Section 410.1; change to read as follows:*

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M, and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9.

Exception: A drinking fountain need not be provided in a drinking or dining establishment.

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

412.4 Required location. 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.
2. Commercial kitchens. (In lieu of floor drains in commercial kitchens, the code official may accept floor sinks.)

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

413.4 Water supply required. All food waste grinders shall be provided with a supply of cold water. The water supply shall be protected against backflow by an air gap or with the installation of a backflow preventer in accordance with Section 608.

*****Section 417.5; change to read as follows:**

417.5 Shower floors or receptors. Floor surfaces shall be constructed of impervious, noncorrosive, nonabsorbent and waterproof materials.

Thresholds shall be a minimum of 2 inches (51 mm) and a maximum of 9 inches (229 mm), measured from top of the drain to top of threshold or dam. Thresholds shall be of sufficient width to accommodate a minimum twenty-two (22) inch (559 mm) door.

Exception: Showers designed to comply with ICC/ANSI A117.1.

*****Section 417.5.2; change to read as follows:**

417.5.2 Shower lining. Floors under shower compartments, except where prefabricated receptors have been provided, shall be lined and made water tight utilizing material complying with Sections 417.5.2.1 through 417.5.2.4. Such liners shall turn up on all sides at least 3 inches (76 mm) above the finished threshold level and shall extend outward over the threshold and fastened to the outside of the threshold jamb. Liners shall be recessed and fastened to an approved backing . . .
{remainder of section unchanged}

*****Add Section 417.7 to read as follows:**

417.7 Test for shower receptors. Shower receptors shall be tested for water tightness by filling with water to the level of the rough threshold. The drain shall be plugged in a manner so that both sides of pans shall be subjected to the test at the point where it is clamped to the drain.

*****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.

IPC CHAPTER 5.

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

502.3 Water heaters installed in attics. Attics containing a water heater shall be provided . . .
{bulk of paragraph unchanged} . . . side of the water heater. The clear access opening dimensions shall be 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 water heater.

*****Add Section 502.5 to read as follows:**

502.5 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.

*****Add exception to read as follows:**

Exception: A max 10 gallon water heater (or larger with approval of the code official) and 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.

502.5.1 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 502.3.1.

*****Section 504.6.1; change to read as follows:**

504.6.1 Discharge. The relief valve shall discharge through full size piping to a safe place of disposal such as a floor drain, outside the building, or an indirect waste receptor. The discharge pipe shall not have any trapped sections. When the drain pipe run is exposed, in an area outside of the room where the water heater is located, in a manner that would make it subject to damage, the drain ~~and~~ shall have a visible air gap or air gap fitting located in the same room as the water heater. The outlet end of the discharge pipe shall not be threaded and such discharge pipe shall not have a valve or tee installed. Relief valve piping shall be piped independent of other equipment drains or relief valve discharge piping to the disposal point. Such pipe shall be installed in a manner that does not cause personal injury to occupants in the immediate area or structural damage to the building.

The discharge pipe shall not discharge into the pan required in Section 504.7.

When discharging outside the building, the point of discharge shall be with the end of the pipe not more than two (2) feet (610 mm) nor less than six (6) inches (152 mm) above the ground or the floor level of the area receiving the discharge and pointing downward.

IPC CHAPTER 6.

*****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.

*****Tables 605.3 and 605.4; delete “Polybutylene (PB) plastic pipe and tubing”.**

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

*****Section 606.2; items #1 and 2 change to read as follows:**

1. On the fixture supply to each plumbing fixture.

Exception: Tub and shower valves.

2. On the water supply pipe to each sillcock when subject to freezing.

*****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, and as specifically stated in Sections 608.2 through 608.16.9.

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

608.16.5 Connections to lawn Irrigation Systems. The potable water supply system 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 . . . {*remainder of section unchanged*}.

*****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. In the absence of other local regulations, installation shall be in accordance with Sections 608.17.1 through 608.17.8.

IPC CHAPTER 7.

*****Add Section 712.5 to read as follows:**

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

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

SECTION 714 ENGINEERED 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 design methods.

IPC CHAPTER 8.

***Section 802.4; add a sentence to read as follows:

No standpipe shall be installed below the ground.

IPC CHAPTER 9.

***Section 904.1; changed to read as follows:

904.1 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.

***Section 912.1; change to read as follows:

912.1 Type of fixture. A combination drain and vent system shall not serve fixtures other than floor drains, standpipes, and indirect waste receptors. Combination drain and vent systems shall not receive the discharge from a food waste grinder or clinical sink.

***Section 912.2; change to read as follows:

912.2 Installation. The only vertical pipe of a combination drain and vent system shall be the connection between the fixture drain of a standpipe, and the horizontal combination drain and vent pipe. The maximum vertical distance shall be 8 feet (2438 mm).

IPC CHAPTER 10.

***Section 1002.10; delete.

***Section 1003; change to read as follows:

{The size, type and location of each interceptor and of each separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of the city of Carrollton Grease Interceptor Sizing technical policy.}

IPC CHAPTER 11.

***Section 1101.8; change to read as follows:

1101.8 Cleanouts required. Cleanouts shall be installed in the storm drainage system...*{remainder of section unchanged}*...

***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 rainfall rate

*****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. Scuppers shall be sized to prevent the depth of ponding water . . .
{remainder of section unchanged}

IPC CHAPTER 12.

*****Section 1202.1; delete Exception 2.**

END

SECTION 7.

That Section 150.060 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.060. THE 2006 EDITION OF THE INTERNATIONAL MECHANICAL CODE ADOPTED.

- (a) The International Mechanical Code, 2006 Edition, as published by the International Code Council, is hereby adopted, and designated as the building code of the City of Carrollton, and is made a part hereof, as amended.
- (b) One (1) copy of the 2006 edition of the International Mechanical Code, marked Exhibit “D”, is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.
- (c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Mechanical Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former.

SECTION 8.

That Section 150.061 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.061. AMENDMENTS.

IMC CHAPTER 1.

******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.

IMC CHAPTER 3.

******Section 302.3; change to read as follows:***

302.3 Cutting, notching and boring in wood framing. When permitted by the *International Building Code*, the cutting, notching and boring of wood framing members shall comply with Sections 302.3.1 through 302.3.4.

****Section 304.6; delete.*

****Section 304.9; change to read as follows:*

304.9 Clearances from grade. Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending above adjoining grade a minimum of 3 inches (76 mm) or shall be suspended a minimum of 6 inches (152 mm) above adjoining grade.

306.3 Appliances in attics. Attics containing appliances requiring access shall be provided . . . *{bulk of paragraph unchanged}* . . . from the opening to the appliance. The passageway shall have continuous unobstructed solid flooring not less than 30 inches (762 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service 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. As a minimum, access to the attic space shall be provided by one of the following:

1. A permanent stair.
2. A pull down stair.
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 structural conditions.

Exception: The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

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

306.5 Equipment and appliances on roofs or elevated structures. Where equipment and appliances requiring access are installed on roofs or elevated structures at an aggregate height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access. Permanent exterior ladders providing roof access need not extend closer than 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment and appliance's 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).

A receptacle outlet shall be provided at or near the equipment and appliance location in accordance with the Electrical Code.

****Add Section 306.6.1 to read as follows:*

306.6.1 Catwalk. On roofs having slopes greater than 4 units vertical in 12 units horizontal, 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 the working platform at the appliance.

*****Add Section 306.7 to read as follows:**

306.7 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.

*****Add exception to read as follows:**

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 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 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.

*****Section 307.2.1; modify second sentence to read as follows:**

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

*****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 PVC pipe or tubing. All components shall be selected for the pressure, ~~and~~ temperature, and exposure rating of the installation. *{Remainder unchanged}*

*****Section 307.2.3; add item #4 to read as follows:**

4. Discharge, as noted, shall be to a conspicuous point of disposal to alert occupants in the event of a stoppage of the drain. 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.

IMC CHAPTER 4.

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

Exceptions:

1. *{existing exception unchanged}*
2. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

*****Section 403.2; add an exception to read as follows:**

Exception: Where the design professional demonstrates that an engineered ventilation system is designed in accordance with ASHRAE 62, the minimum required rate of outdoor air shall be permitted to be as specified in such engineered system design.

****Section 403.2.1; add an item #4 to read as follows:*

4. 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.

****Table 403.3, footnote g: change to read as follows:*

- g. Transfer air permitted in accordance with Section 403.2.2. 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.

IMC CHAPTER 5.

****Section 501.2; add a third exception to read as follows:*

Exceptions:

1. *{existing exception unchanged}*
2. *{existing exception unchanged}*
3. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

****Section 504.6; add a sentence to read as follows:*

The size of duct shall not be reduced along its developed length nor at the point of termination.

****Section 504.6.1; change to read as follows:*

504.6.1 Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location to the outlet terminal with not more than two bends. When extra bends are installed, the maximum length of the duct shall be reduced 2.5 feet (762 mm) for each 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each 90-degree (1.6 rad) bend that occur after the first two bends, measuring in the direction of airflow. The maximum length of the exhaust duct does not include the transition duct.

****Add exception to read as follows:*

Exception: Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions, and provided that a 4 inch by 6 inch sign red in color with white letters is permanently affixed to the structure stating the following:

Warning: Dryer must be approved for vent length not to exceed
40 feet total developed length (TDL).
Duct Size: (Number)
Total Developed Length: (Number)

IMC CHAPTER 6.

*****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 approved fire dampers installed in accordance with their listing. Hazardous exhaust ducts shall not penetrate fire walls.

END

SECTION 9.

That Section 150.050 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.050. THE 2006 EDITION OF THE INTERNATIONAL FUEL GAS CODE ADOPTED.

- (a) The International Fuel Gas Code, 2006 Edition, as published by the International Code Council, is hereby adopted, and designated as the building code of the City of Carrollton, and is made a part hereof, as amended.
- (b) One (1) copy of the 2006 edition of the International Fuel Gas Code, marked Exhibit "E", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.
- (c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Fuel Gas Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former.

SECTION 10.

That Section 150.051 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.051. AMENDMENTS.

IFGC CHAPTER 1.

*****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.

*****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.

IFGC CHAPTER 3.

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

304.10 Louvers and grilles. The required size of openings... {bulk of paragraph unchanged}... to provide the free area specified. Where the design and free area are not known, it shall be assumed that wood louvers will have 25-percent free area and metal louvers and grilles will have 50-percent free area. {Remainder of section unchanged.}

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

304.11 Combustion air ducts. {Bulk of section unchanged.}

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 grade level or the manufacturer's recommendation, whichever is more stringent.

*****Section 305.5; delete.**

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

305.7 Clearances from grade. Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending a minimum of 3 inches (76 mm) above adjoining grade or shall be suspended a minimum of 6 inches (152 mm) above adjoining grade.

*****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} . . . from the opening to the equipment. The passageway shall have continuous unobstructed solid flooring not less than 30 inches (762 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the equipment. 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. As a minimum, access to the attic space shall be provided by one of the following:

5. A permanent stair.
6. A pull down stair.
7. An access door from an upper floor level.

Exceptions: The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening. (*Delete Exception #2.*)

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

306.5 Equipment and appliances on roofs or elevated structures. Where equipment and appliances requiring access are installed on roofs or elevated structures at an aggregate height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access. Permanent exterior ladders providing roof access need not extend closer than 8 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment and appliance's 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).

A receptacle outlet shall be provided at or near the equipment and appliance location in accordance with the Electrical Code.

*****Add Section 306.5.1.1 to read as follows:**

306.5.1.1 Catwalk. On roofs having slopes greater than 4 units vertical in 12 units horizontal, 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 the working platform at the appliance.

*****Add Section 306.7 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.

*****Add exception as follows:**

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 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. 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.

IFGC CHAPTER 4.

*****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"

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

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

*****Section 404.6; change to read as follows:**

404.6 Piping in solid floors. Piping in solid floors shall be laid in channels in the floor and covered in a manner that will allow access to the piping with a minimum amount of damage to the building. Where such piping is subject to exposure to excessive moisture or corrosive substances, the piping shall be protected in an approved manner. As an alternative to installation in channels, the piping shall be installed in accordance with Section 404.11

*****Section 404.9; change to read as follows:**

404.9 Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches (458 mm) below grade.

*****Section 404.9.1; delete**

*****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.

*****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. For tests requiring a pressure of 3 psig, mechanical gauges shall utilize a dial with a minimum diameter of three and one half inches (3 1/2"), 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 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.

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

406.4.1 Test pressure. The test pressure to be used shall be not less than 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. 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.

*****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.)

*****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.

*****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.

IFGC CHAPTER 6.

*****Section 614.6; add a sentence to read as follows:**

The size of duct shall not be reduced along its developed length nor at the point of termination.

*****Section 614.6.1; change to read as follows:**

614.6.1 Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location to the outlet terminal with not more than two bends. When extra bends are installed, the maximum length of the duct shall be reduced 2.5 feet (762 mm) for each 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each 90-degree (1.6 rad) bend that occur after the first two bends, measuring in the direction of airflow.

{Exception is unchanged}

*****Section 621.2; change to read 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.

*****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*.

END

SECTION 11.

That Section 150.010 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.010. THE 2006 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE ADOPTED.

- (a) The International Residential Code, 2006 Edition, as published by the International Code Council, is hereby adopted, and designated as the building code of the City of Carrollton, and is made a part hereof, as amended.
- (b) One (1) copy of the 2006 edition of the International Residential Code, marked Exhibit “F”, is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.
- (c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Residential Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former.

SECTION 12.

That Section 150.011 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.011. AMENDMENTS.

IRC CHAPTER 1.

******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. 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 ICC *Electrical Code* shall mean the Electrical Code as adopted.

Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

Exception: Where enforcement . . .{remainder of exception unchanged}. . . .

*****Section R105.2, item #1; change to read as follows:**

3. One-story detached accessory structures, provided the floor area does not exceed 120 square feet (11.15 m²).

*****Section R105.2, item #2; change to read as follows:**

4. Fences less than 20 feet in length.

*****Section R105.2, item #5; change to read as follows:**

7. Structures, sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade and not over any basement or story below.

*****Section R105.2, item #10; change to read as follows:**

16. Satellite dishes with a maximum diameter of 2 ½ feet or less.

*****Section R105.2, item #11; add to read as follows:**

17. Foundation repairs with a valuation less than \$3000.00.

*****Section R105.3.1; change to read as follows:**

R105.3.1 Action on application. The building official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the building official shall reject such application. If the building official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the building official shall issue a permit therefore as soon as practicable.

*****Section R108.4.1; add to read as follows:**

R108.4.1 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to an investigation fee established by the building official that shall be in addition to the required permit fees. Such investigation fee shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by the city fee schedule. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

*****Section R109.1.3; change to read as follows:**

R109.1.3 Floodplain inspections. For construction permitted in areas prone to flooding as established by Table R301.2(1), upon . . . *{bulk of section unchanged}* . . . construction, the building official may require submission . . . *{remainder of section unchanged}*.

***Section R110 (R110.1 through R110.4); delete.

***Section R112.2.1 & R112.2.2 delete.

***Section R114.1; change to read as follows:

R114.1 Notice to owner. Upon notice from the building official that work on any building or structure is being prosecuted contrary to the provisions of this code or in an unsafe and dangerous manner, such work shall be immediately stopped. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner’s agent or to the person doing the work.

IRC CHAPTER 2.

***Amend Section 202 GENERAL DEFINITIONS by adding 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 than 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.

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

TOWNHOUSE. A single-family dwelling unit constructed in a group of attached units separated by property lines in which each unit extends from foundation to roof and with open space on at least two sides.

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

GROUND SNOW LOAD	WIND SPEED ^{ed} (mph)	SEISMIC DESIGN CATEGORY ^{eh}
5 lb/ft ²	90 (3-sec-gust)/75 fastest mile	A

SUBJECT TO DAMAGE FROM			
Weathering ^a	Frost line depth ^b	Termite ^c	Decay ^d
moderate	6"	very heavy	

WINTER DESIGN TEMP ^{fe}	ICE SHIELD UNDER-LAYMENT REQUIRED ^{ih}	FLOOD HAZARDS ^{hg}	AIR FREEZING INDEX ^{ji}	MEAN ANNUAL TEMP ^{ki}
22°F	No	local code	69°F	64.9°F

****No changes to footnotes*

IRC CHAPTER 3.

****Figure R301.2(7); delete and renumber figures as needed.*

****Section R302.1; add a fourth exception as follows:*

Exceptions:

4. Open metal carport structures may be constructed within zero (0) feet of the property line without fire-resistive or opening protection when the location of such is approved as required by other adopted ordinances.

****Section R303.3, exception; change to read as follows:*

Exception: The glazed areas shall not be required where artificial light and a mechanical ventilation system, complying with one of the following, are provided.

1. The minimum ventilation rates shall be 50 cfm (23.6 L/s) for intermittent ventilation or 20 cfm (9.4 L/s) for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.
2. Bathrooms 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.

****Section R303.8; change to read as follows:*

R303.8 Required heating. Every dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms at the design temperature.
{Remainder of section unchanged}

****Section R311.2.2; change to read as follows:*

R311.2.2 Under stair protection. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 5/8-inch (15.8 mm) fire-rated gypsum board or one-hour fire-resistive construction.

****Section R317.1; add a third exception to read as follows:*

Exceptions:

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

****Section R317.1.2; add to read as follows:*

An automatic sprinkler system shall be provided throughout all buildings with two or more dwelling units. A residential sprinkler system installed in accordance with Section 903.3 of the International Fire Code shall be permitted.

****Section R317.2.1.1; add to read as follows:*

An automatic sprinkler system shall be provided throughout all buildings with two or more dwelling units. A residential sprinkler system installed in accordance with Section 903.3 of the International Fire Code shall be permitted.

****Section R318; delete.*

****Section R324.1; change to read as follows:*

R324.1 General. Buildings and structures, when permitted to be constructed in flood hazard areas . . . *{bulk of section unchanged}* . . . shall be designed and constructed as required in accordance with the provisions contained in this section or by other local provisions as applicable.

IRC CHAPTER 7.

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

For 2.67 square feet (0.248 m²) of wall area, the following dimensions shall be adhered to:

1. When ties are placed on studs 16 in (407 mm) o.c., they shall be spaced no further apart than 24 in (610 mm) vertically starting approximately 12 in (305 mm) from the foundation.
2. When ties are placed on studs 24 in (610 mm) o.c., they shall be spaced no further apart than 16 in (407 mm) vertically starting approximately 8 in (203 mm) from the foundation.

IRC CHAPTER 8.

****Section R801.3; is changed to read as follows: Reserved.*

IRC CHAPTER 9.

****Add Section R902.3 to read as follows:*

R902.3 Minimum Roof Class. All roof coverings shall be a minimum Class C. All individual replacement shingles or shakes shall be a minimum Class C.

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

***Section R907.1; add a sentence to read as follows:

All individual replacement shingles or shakes shall comply with Section R902.3.

IRC CHAPTER 11.

***Amend Section N1101.2 to read as follows:

N1102.2 Compliance. Compliance shall be demonstrated by either meeting the requirements of the *International Energy Conservation Code* or meeting the requirements of this chapter. Climate zones from Figure N1101.2, Figure N1101.2.1, Table N1101.2 or Table N1101.2.1 shall be used in determining the applicable requirements from this chapter.

***Amend Section N1102.2.1 to read as follows:

N1101.2.1 Warm humid counties. Warm humid counties are listed in Table N1101.2.1 and Table N1102.2.2.

***Amend Section N1101.7 to read as follows:

N1101.7 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.

***Add Figure N1102.2.1 to read as follows:

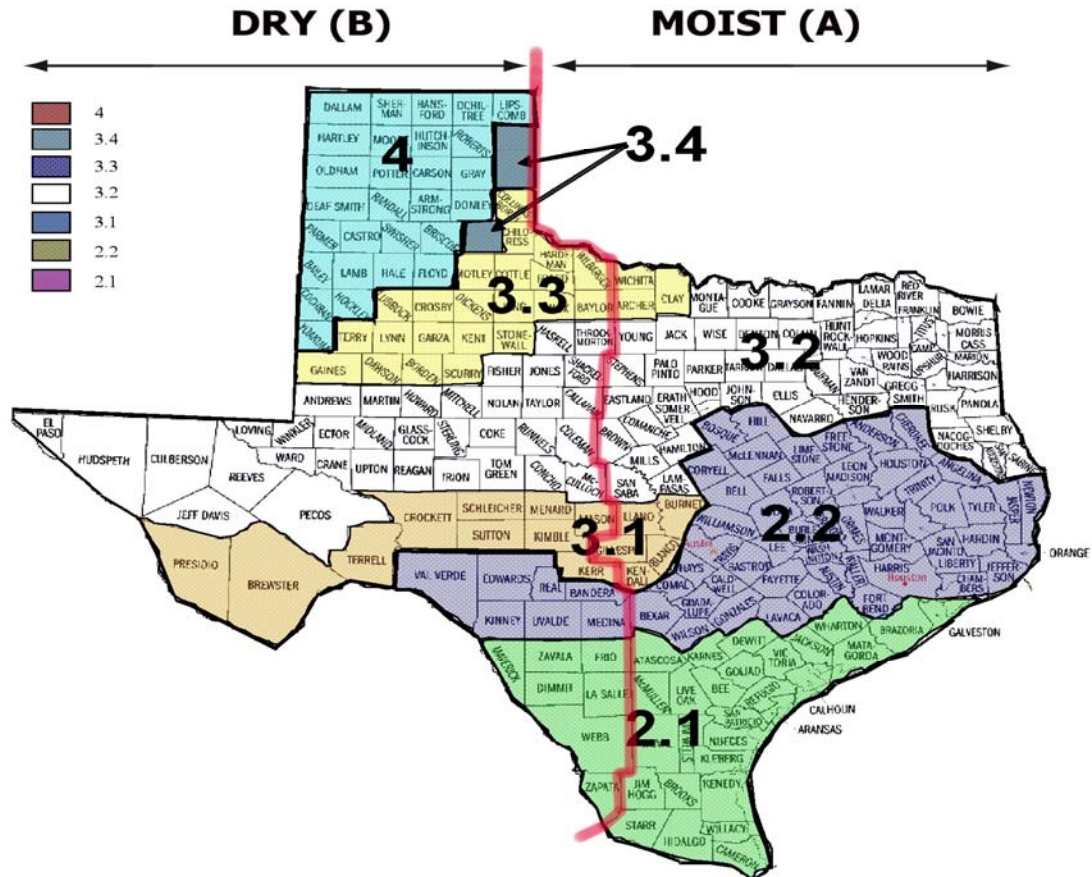


Figure N1102.2.1 TEXAS CLIMATE ZONES

***Add Table N1101.2.1 to read as follows:

TABLE N1101.2.1 CLIMATE ZONES AND SUB CLIMATE ZONES FOR TEXAS

Zone 2							
ANDERSON	2.2	DE WITT	2.1	JIM HOGG	2.1	ORANGE	2.2
ANGELINA	2.2	DIMMIT	2.1	JIM WELLS	2.1	POLK	2.2
ARANSAS	2.1	DUVAL	2.1	KARNES	2.1	REAL	2.2
ATASCOSA	2.1	EDWARDS	2.2	KENEDY	2.1	REFUGIO	2.1
AUSTIN	2.2	FALLS	2.2	KINNEY	2.2	ROBERTSON	2.2
BANDERA	2.2	FAYETTE	2.2	KLEBERG	2.1	SAN JACINTO	2.2
BASTROP	2.2	FORT BEND	2.2	LA SALLE	2.1	SAN PATRICIO	2.1
BEE	2.1	FREESTONE	2.2	LAVACA	2.2	STARR	2.1
BELL	2.2	FRIO	2.1	LEE	2.2	TRAVIS	2.2
BEXAR	2.2	GALVESTON	2.1	LEON	2.2	TRINITY	2.2
BOSQUE	2.2	GOLIAD	2.1	LIBERTY	2.2	TYLER	2.2

SUMMARY OF AMENDMENTS**2006 International Codes**

BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	UVALDE	2.2
BRAZOS	2.2	GRIMES	2.2	LIVE OAK	2.1	VAL VERDE	2.2
BROOKS	2.1	GUADALUPE	2.2	MADISON	2.2	VICTORIA	2.1
BURLESON	2.2	HARDIN	2.2	MATAGORDA	2.1	WALKER	2.2
CALDWELL	2.2	HARRIS	2.2	MAVERICK	2.1	WALLER	2.2
CALHOUN	2.1	HAYS	2.2	MCLENNAN	2.2	WASHINGTON	2.2
CAMERON	2.1	HIDALGO	2.1	MCMULLEN	2.1	WEBB	2.1
CHAMBERS	2.2	HILL	2.2	MEDINA	2.2	WHARTON	2.1
CHEROKEE	2.2	HOUSTON	2.2	MILAM	2.2	WILLACY	2.1
COLORADO	2.2	JACKSON	2.1	MONTGOMERY	2.2	WILLIAMSON	2.2
COMAL	2.2	JASPER	2.2	NEWTON	2.2	WILSON	2.2
CORYELL	2.2	JEFFERSON	2.2	NUECES	2.1	ZAPATA	2.1

Zone 3

ANDREWS	3.2	EL PASO	3.2	KERR	3.1	ROCKWALL	3.2
ARCHER	3.3	ELLIS	3.2	KIMBLE	3.1	RUNNELS	3.2
BAYLOR	3.3	ERATH	3.2	KING	3.3	RUSK	3.2
BLANCO	3.1	FANNIN	3.2	KNOX	3.3	SABINE	3.2
BORDEN	3.3	FISHER	3.2	LAMAR	3.2	SAN AUGUSTINE	3.2
BOWIE	3.2	FOARD	3.3	LAMPASAS	3.2	SAN SABA	3.2
BREWSTER	3.1	FRANKLIN	3.2	LLANO	3.1	SCHLEICHER	3.1
BROWN	3.2	GAINES	3.3	LOVING	3.2	SCURRY	3.3
BURNET	3.1	GARZA	3.3	LUBBOCK	3.3	SHACKELFORD	3.2
CALLAHAN	3.2	GILLESPIE	3.1	LYNN	3.3	SHELBY	3.2
CAMP	3.2	GLASSCOCK	3.2	MARION	3.2	SMITH	3.2
CASS	3.2	GRAYSON	3.2	MARTIN	3.2	SOMERVELL	3.2
CHILDRESS	3.3	GREGG	3.2	MASON	3.1	STEPHENS	3.2
CLAY	3.3	HALL	3.4	MCCULLOCH	3.2	STERLING	3.2
COKE	3.2	HAMILTON	3.2	MENARD	3.1	STONEWALL	3.3
COLEMAN	3.2	HARDEMAN	3.3	MIDLAND	3.2	SUTTON	3.1
COLLIN	3.2	HARRISON	3.2	MILLS	3.2	TARRANT	3.2
COLLINGSWORTH	3.3	HASKELL	3.2	MITCHELL	3.2	TAYLOR	3.2
COMANCHE	3.2	HEMPHILL	3.4	MONTAGUE	3.2	TERRELL	3.1
CONCHO	3.2	HENDERSON	3.2	MORRIS	3.2	TERRY	3.3
COOKE	3.2	HOOD	3.2	MOTLEY	3.3	THROCKMORTON	3.2
COTTLE	3.3	HOPKINS	3.2	NACOGDOCHES	3.2	TITUS	3.2
CRANE	3.2	HOWARD	3.2	NAVARRO	3.2	TOM GREEN	3.2
CROCKETT	3.1	HUDSPETH	3.2	NOLAN	3.2	UPSHUR	3.2
CROSBY	3.3	HUNT	3.2	PALO PINTO	3.2	UPTON	3.2
CULBERSON	3.2	IRION	3.2	PANOLA	3.2	VAN ZANDT	3.2
DALLAS	3.2	JACK	3.2	PARKER	3.2	WARD	3.2
DAWSON	3.3	JEFF DAVIS	3.2	PECOS	3.2	WHEELER	3.4
DELTA	3.2	JOHNSON	3.2	PRESIDIO	3.1	WICHITA	3.3
DENTON	3.2	JONES	3.2	RAINS	3.2	WILBARGER	3.3
DICKENS	3.3	KAUFMAN	3.2	REAGAN	3.2	WINKLER	3.2
EASTLAND	3.2	KENDALL	3.1	RED RIVER	3.2	WISE	3.2
ECTOR	3.2	KENT	3.3	REEVES	3.2	WOOD	3.2
						YOUNG	3.2

Zone 4

ARMSTRONG	DEAF SMITH	HOCKLEY	PARMER
BAILEY	DONLEY	HUTCHINSON	POTTER
BRISCOE	FLOYD	LAMB	RANDALL
CARSON	GRAY	LIPSCOMB	ROBERTS
CASTRO	HALE	MOORE	SHERMAN
COCHRAN	HANSFORD	OCHILTREE	SWISHER
DALLAM	HARTLEY	OLDHAM	YOAKUM

*****Add Table N1102.2.2 to read as follows:**

TABLE N1101.2.2 WARM HUMID COUNTIES FOR TEXAS							
ANDERSON	2.2	DUVAL	2.1	KAUFMAN	3.2	RED RIVER	3.2
ANGELINA	2.2	EDWARDS	2.2	KENDALL	3.1	REAL	2.2
ARANSAS	2.1	ELLIS	3.2	KENEDY	2.1	REFUGIO	2.1
ATASCOSA	2.1	ERATH	3.2	KINNEY	2.2	ROBERTSON	2.2
AUSTIN	2.2	FALLS	2.2	KLEBERG	2.1	ROCKWALL	3.2
BANDERA	2.2	FAYETTE	2.2	LA SALLE	2.1	RUSK	3.2
BASTROP	2.2	FORT BEND	2.2	LAMAR	3.2	SABINE	3.2
BEE	2.1	FRANKLIN	3.2	LAMPASAS	3.2	SAN AUGUSTINE	3.2
BELL	2.2	FREESTONE	2.2	LAVACA	2.2	SAN JACINTO	2.2
BEXAR	2.2	FRIO	2.1	LEE	2.2	SAN PATRICIO	2.1
BLANCO	3.1	GALVESTON	2.1	LEON	2.2	SAN SABA	3.2
BOSQUE	2.2	GILLESPIE	3.1	LLANO	3.1	SHELBY	3.2
BOWIE	3.2	GOLIAD	2.1	LIBERTY	2.2	SMITH	3.2
BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	STARR	2.1
BROWN	3.2	GREGG	3.2	LIVE OAK	2.1	SOMMERVELL	3.2
BRAZOS	2.2	GRIMES	2.2	MADISON	2.2	TARRANT	3.2
BROOKS	2.1	GUADALUPE	2.2	MARION	3.2	TITUS	3.2
BURLESON	2.2	HAMILTON	3.2	MATAGORDA	2.1	TRAVIS	2.2
BURNET	3.1	HARDIN	2.2	MAVERICK	2.1	TRINITY	2.2
CALDWELL	2.2	HARRIS	2.2	MCLENNAN	2.2	TYLER	2.2
CALHOUN	2.1	HARRISON	3.2	MCMULLEN	2.1	UPSHUR	3.2
CAMERON	2.1	HAYS	2.2	MEDINA	2.2	UVALDE	2.2
CHAMBERS	2.2	HENDERSON	3.2	MILAM	2.2	VAL VERDE	2.2
CAMP	3.2	HIDALGO	2.1	MILLS	3.2	VAN ZANDT	3.2
CASS	3.2	HOOD	3.2	MONTGOMERY	2.2	VICTORIA	2.1
CHEROKEE	2.2	HOPKINS	3.2	MORRIS	3.2	WALKER	2.2
COLLIN	3.2	HILL	2.2	NACOGDOCHES	3.2	WALLER	2.2
COLORADO	2.2	HOUSTON	2.2	NAVARRO	3.2	WASHINGTON	2.2
COMAL	2.2	HUNT	3.2	NEWTON	2.2	WEBB	2.1
COMANCHE	3.2	JACKSON	2.1	NUECES	2.1	WHARTON	2.1
CORYELL	2.2	JASPER	2.2	ORANGE	2.2	WILLACY	2.1
DALLAS	3.2	JEFFERSON	2.2	PALO PINTO	3.2	WILLIAMSON	2.2
DELTA	3.2	JIM HOGG	2.1	PANOLA	3.2	WILSON	2.2
DENTON	3.2	JIM WELLS	2.1	PARKER	3.2	WOOD	3.2
DE WITT	2.1	JOHNSON	3.2	POLK	2.2	ZAPATA	2.1
DIMMIT	2.1	KARNES	2.1	RAINS	3.2	ZAVALA	2.1

*****Amend Section N1102.1 Insulation and fenestration criteria; to read as follows:**

1102.1 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Table N1102.1 based on the climate zone specified in Table N1101.2.1.

When compliance using Table 1102.1 is demonstrated with a ceiling *R*-value of R30 or less, no more than 33% of the total projected ceiling area may be of cathedral type construction (ceiling joist/roof rafter assembly) and the required insulation *R*-value may be reduced to a minimum of R22 insulation when the remaining ceiling area insulation is increased to R38.

***Amend Table N1102.1 to read as follows:

TABLE N1102.1

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (TEXAS)^a

CLIMATE - SUB CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION U-FACTOR	MAX SKYLIGHT U-FACTOR ^b	MAX GLAZED FENESTRATION SHGC	MIN CEILING R-VALUE	MIN WOOD FRAME WALL R-VALUE ^d	MASS WALL R-VALUE	MIN FLOOR R-VALUE	MIN BASEMENT WALL R-VALUE	MIN SLAB R-VALUE & DEPTH ^c	MIN CRAWL SPACE WALL R-VALUE
2.1	15	0.75	0.75	0.358	19	13	6	19	0	0	5
	20	0.70	0.75	0.38	30	13	6	19	0	0	5
	25	0.65	0.75	0.35	30	13	6	19	0	0	5
	30	0.54	0.75	0.35	38	13	6	19	0	0	5
2.2	15	0.65	0.75	0.38	30	13	6	19	5	0	6
	20	0.65	0.75	0.38	38	13	6	19	6	0	6
	25	0.54	0.75	0.35	38	13	6	19	8	0	10
	30	0.46	0.75	0.35	38	16, 13 + 3.7 ^e	6	19	8	0	10
3.1	15	0.65	0.65	0.40	30	13	6	19	5	0	6
	20	0.55	0.65	0.40	38	13	6	19	5	0	6
	25	0.54	0.65	0.35	38	13	6	19	8	0	10
	30	0.46	0.65	0.35	38	16, 13 + 3.7 ^e	7	19	8	0	10
3.2	15	0.60	0.65	0.40	30	13	6	19	6	0	7
	20	0.54	0.65	0.40	38	13	6	19	6	0	7
	25	0.51	0.65	0.40	38	16, 13 + 3.7 ^e	7	19	6	0	7
	30	0.46	0.65	0.38	38	16, 13 + 3.7 ^e	7	19	6	0	7
3.3	15	0.51	0.65	0.40	30	13	6	19	7	0	8
	20	0.45	0.65	0.40	38	13	6	19	7	0	9
	25	0.40	0.65	0.40	38	16, 13 + 3.7 ^e	7	19	7	0	9
	30	0.40	0.65	0.40	38	19, 13 + 8.1 ^e	9	19	7	0	9
3.4	15	0.45	0.60	NR	38	13	6	19	8	5, 2 ft	11
	20	0.37	0.60	NR	38	13	6	19	8	6, 2 ft	13
	25	0.37	0.60	NR	38	19, 13 + 8.1 ^e	9	19	8	6, 2 ft	13
	30	0.37	0.60	NR	38	19, 13 + 8.1 ^e	9	30	8	6, 2 ft	13
4	15	0.45	0.60	NR	38	13	8	19	8	5, 2 ft	11
	20	0.37	0.60	NR	38	13	8	19	9	6, 2 ft	13
	25	0.37	0.60	NR	38	19, 13 + 8.1 ^e	10	19	9	6, 2 ft	13
	30	0.37	0.60	NR	38	19, 13 + 8.1 ^e	10	30	9	6, 2 ft	13

For SI: 1 foot = 304.8 mm.

- R-values are minimums. U-factors and SHGC are maximums. R-19 shall be permitted to be compressed into a 2 x 6 cavity.
- The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
- R-5 shall be added to the required slab edge R-values for heated slabs.
- The total R-value may be achieved with a combination of cavity insulation and insulating sheathing that covers 100% of the exterior wall.
- The wall insulation may be the sum of the two values where the first value is the cavity insulation and the second value is insulating sheathing. The combination of cavity insulation plus insulating sheathing may be used where structural sheathing covers not more than 25% of the exterior wall area and insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of exterior wall area then the wall insulation requirement may only be satisfied with the single insulation value.

***Amend Table N1102.1.2 to read as follows:

TABLE N1102.1.2
EQUIVALENT U-FACTORS^a

CLIMATE - SUB CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION U-FACTOR	MAX SKYLIGHT U-FACTOR	MAX CEILING U-FACTOR	MAX WOOD FRAME WALL U-FACTOR	MAX MASS WALL U-FACTOR	MAX FLOOR U-FACTOR	MAX BASEMENT WALL U-FACTOR	MAX CRAWL SPACE WALL U-FACTOR
2.1	15	0.75	0.75	0.039	0.082	0.124	0.047	0.360	0.136
	20	0.70	0.75	0.034	0.082	0.124	0.047	0.360	0.136
	25	0.65	0.75	0.034	0.082	0.124	0.047	0.360	0.136
	30	0.54	0.75	0.030	0.082	0.124	0.047	0.360	0.136
2.2	15	0.65	0.75	0.034	0.082	0.124	0.047	0.210	0.100
	20	0.65	0.75	0.030	0.082	0.124	0.047	0.210	0.100
	25	0.54	0.75	0.030	0.082	0.124	0.047	0.119	0.065
	30	0.46	0.75	0.030	0.071	0.124	0.047	0.119	0.065
3.1	15	0.65	0.65	0.034	0.082	0.124	0.047	0.210	0.100
	20	0.55	0.65	0.030	0.082	0.124	0.047	0.210	0.100
	25	0.54	0.65	0.030	0.082	0.124	0.047	0.119	0.065
	30	0.46	0.65	0.030	0.071	0.112	0.047	0.119	0.065
3.2	15	0.60	0.65	0.034	0.082	0.124	0.047	0.179	0.075
	20	0.54	0.65	0.030	0.082	0.124	0.047	0.179	0.075
	25	0.51	0.65	0.030	0.071	0.112	0.047	0.179	0.075
	30	0.46	0.65	0.030	0.071	0.112	0.047	0.179	0.075
3.3	15	0.51	0.65	0.034	0.082	0.124	0.047	0.149	0.061
	20	0.45	0.65	0.030	0.082	0.124	0.047	0.149	0.058
	25	0.40	0.65	0.030	0.075	0.112	0.047	0.149	0.058
	30	0.40	0.65	0.030	0.061	0.094	0.047	0.149	0.058
3.4	15	0.45	0.60	0.030	0.082	0.124	0.047	0.119	0.083
	20	0.37	0.60	0.030	0.082	0.124	0.047	0.119	0.152
	25	0.37	0.60	0.030	0.061	0.094	0.047	0.119	0.152
	30	0.37	0.60	0.030	0.061	0.094	0.033	0.119	0.152
4	15	0.45	0.60	0.030	0.082	0.102	0.047	0.119	0.083
	20	0.37	0.60	0.030	0.082	0.102	0.047	0.089	0.152
	25	0.37	0.60	0.030	0.061	0.087	0.047	0.089	0.152
	30	0.37	0.60	0.030	0.061	0.087	0.033	0.089	0.152

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

***Amend Section N1102.3.2 Glazed fenestration SHGC to read as follows:

N1102.3.2 Glazed fenestration SHGC. An area-weighted average of fenestration products more than 50 percent glazed shall be permitted to satisfy the SHGC requirements. In sub climate zones 2.1, 2.2, 3.1, 3.2 and 3.3 the maximum area-weighted average and the maximum SHGC shall not exceed 0.40.

***Add Section N1102.2.11. Insulation installed in wall. to read as follows:

N1102.2.11. Insulation installed in walls. Insulation batts installed in walls shall be totally surrounded by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood

structural panel sheathing or other equivalent material approved by the building official.

*****Amend Section N1102.3.3 Glazed fenestration exemption. to read as follows:**

N1102.3.3 Glazed fenestration exemption. Up to 1 percent of glazed fenestration per dwelling unit shall be permitted to be exempt from *U*-factor and SHGC requirements in Section 402.1.

*****Amend Section N1102.3.5 Thermally isolated sunroom *U*-factor. to read as follows:**

N1102.3.5 Thermally isolated sunroom. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

*****Amend Section N1102.3.6 Replacement fenestration. to read as follows:**

N1102.3.6 Replacement fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for *U*-factor in Table N1102.3.6.

Exceptions:

1. Replacement skylights shall have a maximum *U*-factor for 0.60 when installed in all sub climate zones except for 2.1.
2. For buildings constructed in conformance with an energy code as required by State of Texas Senate Bill Number 5, 77th Legislature, replacement fenestration units may comply with the original construction documents or applicable *U*-factor in Table 402.1.1.

*****Add Section N1102.3.7 Prescriptive path for additions.; to read as follows:**

N1102.3.7 Prescriptive path for additions. As an alternative to demonstrating compliance, additions with a conditioned floor area less than 500 square feet (46.5 m²) to existing single-family residential buildings and structures shall meet the prescriptive envelope component criteria in Table N1102.3.7 for the sub climate zone applicable to the location. The *U*-factor of each individual fenestration product (windows, doors and skylights) shall be used to calculate and area-weighted average fenestration product *U*-factor for the addition, which shall not exceed the applicable listed values in Table N1102.3.7. For additions, other than sunroom additions, the total area of fenestration products shall not exceed 40 percent of the gross wall and roof area of the addition. The *R*-values for opaque thermal envelope components shall be equal to or greater than the applicable listed values in Table N1102.3.7.

Conditioned sunroom additions shall maintain thermal isolation; shall not be used as kitchens or sleeping rooms.

In sub climate zones 2.1, 2.2, 3.1, 3.2 and 3.3, the combined solar heat gain coefficient (the area weighted average) of all glazed fenestration products used in additions and as replacement windows in accordance with this section shall not exceed 0.40.

***Add Table N1102.3.7 PRESCRIPTIVE ENVELOPE COMPONENT CRITERIA ADDITIONS TO AND REPLACEMENT WINDOWS FOR EXISTING DETACHED ONE- AND TWO-FAMILY DWELLINGS to read as follows:

**Table N1102.3.7 PRESCRIPTIVE ENVELOPE COMPONENT CRITERIA
ADDITIONS TO AND REPLACEMENT WINDOWS FOR EXISTING DETACHED
ONE- AND TWO-FAMILY DWELLINGS^d**

SUB CLIMATE ZONES	MAXIMUM	MINIMUM					
	Fenestration U-factor	Ceiling R-value ^{a,c}	Wall R-value ^c	Floor R-value	Basement wall R-value ^b	Slab perimeter R-value	Crawl space wall R-value
2.1	0.75	R-26	R-13	R-11	R-5	R-0	R-5
2.2, 3.1, 3.2, 3.3 and 3.4	0.50	R-30	R-13	R-19	R-8	R-0	R-10
4	0.50	R-38	R-13	R-21	R-10	R-0	R-19

- a. "Ceiling R-value" shall be required for flat or inclined (cathedral) ceilings. Floors over outside air shall meet "Ceiling R-value" requirements.
- b. Basement wall insulation to be installed in accordance with Section 402.2.6.
- c. "Crawl space wall R-value" shall apply to unventilated crawl spaces only. Crawl space insulation shall be installed in accordance with Section 402.2.8.
- d. Sunroom additions shall be required to have a maximum fenestration U-factor of 0.5, in all sub climate zones except sub climate zone 2.1. In all sub climate zones, the minimum ceiling R-value for sunroom additions shall be R-19 and the minimum wall R-value shall be R-13.

IRC CHAPTER 13.

***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} . . . from the opening to the appliance. The passageway shall have continuous unobstructed solid flooring in accordance with Chapter 5 not less than 24- 30 inches (610- 762 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present along all 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 where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, access to the attic space shall be provided by one of the following:

8. A permanent stair.
9. A pull down stair.
10. An access door from an upper floor level.

Exception: The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

***Section M1305.1.3.1; add a sentence to read as follows:

Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

***Section M1305.1.4.1; change to read as follows:

M1305.1.4.1 Ground clearance. Appliances supported from the ground shall be level and firmly supported on a concrete slab or other approved material extending above the adjoining ground a minimum of 3 inches (76 mm). Appliances suspended from the floor shall have a clearance of not less than 6 inches (152 mm) above the ground.

*****Section M1305.1.4.3; add a sentence to read as follows:**

Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

*****Section M1307.3.1; delete.**

IRC CHAPTER 15.

*****Section M1501.2; delete and replace with the following:**

M1501.2 Exhaust duct size. The minimum diameter of the exhaust duct shall be as recommended by the manufacturer, shall be at least the diameter of the appliance outlet and shall be a minimum nominal size of 4 inches (102 mm) in diameter. The size of duct shall not be reduced along its developed length nor at the point of termination.

*****Section M1501.3; change to read as follows:**

M1501.3 Length limitation. The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location to the wall or roof termination with not more than two bends. When extra bends are installed, the maximum length of the duct shall be reduced 2.5 feet (762 mm) for each 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each 90-degree (1.6 rad) bend that occur after the first two bends, measuring in the direction of airflow. The maximum length of the exhaust duct does not include the transition duct.

{Exception is unchanged}

IRC CHAPTER 20.

*****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. Direct-vent water heaters are not required to be installed within an enclosure.

IRC CHAPTER 24.

***Section G2408.3; delete.

***Section G2412.5; 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"

***Section G2413.3; add an exception to read as follows:

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

***Section G2415.6; change to read as follows:

G2415.6 (404.6) Piping in solid floors. Piping in solid floors shall be laid in channels in the floor and covered in a manner what will allow access to the piping with a minimum amount of damage to the building. Where such piping is subject to exposure to excessive moisture or corrosive substances, the piping shall be protected in an approved manner. As an alternative to installation in channels, the piping shall be installed in accordance with Section G2415.11 (404.11)

***Section G2415.9; change to read as follows:

G2415.9 (404.9) Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches (458 mm) below grade.

***Section G2415.9.1; delete.

***Section G2417.1; 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 2417.7.4 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.

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

G2417.4 (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. For tests requiring a pressure of 3 psig, mechanical 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, mechanical 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.

*****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 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. 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.

*****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 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.

*****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.

*****Section G2421.1; 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 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.

*****Section G2439.5; add a sentence to read as follows:**

The size of duct shall not be reduced along its developed length nor at the point of termination.

*****Section G2439.5.1; change to read as follows:**

G2439.5.1 (614.6.1) Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet (7620 mm) from the dryer location to the outlet terminal with not more than two bends. When extra bends are installed, the maximum length of the duct shall be reduced 2 1/2 feet (762 mm) for each 45-degree (0.79 rad) bend and 5 feet (1524 mm) for each 90-degree (1.6 rad) bend that occur after the first two bends, measuring in the direction of airflow.

{Exception is unchanged}

*****Section G2445.2; change 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 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 *International Fuel Gas Code* Section 108.7.

*****Section G2448.1.1; 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.

IRC CHAPTER 25.

*****Section P2503.5.1, item 1; add a second paragraph to read as follows:**

Shower receptors shall be tested for water tightness by filling with water to the level of the rough threshold. The drain shall be plugged in a manner so that both sides of pans shall be subjected to the test at the point where it is clamped to the drain.

*****Section P2503.7.2; change to read as follows:**

P2503.7.2 Testing. Reduced pressure principle . . . *{bulk of section unchanged}* . . . at the time of installation, immediately after repairs or relocation and at regular intervals as required by applicable state or local provisions.

IRC CHAPTER 26.

****Section P2603.2.1; change to read as follows:*

P2603.2.1 Protection against physical damage. In concealed locations...*{bulk of section unchanged}*...Protective shield plates shall be a minimum of .062-inch-thick (1.6 mm) steel and shall cover the area of the pipe where the member is notched or bored.

****Section P2603.6.1; delete and replace with the following:*

P2603.6.1 Sewer depth. Building sewers shall be a minimum of 12 inches (304 mm) below grade.

IRC CHAPTER 27.

****Section P2709.1; add an exception to read as follows:*

Exception: Showers designed to comply with ICC/ANSI A117.1.

IRC CHAPTER 28.

****Section P2801.6; add an exception as follows:*

Exception: Elevation of the ignition source is not required for water heaters that are listed as flammable vapor resistant and for installation without elevation.

IRC CHAPTER 29.

****Section P2902.4.3; changed to read as follows:*

P2902.4.3 Lawn Irrigation Systems. The potable water supply system 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 . . . *{remainder of section unchanged}*.

****Table P2904.4.1 & P2904.5; delete "Polybutylene (PB) plastic pipe and tubing".*

****Sections P2904.5.1 and P2904.14; delete reference to "PB" plastic pipe.*

IRC CHAPTER 30.

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

P3005.2.6 Upper terminal. 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.

IRC CHAPTER 31.

****Section P3111; delete.*

****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.

IRC CHAPTERS 33-42.

****Chapters 33 through 42; delete. Replace with the electrical code as adopted.*

APPENDIX G

(c) *Section AG 105.2.4 Barrier Requirements Outdoor Swimming Pools: Add an exception as follows:*

Exception: Horizontal members may be located on the outside of the barrier provided that 45 degree bevels are continuously placed on the topside of the second horizontal member away from grade.

*** *Section AG 109; added to read as follows:*

AG 109 Plumbing requirements.

AG 109.1 General. All residential swimming pools are required to have a drain pipe run from the pool filter system to the sanitary sewer system with an indirect 1 inch air gap connection to a P trap.

END

SECTION 13.

That Section 150.120 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.120. THE 2006 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE ADOPTED.

- (a) The International Energy Conservation Code, 2006 Edition, as published by the International Code Council, is hereby adopted, and designated as the building code of the City of Carrollton, and is made a part hereof, as amended.
- (b) One (1) copy of the 2006 edition of the International Energy Conservation Code, marked Exhibit "G", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.
- (c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Energy Conservation Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former.

SECTION 14.

That Section 150.121 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

SECTION § 150.121. AMENDMENTS.

IECC CHAPTER 1.

*****Amend Section 101.4.2 Historic Buildings to read as follows:**

101.4.2 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 or the Keeper of the National Register of Historic Places, 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.

*****Amend Section 103.1.1 Above code program to read as follows:**

103.3.1.1 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.

*****Amend SECTION 202 GENERAL DEFINITIONS by adding 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 than 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.

*****Amend Section 301.1 to read as follows:**

301.1 General. Climate zones from Figure 301.1, Figure 301.2, Table 301.1(1), Table 301.2(1), or Table 301.3(3) shall be used in determining the applicable requirements from Chapters 4 & 5. Locations not in Table 301.1 (outside the US) shall be assigned a climate zone based on Section 301.3.

*****Amend the code by inserting FIGURE 301.2 –TEXAS CLIMATE ZONES immediately following Figure 301.1:**

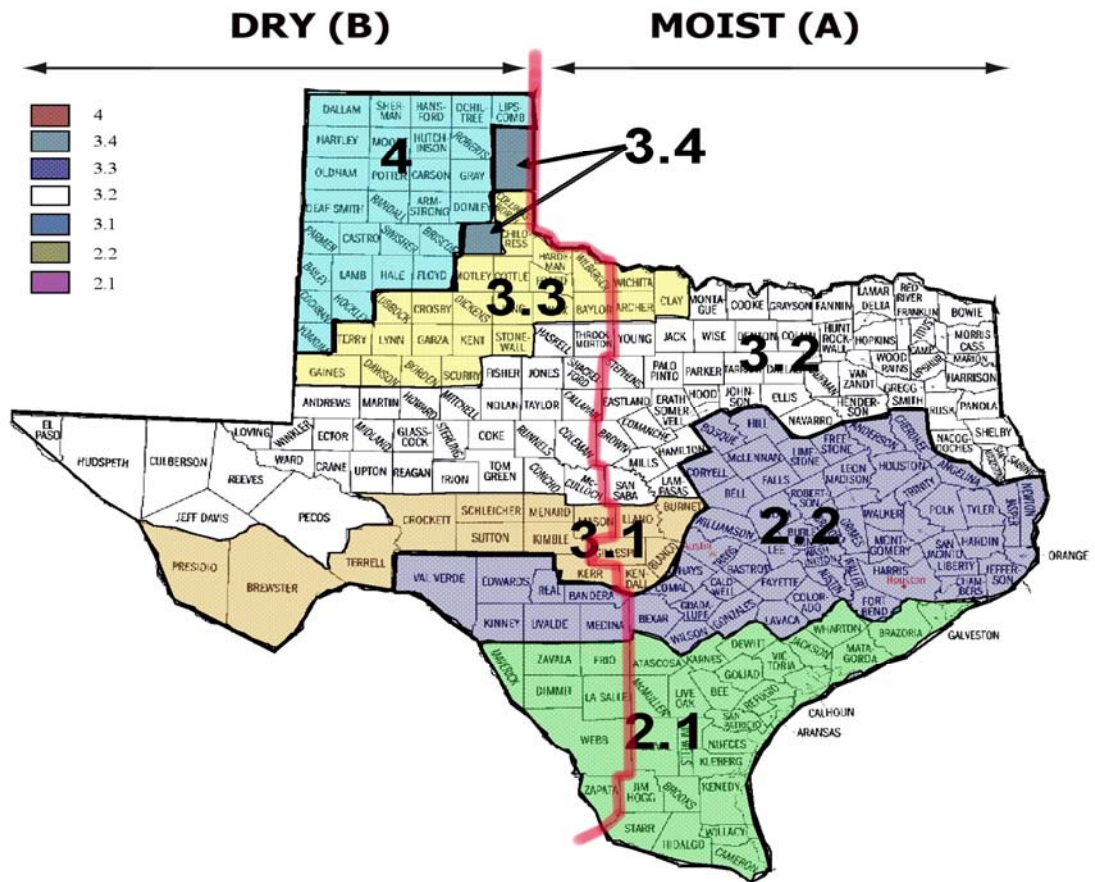


FIGURE 301.2: TEXAS CLIMATE ZONES

*****Amend TABLE 301.1 CLIMATE ZONES BY STATE, COUNTY AND TERRITORIES by deleting the references to Texas and add TABLE 301.1(1) CLIMATE ZONES AND SUB CLIMATE ZONES FOR TEXAS:**

TABLE 301.1(1) CLIMATE ZONES AND SUB CLIMATE ZONES FOR TEXAS

Zone 2							
ANDERSON	2.2	DE WITT	2.1	JIM HOGG	2.1	ORANGE	2.2
ANGELINA	2.2	DIMMIT	2.1	JIM WELLS	2.1	POLK	2.2
ARANSAS	2.1	DUVAL	2.1	KARNES	2.1	REAL	2.2
ATASCOSA	2.1	EDWARDS	2.2	KENEDY	2.1	REFUGIO	2.1
AUSTIN	2.2	FALLS	2.2	KINNEY	2.2	ROBERTSON	2.2
BANDERA	2.2	FAYETTE	2.2	KLEBERG	2.1	SAN JACINTO	2.2
BASTROP	2.2	FORT BEND	2.2	LA SALLE	2.1	SAN PATRICIO	2.1
BEE	2.1	FREESTONE	2.2	LAVACA	2.2	STARR	2.1
BELL	2.2	FRIO	2.1	LEE	2.2	TRAVIS	2.2
BEXAR	2.2	GALVESTON	2.1	LEON	2.2	TRINITY	2.2
BOSQUE	2.2	GOLIAD	2.1	LIBERTY	2.2	TYLER	2.2
BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	UVALDE	2.2
BRAZOS	2.2	GRIMES	2.2	LIVE OAK	2.1	VAL VERDE	2.2
BROOKS	2.1	GUADALUPE	2.2	MADISON	2.2	VICTORIA	2.1
BURLESON	2.2	HARDIN	2.2	MATAGORDA	2.1	WALKER	2.2
CALDWELL	2.2	HARRIS	2.2	MAVERICK	2.1	WALLER	2.2
CALHOUN	2.1	HAYS	2.2	MCLENNAN	2.2	WASHINGTON	2.2
CAMERON	2.1	HIDALGO	2.1	MCMULLEN	2.1	WEBB	2.1
CHAMBERS	2.2	HILL	2.2	MEDINA	2.2	WHARTON	2.1
CHEROKEE	2.2	HOUSTON	2.2	MILAM	2.2	WILLACY	2.1
COLORADO	2.2	JACKSON	2.1	MONTGOMERY	2.2	WILLIAMSON	2.2
COMAL	2.2	JASPER	2.2	NEWTON	2.2	WILSON	2.2
CORYELL	2.2	JEFFERSON	2.2	NUECES	2.1	ZAPATA	2.1
Zone 3							
ANDREWS	3.2	EL PASO	3.2	KERR	3.1	ROCKWALL	3.2
ARCHER	3.3	ELLIS	3.2	KIMBLE	3.1	RUNNELS	3.2
BAYLOR	3.3	ERATH	3.2	KING	3.3	RUSK	3.2
BLANCO	3.1	FANNIN	3.2	KNOX	3.3	SABINE	3.2
BORDEN	3.3	FISHER	3.2	LAMAR	3.2	SAN AUGUSTINE	3.2
BOWIE	3.2	FOARD	3.3	LAMPASAS	3.2	SAN SABA	3.2
BREWSTER	3.1	FRANKLIN	3.2	LLANO	3.1	SCHLEICHER	3.1
BROWN	3.2	GAINES	3.3	LOVING	3.2	SCURRY	3.3
BURNET	3.1	GARZA	3.3	LUBBOCK	3.3	SHACKELFORD	3.2
CALLAHAN	3.2	GILLESPIE	3.1	LYNN	3.3	SHELBY	3.2
CAMP	3.2	GLASSCOCK	3.2	MARION	3.2	SMITH	3.2
CASS	3.2	GRAYSON	3.2	MARTIN	3.2	SOMERVELL	3.2
CHILDRESS	3.3	GREGG	3.2	MASON	3.1	STEPHENS	3.2
CLAY	3.3	HALL	3.4	MCCULLOCH	3.2	STERLING	3.2
COKE	3.2	HAMILTON	3.2	MENARD	3.1	STONEWALL	3.3
COLEMAN	3.2	HARDEMAN	3.3	MIDLAND	3.2	SUTTON	3.1
COLLIN	3.2	HARRISON	3.2	MILLS	3.2	TARRANT	3.2
COLLINGSWORTH	3.3	HASKELL	3.2	MITCHELL	3.2	TAYLOR	3.2
COMANCHE	3.2	HEMPHILL	3.4	MONTAGUE	3.2	TERRELL	3.1
CONCHO	3.2	HENDERSON	3.2	MORRIS	3.2	TERRY	3.3
COOKE	3.2	HOOD	3.2	MOTLEY	3.3	THROCKMORTON	3.2
COTTLE	3.3	HOPKINS	3.2	NACOGDOCHES	3.2	TITUS	3.2
CRANE	3.2	HOWARD	3.2	NAVARRO	3.2	TOM GREEN	3.2
CROCKETT	3.1	HUDSPETH	3.2	NOLAN	3.2	UPSHUR	3.2
CROSBY	3.3	HUNT	3.2	PALO PINTO	3.2	UPTON	3.2

SUMMARY OF AMENDMENTS

2006 International Codes

CULBERSON	3.2	IRION	3.2	PANOLA	3.2	VAN ZANDT	3.2
DALLAS	3.2	JACK	3.2	PARKER	3.2	WARD	3.2
DAWSON	3.3	JEFF DAVIS	3.2	PECOS	3.2	WHEELER	3.4
DELTA	3.2	JOHNSON	3.2	PRESIDIO	3.1	WICHITA	3.3
DENTON	3.2	JONES	3.2	RAINS	3.2	WILBARGER	3.3
DICKENS	3.3	KAUFMAN	3.2	REAGAN	3.2	WINKLER	3.2
EASTLAND	3.2	KENDALL	3.1	RED RIVER	3.2	WISE	3.2
ECTOR	3.2	KENT	3.3	REEVES	3.2	WOOD	3.2
						YOUNG	3.2

Zone 4

ARMSTRONG	DEAF SMITH	HOCKLEY	PARMER
BAILEY	DONLEY	HUTCHINSON	POTTER
BRISCOE	FLOYD	LAMB	RANDALL
CARSON	GRAY	LIPSCOMB	ROBERTS
CASTRO	HALE	MOORE	SHERMAN
COCHRAN	HANSFORD	OCHILTREE	SWISHER
DALLAM	HARTLEY	OLDHAM	YOAKUM

***** Amend TABLE 301.2 WARM HUMID COUNTIES AND TERRITORIES by deleting the references to Texas and add TABLE 301.2(1) WARM HUMID COUNTIES FOR TEXAS**

TABLE 301.2(1) WARM HUMID COUNTIES FOR TEXAS

ANDERSON	2.2	DUVAL	2.1	KAUFMAN	3.2	RED RIVER	3.2
ANGELINA	2.2	EDWARDS	2.2	KENDALL	3.1	REAL	2.2
ARANSAS	2.1	ELLIS	3.2	KENEDY	2.1	REFUGIO	2.1
ATASCOSA	2.1	ERATH	3.2	KINNEY	2.2	ROBERTSON	2.2
AUSTIN	2.2	FALLS	2.2	KLEBERG	2.1	ROCKWALL	3.2
BANDERA	2.2	FAYETTE	2.2	LA SALLE	2.1	RUSK	3.2
BASTROP	2.2	FORT BEND	2.2	LAMAR	3.2	SABINE	3.2
BEE	2.1	FRANKLIN	3.2	LAMPASAS	3.2	SAN AUGUSTINE	3.2
BELL	2.2	FREESTONE	2.2	LAVACA	2.2	SAN JACINTO	2.2
BEXAR	2.2	FRIO	2.1	LEE	2.2	SAN PATRICIO	2.1
BLANCO	3.1	GALVESTON	2.1	LEON	2.2	SAN SABA	3.2
BOSQUE	2.2	GILLESPIE	3.1	LLANO	3.1	SHELBY	3.2
BOWIE	3.2	GOLIAD	2.1	LIBERTY	2.2	SMITH	3.2
BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	STARR	2.1
BROWN	3.2	GREGG	3.2	LIVE OAK	2.1	SOMMERVELL	3.2
BRAZOS	2.2	GRIMES	2.2	MADISON	2.2	TARRANT	3.2
BROOKS	2.1	GUADALUPE	2.2	MARION	3.2	TITUS	3.2
BURLESON	2.2	HAMILTON	3.2	MATAGORDA	2.1	TRAVIS	2.2
BURNET	3.1	HARDIN	2.2	MAVERICK	2.1	TRINITY	2.2
CALDWELL	2.2	HARRIS	2.2	MCLENNAN	2.2	TYLER	2.2
CALHOUN	2.1	HARRISON	3.2	MCMULLEN	2.1	UPSHUR	3.2
CAMERON	2.1	HAYS	2.2	MEDINA	2.2	UVALDE	2.2
CHAMBERS	2.2	HENDERSON	3.2	MILAM	2.2	VAL VERDE	2.2
CAMP	3.2	HIDALGO	2.1	MILLS	3.2	VAN ZANDT	3.2
CASS	3.2	HOOD	3.2	MONTGOMERY	2.2	VICTORIA	2.1
CHEROKEE	2.2	HOPKINS	3.2	MORRIS	3.2	WALKER	2.2
COLLIN	3.2	HILL	2.2	NACOGDOCHES	3.2	WALLER	2.2
COLORADO	2.2	HOUSTON	2.2	NAVARRO	3.2	WASHINGTON	2.2
COMAL	2.2	HUNT	3.2	NEWTON	2.2	WEBB	2.1
COMANCHE	3.2	JACKSON	2.1	NUECES	2.1	WHARTON	2.1
CORYELL	2.2	JASPER	2.2	ORANGE	2.2	WILLACY	2.1
DALLAS	3.2	JEFFERSON	2.2	PALO PINTO	3.2	WILLIAMSON	2.2
DELTA	3.2	JIM HOGG	2.1	PANOLA	3.2	WILSON	2.2

DENTON	3.2	JIM WELLS	2.1	PARKER	3.2	WOOD	3.2
DE WITT	2.1	JOHNSON	3.2	POLK	2.2	ZAPATA	2.1
DIMMIT	2.1	KARNES	2.1	RAINS	3.2	ZAVALA	2.1

***Add Section 401.2.1. Compliance software tools; to read as follows:

401.2.1. Compliance software tools. Software tools may be used to demonstrate energy code compliance that is deemed acceptable by the building official. The PNL program REScheck is not acceptable for residential compliance.

***Amend Section 402.1.1 Insulation and fenestration criteria; to read as follows:

402.1.1 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Table 402.1.1 based on the climate zone specified in Chapter 3.

When compliance using Table 402.1.1 is demonstrated with a ceiling *R*-value of R30 or less, no more than 33% of the total projected ceiling area may be of cathedral type construction (ceiling joist/roof rafter assembly) and the required insulation *R*-value may be reduced to a minimum of R22 insulation when the remaining ceiling area insulation is increased to R38.

*** Amend TABLE 402.1.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT to read as follows:

TABLE 402.1.1

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (TEXAS)^a

CLIMATE - SUB CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION U-FACTOR	MAX SKYLIGHT U-FACTOR ^b	MAX GLAZED FENESTRATION SHGC	MIN CEILING R-VALUE	MIN WOOD FRAME WALL R-VALUE ^d	MASS WALL R-VALUE	MIN FLOOR R-VALUE	MIN BASEMENT WALL R-VALUE	MIN SLAB R-VALUE & DEPTH ^f	MIN CRAWL SPACE WALL R-VALUE
3.2	15	0.60	0.65	0.40	30	13	6	19	6	0	7
	20	0.54	0.65	0.40	38	13	6	19	6	0	7
	25	0.51	0.65	0.40	38	16, 13 + 3.7 ^e	7	19	6	0	7
	30	0.46	0.65	0.38	38	16, 13 + 3.7 ^e	7	19	6	0	7

For SI: 1 foot = 304.8 mm.

- f. *R*-values are minimums. *U*-factors and SHGC are maximums. R-19 shall be permitted to be compressed into a 2 x 6 cavity.
- g. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
- h. R-5 shall be added to the required slab edge *R*-values for heated slabs.
- i. The total *R*-value may be achieved with a combination of cavity insulation and insulating sheathing that covers 100% of the exterior wall.
- j. The wall insulation may be the sum of the two values where the first value is the cavity insulation and the second value is insulating sheathing. The combination of cavity insulation plus insulating sheathing may be used where structural sheathing covers not more than 25% of the exterior wall area and insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of exterior wall area then the wall insulation requirement may only be satisfied with the single insulation value.

*** Amend TABLE 402.1.3 EQUIVALENT U-FACTORS to read as follows:

TABLE 402.1.3
EQUIVALENT U-FACTORS^a

CLIMATE - SUB CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION U-FACTOR	MAX SKYLIGHT U-FACTOR	MAX CEILING U-FACTOR	MAX WOOD FRAME WALL U-FACTOR	MAX MASS WALL U-FACTOR	MAX FLOOR U-FACTOR	MAX BASEMENT WALL U-FACTOR	MAX CRAWL SPACE WALL U-FACTOR
3.2	15	0.60	0.65	0.034	0.082	0.124	0.047	0.179	0.075
	20	0.54	0.65	0.030	0.082	0.124	0.047	0.179	0.075
	25	0.51	0.65	0.030	0.071	0.112	0.047	0.179	0.075
	30	0.46	0.65	0.030	0.071	0.112	0.047	0.179	0.075

- b. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.

*****Add Section 402.2.11. Insulation installed in walls; to read as follows:**

Section 402.2.11. Insulation installed in walls. Insulation batts installed in walls shall be totally surrounded by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing or other equivalent material approved by the building official.

*****Amend Section 402.3.2 Glazed fenestration SHGC. to read as follows:**

402.3.2 Glazed fenestration SHGC. An area-weighted average of fenestration products more than 50 percent glazed shall be permitted to satisfy the SHGC requirements. In sub climate zones 2.1, 2.2, 3.1, 3.2 and 3.3 the maximum area-weighted average and the maximum SHGC shall not exceed 0.40.

*****Amend Section 402.3.3 Glazed fenestration exemption. to read as follows:**

402.3.3 Glazed fenestration exemption. Up to 1 percent of glazed fenestration per dwelling unit shall be permitted to be exempt from *U*-factor and SHGC requirements in Section 402.1.

*****Amend Section 402.3.5 Thermally isolated sunroom *U*-factor; to read as follows:**

Section 402.3.5 Thermally isolated sunroom. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

*****Amend Section 402.3.6 Replacement fenestration. To read as follows:**

Section 402.3.6 Replacement fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for *U*-factor in Table 402.3.7.

Exceptions:

3. Replacement skylights shall have a maximum *U*-factor for 0.60 when installed in all sub climate zones except for 2.1.
4. For buildings constructed in conformance with an energy code as required by State of Texas Senate Bill Number 5, 77th Legislature, replacement fenestration units may comply with the original construction documents or applicable *U*-factor in Table 402.1.1.

*****Add Section 402.3.7 Prescriptive path for additions. to read as follows:**

Section 402.3.7 Prescriptive path for additions. As an alternative for demonstrating compliance, additions with a conditioned floor area less than 500 square feet (46.5 m²) to existing single-family residential buildings and structures shall meet the prescriptive envelope component criteria in Table 402.3.7 for the sub climate zone applicable to the location. The *U*-factor of each individual fenestration product (windows, doors and skylights) shall be used to calculate an area-weighted average fenestration product *U*-factor for the addition, which shall not exceed the applicable listed values in Table 402.3.7. For additions, other than sunroom additions, the total area of fenestration products shall not exceed 40 percent of the gross wall and roof area of the

addition. The *R*-values for opaque thermal envelope components shall be equal to or greater than the applicable listed values in Table 402.3.7.

Conditioned sunroom additions shall maintain thermal isolation; shall not be used as kitchens or sleeping rooms.

The combined solar heat gain coefficient (the area weighted average) of all glazed fenestration products used in additions and as replacement windows in accordance with this section shall not exceed 0.40.

*****Add Table 402.3.7 PRESCRIPTIVE ENVELOPE COMPONENT CRITERIA ADDITIONS TO AND REPLACEMENT WINDOWS FOR EXISTING DETACHED ONE- AND TWO-FAMILY DWELLINGS to read as follows:**

Table 402.3.7 PRESCRIPTIVE ENVELOPE COMPONENT CRITERIA
ADDITIONS TO AND REPLACEMENT WINDOWS FOR EXISTING DETACHED
ONE- AND TWO-FAMILY DWELLINGS^d

SUB CLIMATE ZONES	MAXIMUM	MINIMUM					
	Fenestration U-factor	Ceiling R-value ^a	Wall R-value	Floor R-value	Basement wall R-value ^b	Slab perimeter R-value	Crawl space wall R-value ^c
2.1	0.75	R-26	R-13	R-11	R-5	R-0	R-5
2.2, 3.1, 3.2, 3.3 and 3.4	0.50	R-30	R-13	R-19	R-8	R-0	R-10
4	0.50	R-38	R-13	R-21	R-10	R-0	R-19

- a. "Ceiling R-value" shall be required for flat or inclined (cathedral) ceilings. Floors over outside air shall meet "Ceiling R-value" requirements.
- b. Basement wall insulation to be installed in accordance with Section 402.2.6.
- c. "Crawl space wall R-value" shall apply to unventilated crawl spaces only. Crawl space insulation shall be installed in accordance with Section 402.2.8.
- d. Sunroom additions shall be required to have a maximum fenestration U-factor of 0.5. in all sub climate zones except sub climate zone 2.1. In all sub climate zones, the minimum ceiling R-value for sunroom additions shall be R-19 and the minimum wall R-value shall be R-13.

*****Amend the Exception to Section 403.2.1. Insulation; to read as follows:**

Section 403.2.1. Insulation.

Exceptions:

1. Ducts or portions thereof located completely inside the building thermal envelope.
2. Supply and return ducts can be insulated to a minimum of R-6, if the efficiency of the cooling equipment is upgraded to one SEER point above the NAECA (National Appliance Energy Conservation Act) Standard.

(Reason: To provide an equivalent tradeoff to permit the use of R-6 duct insulation.)

*****Add Section 501.3. Compliance software tools. to read as follows:**

Section 501.3. Compliance software tools. Software tools used to demonstrate energy code compliance that are deemed acceptable by the building official may only utilize the energy chapter of the 2006 International Energy Conservation Code or the 2004 Edition of AHSRAE 90.1 Energy Standard for Buildings Except Low-rise Residential Buildings when code edition and/or standard selection is available.

(Reason: The nonresidential provisions of the 2006 IECC are deemed “not less restrictive” in accordance with Texas SB 5, 77th Legislature.)

*****Amend Section 505.2.1 Interior Lighting Controls. to read as follows:**

505.2.1 Interior lighting controls. Each area enclosed by walls or floor-to-ceiling partitions shall have at least one manual control for the lighting serving that area. The required controls shall be located within the area served by the controls or be a remote switch that identifies the lights served and their status. Each control device shall control a maximum of 2,500 square feet (232.26 square meters) of floor area for a space 10,000 square feet (929.03 square meters) or less and a maximum of 10,000 square feet (929.03 square meters) for a space greater than 10,000 square feet (929.03 square meters).

END

SECTION 15.

That Section 150.001 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows;

Section 150.001 Contractor Registration

A. No person, firm or corporation shall be authorized to secure permits as indicated in division (D) of this section without being a valid registered contractor with the city. Homeowners doing work on their homestead are exempt.

B. A valid registered contractor is a person, firm or corporation who has paid the prescribed fees, as shown in the City Fee Schedule (Chapter 31), and is not delinquent in any fees or debt to the city.

C. The registration applicant shall file an application in writing on a form furnished by the Building Inspection Department for this purpose. Failure by the applicant to have obtained appropriate licenses shall be cause for rejection of the application.

D. Permits that pertain to this chapter includes, but is not limited to, the following: Building, electrical, plumbing, irrigation, mechanical and fire sprinkler.

SECTION 16.

That Section 150.100 of the Code of Ordinance is hereby amended by adding a new section (K) to read as follows:

(K) In addition to the authority established in this Section 150.100, the Board shall have all the power and authority established in Tex. Local Govt. Code, Chapter 214, Subchapter A as amended.

SECTION 17.

That Section 34.040 (C) (3) is hereby repealed.

SECTION 18.

Savings Clause. That save and except as amended by this ordinance, all other ordinances of the City of Carrollton, Texas, shall remain in full force and effect.

SECTION 19.

Penalty Clause. That violation of this ordinance shall be a misdemeanor punishable in accordance with Section 10.99 of the Code of Ordinances, City of Carrollton, Texas.

SECTION 20.

Severability Clause. That the Terms and provisions of this ordinance are severable in accordance with Section 10.07 and are the Carrollton City Code.

SECTION 21.

Effective Date. That this ordinance shall become and be effective _____ 2008 from and after its adoption and publication.

DULY PASSED AND APPROVED by the City Council of the City of Carrollton, Texas, this _____ day of _____, 2007.

By: _____

Becky Miller, Mayor

ATTEST:

Ashley D. Mitchell, City Secretary

APPROVED AS TO FORM:

Clayton R. Hutchins, City Attorney

APPROVED AS TO CONTENT:

Ravi Shah, Director of Urban Development

Gary Heubach, Assistant Building Official