

AN ORDINANCE OF THE CITY OF FRISCO, TEXAS, REPEALING ORDINANCE NO. 05-12-102; ADOPTING THE 2006 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE, SAVE AND EXCEPT THE DELETIONS AND AMENDMENTS SET FORTH HEREIN; REGULATING THE CONSTRUCTION, ALTERATION, MOVEMENT, ENLARGEMENT, REPLACEMENT, REPAIR, EQUIPMENT, USE AND OCCUPANCY, LOCATION, REMOVAL, AND DEMOLITION OF DETACHED ONE- AND TWO-FAMILY DWELLINGS AND MULTIPLE SINGLE-FAMILY DWELLINGS (TOWNHOUSES) NOT MORE THAN THREE STORIES IN HEIGHT WITH A SEPARATE MEANS OF EGRESS AND RELATED ACCESSORY STRUCTURES IN THE CITY OF FRISCO, TEXAS; PROVIDING FOR A PENALTY FOR THE VIOLATION OF THIS ORDINANCE; PROVIDING FOR REPEALING, SAVINGS AND SEVERABILITY CLAUSES; PROVIDING FOR AN EFFECTIVE DATE OF THIS ORDINANCE; AND PROVIDING FOR THE PUBLICATION OF THE CAPTION HEREOF.

WHEREAS, the City Council of the City of Frisco, Texas ("City Council") has investigated and determined that it would be advantageous and beneficial to the citizens of the City of Frisco, Texas ("Frisco") to repeal Ordinance No. 05-12-102; and

WHEREAS, the City Council of the City of Frisco, Texas ("City Council") has investigated and determined that it would be advantageous and beneficial to the citizens of Frisco to adopt the 2006 Edition of the International Residential Code, save and except the deletions and amendments set forth below.

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

SECTION 1: Findings Incorporated. The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

SECTION 2: Repeal of Ordinance No. 05-12-102. Frisco Ordinance No. 05-12-102 is repealed in its entirety and replaced by this Ordinance. The effective date of the repeal discussed in this Section shall not occur until the effective date of this Ordinance, at which time Ordinance No. 05-12-102 shall be repealed. Such repeal shall not abate any pending prosecution and/or lawsuit or prevent any prosecution and/or lawsuit from being commenced for any violation of Ordinance No. 05-12-102 occurring before the effective date of this Ordinance.

SECTION 3: Adoption of the 2006 International Residential Code. The International Residential Code, 2006 Edition, copyrighted by the International Code Council, Inc., including Appendix Chapters G, J and K, save and except the deletions and amendments set forth in Exhibit "A", attached hereto and incorporated herein for all purposes, is hereby adopted as the Residential Code for Frisco, regulating the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal, and demolition of

detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress and related accessory structures in Frisco (the "2006 International Residential Code"). The 2006 International Residential Code is made part of this Ordinance as if fully set forth herein. Three (3) copies of the 2006 International Residential Code are on file in the office of the City Secretary of Frisco being marked and designated as the 2006 International Residential Code.

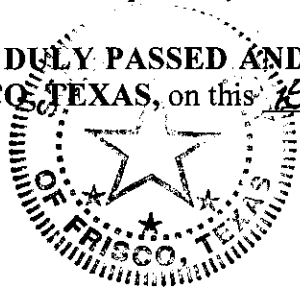
SECTION 4: Savings/Repealing Clause. All provisions of any ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict; but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portion of conflicting ordinances shall remain in full force and effect.

SECTION 5: Penalty Provision. Any person, firm, corporation or business entity violating this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction therefore, shall be fined a sum not exceeding Two Thousand Dollars (\$2,000.00), and each and every day that such violation continues shall be considered a separate offense; provided, however, that such penal provision shall not preclude a suit to enjoin such violation. Frisco retains all legal rights and remedies available to it pursuant to local, state and federal law.

SECTION 6: Severability. If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason, held to be unconstitutional or invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. Frisco hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, and phrases be declared unconstitutional.

SECTION 7: Effective Date. This Ordinance shall become effective upon its passage and publication as required by the City Charter and by law.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF FRISCO, TEXAS, on this 15th day of January, 2008.



E. Michael Simpson
E. MICHEAL SIMPSON, Mayor

ATTESTED AND CORRECTLY RECORDED:

Nan Parker
NAN PARKER, City Secretary

APPROVED AS TO FORM:

Rebecca H. Brewer
ABERNATHY, ROEDER, BOYD & JOPLIN, P.C.
REBECCA H. BREWER
City Attorneys

Date(s) of Publication January 18 & 25, 2008, Frisco Enterprise

Exhibit "A"
CITY OF FRISCO AMENDMENTS
2006 INTERNATIONAL RESIDENTIAL CODE

The following additions, deletions and amendments to the 2006 International Residential Code adopted herein are hereby approved and adopted.

Chapter 1. Administration of the 2006 International Residential Code is amended as follows:

Section 102 Applicability of the 2006 International Residential Code is amended as follows:

R102.4 Referenced codes and standards. The codes, when specifically adopted by the City of Frisco, 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. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply. Any reference made to NFPA 70 or the ICC Electrical Code shall mean the Electrical Code as adopted.

Exception: Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer's instructions shall apply.

Section 105 Permits of the 2006 International Residential Code is amended as follows:

R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Building:

- ~~1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11.15 mm).~~
- ~~2. Fences not over 6 feet (1829 mm) high.~~
- ~~3. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.~~
4. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18 927 L) and the ratio of height to diameter or width does not exceed 2 to 1.
- ~~5. Sidewalks and driveways.~~
6. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.

7. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
8. Swings and other playground equipment.
9. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.

Plumbing:

Water heater replacement is not exempt from permit requirement and inspection.

Section 106 Construction Documents of the 2006 International Residential Code is amended as follows:

R106.1 Submittal documents. R106.1 Submittal documents. Construction documents, special inspection and structural observation programs and other data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional. Foundation and framing plans shall be submitted with each application. These plans shall be designed by an engineer licensed by the State of Texas and shall bear that engineers seal. The engineer must also meet all requirements for registration with the City of Frisco.

Exception: These plans shall not be required for Group U, Division 2 other than those, which are required by separate ordinance. The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.

All structural plans for residential buildings, shall be designed by an engineer licensed by the State of Texas and shall bear that engineers seal.

Section 107 Temporary Structures and Uses of the 2006 International Residential Code is amended as follows:

R107.1 General. The building official is authorized to issue a permit for temporary structures and temporary uses. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The building official is authorized to grant extensions for demonstrated cause. Such permits shall be issued according to the requirements of section 3103 of the 2006 International Building Code as amended, subject to the requirement of ORD# 06-02-10 as is currently exists or may be amended.

Section 108 Fees of the 2006 International Residential Code is amended as follows:

R108.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority. Permit fees shall be calculated using Table 1-A of the 1997 Uniform Building Code. Valuations shall be based on the most current valuation information published by the International Code Council in Building Safety Journal Magazine. Building permit fees for commercial projects shall be calculated on the basis of sixty percent (60%) of the calculated fee, unless a different percentage is approved by the City Council.

R108.2.1 Miscellaneous fees. Miscellaneous permit fees shall be as follows:

1. Certificate of Occupancy	\$100.00
2. Certificate of Occupancy (non-conforming)	\$ 25.00
3. Demolition Permit	\$ 50.00
4. Detached Accessory Bldg. (<100 sq ft)	\$ 25.00
5. Detached Accessory Bldg. (≥100/<160 sq ft)	\$ 50.00
6. Detached Accessory Bldg. (≥160 sq ft)	Table 1-A
7. Duplicate Permit Card	\$ 10.00
8. Irrigation Permit	\$ 35.00
9. Reinspection Fee (residential)	\$ 30.00
10. Reinspection Fee (commercial)	\$ 35.00
11. Spa Permit	\$ 50.00
12. Structural Moving Permit	\$ 50.00
13. Swimming Pool (above ground)	\$ 50.00
14. Swimming Pool (in ground)	\$100.00
15. Temporary Building Permit	\$ 50.00
16. Underground Fuel Storage Tank	\$150.00

R108.2.2 Plan review fees. Plan review fees shall be required when, in the judgment of the Building Official, submitted documents require special review by a third party plan review service. The plan review fee shall be sixty-five percent

(65%) of the building permit fee as calculated in Table 1-A of the 1997 Uniform Building Code. The plan review fees specified in this section are separate and in addition to the required building permit fees.

Additional plan review required by changes, additions, or revisions to approved plans will be assessed a plan review fee at the rate of fifty dollars (\$50.00) per hour with a minimum charge of one (1) hour.

R108.3 Building permit valuations. Building permit valuation shall include total value of the work for which a permit is being issued, such as electrical, gas, mechanical, plumbing equipment and other permanent systems, including materials and labor.

Building Valuation Data - April 2001

<u>Occupancy Type</u>	<u>Cost per Sq Ft</u>	<u>Regional Modifier</u>	<u>Adjusted Cost per 60% Sq Ft</u>	<u>Discount</u>	<u>Discounted Cost per Sq Ft</u>
<u>Dwellings</u>					
Type V - Masonry	\$ 74.20	0.74	\$ 54.91	1	\$ 54.91
Type V - Masonry GOOD	\$ 95.00	0.74	\$ 70.30	1	\$ 70.30
Type V - Wood	\$ 66.00	0.74	\$ 48.84	1	\$ 48.84
Type V - Wood GOOD	\$ 90.60	0.74	\$ 67.04	1	\$ 67.04
Base - Semi Finished	\$ 19.70	0.74	\$ 14.58	1	\$ 14.58
Base Semi-Finished					
GOOD	\$ 22.80	0.74	\$ 16.87	1	\$ 16.87
Base Unfinished	\$ 14.30	0.74	\$ 10.58	1	\$ 10.58
Base Unfinished GOOD	\$ 17.40	0.74	\$ 12.88	1	\$ 12.88

R108.5 Refunds. The building official is authorized to establish a refund policy.

The building official may authorize refunding of any fee paid hereunder, which was erroneously paid or collected.

The building official may authorize refunding of not more than 80 percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.

The building official may authorize refunding of not more than 80 percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan reviewing is done.

The building official shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment.

Section 109 Inspections of the 2006 International Residential Code is amended as follows:

R109.1.4 Frame and masonry inspection. Inspection of framing and masonry construction shall be made after the roof, masonry, all framing, firestopping, draftstopping and bracing are in place and after the plumbing, mechanical and electrical rough inspections are approved. All Residential Dwellings shall be designed by a registered Professional Engineer in the State of Texas and all drawings and documentation must be signed and sealed. Design Engineers must be registered with the City and provide proof of Professional Liability Insurance with a minimum coverage of one million dollars.

Design engineer must perform a structural framing inspection and provide the Building Official with signed and sealed document stating that the house framing has been inspected and approved. This inspection must take place prior to requesting a framing inspection from the Building Official. The engineer shall physically verify all structural corrections.

The engineer must provide to the Building Official a Letter of Final Acceptance stating that the framing has been constructed in compliance with the design prior to the issuance of a Certificate of Occupancy.

Section 112 Board of Appeals of the 2006 International Residential Code is amended as follows:

~~R112.2.1 Determination of substantial improvement in areas prone to flooding.~~ ~~When the building official provides a finding required in Section R105.3.1.1, the board of appeals shall determine whether the value of the proposed work constitutes a substantial improvement. A substantial improvement means any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the building or structure has sustained substantial damage, all repairs are considered substantial improvement regardless of the actual repair work performed. The term does not include:~~

- ~~1. Improvements of a building or structure required to correct existing health, sanitary or safety code violations identified by the building official and which are the minimum necessary to assure safe living conditions; or~~
- ~~2. Any alteration of an historic building or structure, provided that the alteration will not preclude the continued designation as an historic building or structure. For the purpose of this exclusion, an historic building is:
 - ~~2.1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places; or~~
 - ~~2.2. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or~~
 - ~~2.3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.~~~~

Chapter 2. Definitions of the 2006 International Residential Code is amended as follows:

Section 202 Definitions of the 2006 International Residential Code is amended as follows:

~~**ACCESSORY STRUCTURE.** A structure not greater than 3,000 square feet (279 m²) in floor area, and not over two stories in height, the use of which is customarily accessory to and incidental to that of the dwelling(s) and which is located on the same lot.~~

ACCESSORY STRUCTURE : Any structure 36 inches (914 mm) above grade, either attached or detached from the main dwelling, the use of which is incidental to that of the main building and located on the same lot. A permit is required for all accessory structures. Accessory structures include, but are not limited to patio covers, arbors, gazebos, cabanas, outdoor kitchens and/or recreational fire enclosures.

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

PATIO HOME. A “zero lot line” home that has the majority of one side of the structure located within 3’ of the property line.

NATURALLY DURABLE WOOD. The heartwood of the following species with the exception that an occasional piece with ~~Decay-resistant redwood, cedars, black locust and black walnut.~~ Note: corner sapwood is permitted if 90 percent or more of the width of each side on which it occurs is heartwood.

Decay Resistant: Redwood, cedars, black locust and black walnut.

Termite Resistant: Redwood and Eastern red cedar.

Chapter 3. Building Planning of the 2006 International Residential Code is amended as follows:

Section 301 Design Criteria of the 2006 International Residential Code is amended as follows:

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

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

SUBJECT TO DAMAGE FROM		
<u>Weathering^a</u>	<u>Frost line depth^b</u>	<u>Termite^c</u>
<u>moderate</u>	<u>6"</u>	<u>very heavy</u>

WINTER DESIGN TEMP ^c	ICE BARRIER UNDERLAYMENT REQUIRED ^b	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
<u>22°F</u>	<u>No</u>	<u>local code</u>	<u>69°F</u>	<u>64.9°F</u>

Section 302 Exterior Wall and Roof Location of the 2006 International Residential Code is amended as follows:

R302.1 Exterior walls and roofs. Construction, projections, openings and penetrations of exterior walls and roofs of dwellings and accessory buildings shall comply with Table R302.1. These provisions shall not apply to walls, projections, openings or penetrations in walls that are perpendicular to the line used to determine the fire separation distance. Projections beyond the exterior wall shall not extend more than 12 inches (305 mm) into the areas where openings are prohibited.

Exceptions:

1. ~~Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.~~
2. ~~Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm).~~
- 1 3. Foundation vents installed in compliance with this code are permitted.

*****Amend Table 302.1 to read as follows:**

EXTERIOR WALL AND ROOF ELEMENTS		MINIMUM FIRE-RESISTIVE RATING	MINIMUM SEPARATION DISTANCE
Walls	(Fire-resistance rated)	1 hour with exposure from both sides	0 Feet
	(Not fire-resistive rated)	0 hours	5 Feet
Projections	(Fire-resistance rated)	1 hour on the underside	2 Feet
	(Not fire-resistive rated)	0 hours	5 Feet
Openings	Not Allowed	N/A	≤ 3 Feet
	25% Maximum of Wall Area	0 hours	> 3 Feet
	Unlimited	0 hours	5 Feet
Penetrations	Roof	Not Allowed	< 5 Feet
	Roof	Unlimited	5 Feet
	Walls and Projections	All	Comply with Section R317.3 and City of Frisco Comprehensive Zoning Ordinance
		None Required	< 5 Feet
		None Required	5 Feet

Section 303 Light, Ventilation and Heating of the 2006 International Residential Code is amended as follows:

R303.3 Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 mm²), one-half of which must be openable.

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

The minimum ventilation rates shall be 50 cubic feet per minute (24 L/s) for intermittent ventilation or 20 cubic feet per minute (10 L/s) for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside. Exhaust ducts shall be metal conforming to table M1601.1.1(2). Joints shall be fastened with sheet metal screws and comply with section M1601.3.1.

Section 309 Garages and Carports of the 2006 International Residential Code is amended as follows:

R309.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with a self closing, tight fitting solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors.

R309.1.1 Duct penetration. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved material and shall have no openings into the garage.

R309.1.2 Other penetrations. Penetrations through the separation required in Section R309.2 shall be protected by filling the opening around the penetrating item with approved material to resist the free passage of flame and products of combustion.

R309.1.3 Access Openings. Access openings in the separation required by R309.2 shall have a tight fitting, non-combustible and latching cover.

R309.2 Separation required. The garage shall be separated from the residence ~~and its attic area~~ by not less than 5/8 1/2 inch (15.9 12.7 mm) gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8 1/2 inch (15.9 12.7 mm) Type X gypsum board or equivalent. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than 5/8 1/2 inch (15.9 12.7 mm) gypsum board or equivalent. Garages located less than 5 3 feet (1524 914 mm) from a dwelling unit on the same lot shall be protected with not less than 5/8 1/2 inch (15.9 12.7 mm) gypsum board applied to the interior side of exterior walls that are within this area. Openings in these walls shall be

regulated by Section R309.1. This provision does not apply to garage walls that are perpendicular to the adjacent dwelling unit wall.

Section 311 Means of Egress of the 2006 International Residential Code is amended 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 1/2 inch (15.9 13 mm) Type X gypsum board or 1hr fire-resistive construction.

Section 313 Smoke Alarms of the 2006 International Residential Code is added as follows:

R313.4 Carbon Monoxide Detector. A carbon monoxide detector shall be installed for each 1000 square feet (305 m²) of living area. Carbon Monoxide detectors shall be placed adjacent to openings in enclosures for fuel burning appliances, at least one location per floor level and at garage entrances. Power source shall be same as required by section R313.3 for smoke detectors.

Section 317 Dwelling Unit Separation of the 2006 International Residential Code is amended as follows:

R317.1 Two-family dwellings. Dwelling units in two-family dwellings shall be separated from each other by wall and/or floor assemblies having not less than a 1-hour fire-resistance rating when tested in accordance with ASTM E 119. Fire-resistance rated floor-ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend to the underside of the roof sheathing. Two family dwelling units that are also divided by a property line through the structure shall be separated as required in Section R317.2 for townhouses.

Exceptions:

1. A fire-resistance rating of ½ hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.
2. Wall assemblies need not extend through attic spaces when the ceiling is protected by not less than 5/8 inch (15.9 mm) Type X gypsum board and an attic draft stop constructed as specified in Section R502.12.1 is provided above and along the wall assembly separating the dwellings. The structural framing supporting the ceiling shall also be protected by not less than ½ inch (12.7 mm) gypsum board or equivalent.

R317.2 Townhouses and Patio Homes. Each Townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302 for exterior walls. Patio Homes shall have their roof protected as per Section R317.2.2 #2 exception to a distance of 4' from the property line on the zero lot line side.

Exception: A common 2-hour fire-resistance-rated wall is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. Electrical installations shall be installed in accordance with Chapters 33 through 42. Penetrations of electrical outlet boxes shall be in accordance with Section R317.3

R317.2.4 Structural independence. Each individual townhouse shall be structurally independent.

Exceptions:

1. Foundations supporting exterior walls or common walls.
2. Structural roof and wall sheathing from each unit may fasten to the common wall framing.
3. Nonstructural wall coverings.
4. Flashing at termination of roof covering over common wall.
5. ~~Townhouses separated by a common 2-hour fire-resistance-rated wall as provided in Section R317.2.~~

Section 321 Site Address of the 2006 International Residential Code is amended as follows:

R321.1 Premises identification. Approved numbers or addresses shall be provided for all new buildings and existing building in such a position as to be plainly visible and legible from the street or road fronting the property, from alleyway, fire lanes and other vehicular entrances to the rear of the building. Letters or numbers shall be a minimum of 4 inches (102 mm) in height fronting the property with a minimum stroke of ½ inch (13 mm), and shall be of a contrasting color to the background. All letters or numbers shall be permanently attached to the building. Where buildings do not immediately front on a street, approved 4 inch (102 mm) height building letters or numerals and 4 inch (102 mm) height apartment/suite numbers of contrasting color to the background, shall placed on all new or existing buildings or structures.

Section 324 Flood-resistant Construction of the 2006 International Residential Code is amended as follows:

R324.1 General. Buildings and structures, when permitted to be constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in accordance with the provisions contained in this section or by local provisions as applicable.

Section 325 Automatic Fire Protection of the 2006 International Residential Code is added as follows:

SECTION R325 AUTOMATIC FIRE PROTECTION

Section R325.1. Automatic fire protection required: Automatic fire protection systems in accordance with NFPA 13D or NFPA 13R shall be provided in all one and two-family dwellings with a gross floor area 6000 square feet (1830 m²) or greater. For the purposes of this section, gross floor area means conditioned space and attached garage areas. Unenclosed covered areas, such as porches and balconies, are not included. Automatic fire protection systems shall be provided in all buildings containing three (3) or more dwelling units. In the event that an addition or alteration increases the gross floor area from less than 6000 square feet to equal to or greater than 6000 square feet the entire dwelling shall be retro fitted with an automatic fire protection system in accordance with NFPA 13D or NFPA 13R.

Where requirements in this section conflict with requirements found in the Fire Code adopted by the City of Frisco the most stringent requirements shall apply.

Chapter 4. Foundations of the 2006 International Residential Code is amended as follows:

Section 403 Footings of the 2006 International Residential Code is amended as follows:

R403.1.8 Foundations on expansive soils. Foundation and floor slabs for buildings located on expansive soils shall be designed in accordance with Section 1805.8 of the *International Building Code*, *The American Society of Civil Engineers Texas Section Recommended Practice for the Design of Residential Foundations Version 1* as it currently exists or may be amended, or other accepted industry standards that may be acceptable to the Building Official. All foundations shall be designed by a registered Professional Engineer in the State of Texas and all drawings and documentation must be signed and sealed. Design Engineers must be registered with the City of Frisco and provide proof of Professional Liability Insurance with a minimum coverage of one million dollars. Documentation shall include:

1. Design letter referencing soils report number, date of report, and soils engineer name; specific location including lot, block, and subdivision; specific design criteria including soil bearing capacity, plasticity index, and potential vertical rise. The engineer shall also approve a concrete mix design with performance criteria based on soils and seasonal conditions.
2. Signed and sealed drawings clearly indicating strand and reinforcement placement, pier size, depth, location, and reinforcing, beam size and location, and special details. Design calculations must be included. One ledger size copy of plans and calculations will be included in the permanent permit file for each project.
3. Design engineer must perform a pre-pour inspection and provide the Building Official with signed and sealed document stating that the foundation has been inspected and approved. This inspection must take place prior to requesting a foundation inspection from the Building Official. The engineer shall be present during placement of concrete to

verify concrete mix design and seasonal conditions during placement, and verify tensioning and elongation of cables.

4. Rough grading of lot after form removal to maintain drainage away from foundation during the construction process.

5. Prior to receiving a Certificate of Occupancy, a final survey indicating final grade elevations and verifying positive drainage away from the foundation, and evidence from the homeowner that they have received a copy of foundation maintenance instructions must be submitted to the Building Official.

6. The engineer must provide to the Building Official a Letter of Final Acceptance stating that the foundation has been placed in compliance with the design prior to the issuance of a Certificate of Occupancy.

Chapter 6. Wall Construction of the 2006 International Residential Code is amended as follows:

Section 602 Wood Wall Framing of the 2006 International Residential Code is amended as follows:

R602.6 Drilling and notching—studs. Drilling and notching of studs shall be in accordance with the following:

1. Notching. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40 percent of a single stud width.

2. Drilling. Any stud may be bored or drilled, provided that the diameter of the resulting hole is no more than 60 percent of the stud width, the edge of the hole is no more than 5/8 inch (16 mm) to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in ~~exterior all walls or bearing partitions~~ drilled over 40 percent and up to 60 percent shall also be doubled with no more than two successive doubled studs bored. See Figures R602.6(1) and R602.6(2).

3. Studs that are drilled or notched for plumbing and mechanical pipes larger than 1” inch nominal pipe size shall be a minimum of 2x6 studs.

~~**Exception:** Use of approved stud shoes is permitted when they are installed in accordance with the manufacturer’s recommendations.~~

Chapter 7. Wall Covering of the 2006 International Residential Code is amended as follows:

Section 703 Exterior Covering of the 2006 International Residential Code is amended as follows:

R703.1 General. Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.8. The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior veneer as

required by Section R703.2, and a means of draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be provided in accordance with Chapter 11 of this code. All exterior building materials shall comply with the requirements of Article IV, Section 9.09, Ordinance # 00-11-01 (Comprehensive Zoning Ordinance) as it currently exists or may be amended.

R703.5 Wood shakes and shingles. ~~Wood shakes and shingles shall conform to CSSB Grading Rules for Wood Shakes and Shingles.~~ Wood shakes and shingles are prohibited as exterior wall covering.

Chapter 9. Roof Assemblies of the 2006 International Residential Code is amended as follows:

Section 902 Roof Classification of the 2006 International Residential Code is added 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 square feet (37.5 m²) of projected roof area. When exceeding 120 square feet (37.5 m²) of projected roof area, buildings of U occupancies may use non-rated non-combustible coverings.

Section 907 Reroofing of the 2006 International Residential Code is amended as follows:

R907.1 General. Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9. All individual replacement shingles or shakes shall comply with Section R902.1.

Chapter 10. Energy Efficiency of the 2006 International Residential Code is amended as follows:

Section 1101 General of the 2006 International Residential Code is amended as follows:

N1101.1 Scope. This chapter regulates the energy efficiency for the design and construction of buildings that are regulated by this code and are not covered by The City of Frisco Residential Green Building Program Ordinance # 06-10-111.

Exception. Portions of the building envelope that do not enclose conditioned space.

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

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
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

Section 1102 Building Thermal Envelope. of the 2006 International Residential Code is amended as follows:

*****Add Table N1102.2 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

Section 1102 Building Thermal Envelope. of the 2006 International Residential Code is amended 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.

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 ^e	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 ^c	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 ^c	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

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

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.

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.

N1102.3.3 Glazed fenestration exemption. Up to ~~15 square feet (1.4 m²)~~ 1 percent of glazed fenestration per dwelling unit shall be permitted to be exempt from *U*-factor and SHGC requirements in Section 402.1.

N1102.3.5 Thermally isolated sunroom *U*-factor. For zones ~~4 through 8,~~ the maximum fenestration *U*-factor shall be 0.50 and the maximum skylight *U*-factor shall be 0.75. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

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 and SHGC in Table 402.1.1 ~~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.

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 ^e	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

- "Ceiling R-value" shall be required for flat or inclined (cathedral) ceilings. Floors over outside air shall meet "Ceiling R-value" requirements.
- Basement wall insulation to be installed in accordance with Section 402.2.6.
- "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.
- 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.

Chapter 13. General Mechanical System Requirements of the 2006 International Residential Code is amended as follows:

Section 1305 Appliance Access of the 2006 International Residential Code is amended as follows:

M1305.1.3 Appliances in attics. Attics containing appliances requiring access shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance, but not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) long when measured along the centerline of the passageway from the opening to the appliance. The passageway shall have continuous unobstructed solid flooring in accordance with Chapter 5 not less than 24 inches (610 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 (508 mm) by

30 inches (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 with a 300 lb. rating.
3. An access door from an upper floor.

Exceptions:

1. The passageway and level service space are not required where the appliance can be serviced and removed through the required opening.
2. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length, the passageway shall be not more than 50 feet (15 250 mm) long.

M1305.1.3.1 Electrical requirements. A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the appliance location in accordance with Chapter 38. Low voltage wiring of 50 volts or less shall be installed in a manner to prevent physical damage.

M1305.1.5 Water Heaters above ground or floor: When the mezzanine or platform in which a water heater is installed is more than (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

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

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) from the ground.

Chapter 14. Heating and Cooling Equipment of the 2006 International Residential Code is amended as follows:

Section 1401 General of the 2006 International Residential Code is amended as follows:

M1401.1.1 Equipment Start Up. A comprehensive Equipment Start Up Checklist shall be completed by the Contractor and provided to the Building Official prior to the issuance of a Certificate of Occupancy. The Equipment Start Up Checklist shall be reported on a form provided and/or approved by the City of Frisco and shall become a part of the Permit Records.

M1401.3 Sizing. Heating and cooling equipment shall be sized based on room by room heat building loads calculated in accordance with ACCA Manual J 8th Edition 75°F (24°C) degrees indoor at 100°F (56°C) degrees outdoor temperature). ~~or other approved heating and cooling calculation methodologies.~~

Chapter 15. Exhaust Systems of the 2006 International Residential Code is amended as follows:

Section 1502 Clothes Dryer Exhaust of the 2006 International Residential Code is amended as follows:

M1502.3 Duct size. The diameter of the exhaust duct shall be as required by the clothes dryer's listing and the manufacturer's installation instructions. Duct size shall be at least the diameter of the appliance outlet and shall be a minimum nominal size of 4" (102 mm) in diameter. The size duct shall not be reduced along its developed length nor at the point of termination.

M1502.6 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. The maximum length of the duct shall be reduced 2½ feet (762 mm) for each 45 degree (0.79 rad) bend and 5 feet (1524 mm) for each 90 degree (1.6 rad) bend. The maximum length of the exhaust duct does not include the transition duct.

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)

Chapter 24. Fuel Gas of the 2006 International Residential Code is amended as follows:

G2406.2 (303.3) Prohibited locations. Appliances shall not be located in sleeping rooms, bathrooms, toilet rooms, storage closets or surgical rooms, or in a space that opens only into such rooms or spaces, except where the installation complies with one of the following:

1. The appliance is a direct-vent appliance installed in accordance with the conditions of the listing and the manufacturer's instructions.

2. Vented room heaters, wall furnaces, vented decorative appliances, vented gas fireplaces, vented gas fireplace heaters and decorative appliances for installation in vented solid fuel-burning fireplaces are installed in rooms that meet the required volume criteria of Section G2407.5.

3. A single wall-mounted unvented room heater is installed in a bathroom and such unvented room heater is equipped as specified in Section G2445.6 and has an input rating not greater than 6,000 Btu/h (1.76 kW). The bathroom shall meet the required volume criteria of Section G2407.5.

4. A single wall-mounted unvented room heater is installed in a bedroom and such unvented room heater is equipped as specified in Section G2445.6 and has an input rating not greater than 10,000 Btu/h (2.93 kW). The bedroom shall meet the required volume criteria of Section G2407.5.

5. The appliance is installed in a room or space that opens only into a bedroom or bathroom, and such room or space is used for no other purpose when ~~is provided with a solid weather-stripped door equipped with an approved self-closing device.~~ access to such enclosure is 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. A Carbon Monoxide detector shall be installed according to Section 313. All combustion air shall be taken directly from the outdoors in accordance with Section G2407.6.

Section 2411 Electrical Bonding of the 2006 International Residential Code is amended as follows:

G2411.1 (310.1) Gas pipe bonding. Each above-ground portion of a gas piping system that ~~is likely to become energized~~ shall be electrically continuous and bonded to the service equipment enclosure, the grounded conductor at the service, the grounding electrode conductor where sufficient size, or to one or more of the grounding electrodes used. The bonding jumper(s) shall be sized in accordance with Table E3808.12. The points of attachment of the bonding jumper(s) shall be accessible. Steel gas piping systems shall be bonded at the point of service entry into the dwelling. Dual pressure systems using Corrugated Stainless Steel tubing shall be bonded at the service entry and at the manifold. The stainless steel portion of the CSST system shall not be used as the bonding attachment point. In addition, bonding is required for all metal air ducts, metal chimneys, appliance vents and other metal structures that are likely to become energized, an effective ground-fault current path. Gas piping shall be considered to be bonded where it is connected to appliances that are connected to the equipment grounding conductor of the circuit supplying that appliance.

Section 2412 General of the 2006 International Residential Code is amended as follows:

G2412.5 (401.5) Identification. For other than steel pipe, exposed piping shall be identified by a yellow label marked "Gas" in black letters. The marking shall be

spaced at intervals not exceeding 5 feet (1524 mm). The marking shall not be required on pipe located in the same room as the equipment served.

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: ½ to 5psi gas pressure. Do Not Remove!”

Section 2415 Piping System Installation of the 2006 International Residential Code is amended 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 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 G2415.11 (404.11), ~~a conduit of Schedule 40 steel, wrought iron, PVC or ABS pipe with tightly sealed ends and joints. Both ends of such conduit shall extend not less than 2 inches (51 mm) beyond the point where the pipe emerges from the floor. The conduit shall be vented above grade to the outdoors and shall be installed so as to prevent the entry of water and insects.~~

G2415.9 (404.9) Minimum burial depth. Underground piping systems shall be installed a minimum depth of ~~12~~ 18 inches (~~305~~ 458 mm) below grade, ~~except as provided for in Section G2415.9.1.~~

Section 2417 Inspection, Testing and Purging of the 2006 International Residential Code is amended 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 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.

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. For a test requiring a 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
incrimination and pressure range not to exceed 6 psi. For test requiring 10 psig.
Mechanical gauges shall utilize a dial with minimum diameter of three and one-
half inches (3 ½”), a set hand, a minimum of 2/10 pound incrimination and a
pressure range not to exceed 20 psi. Mechanical gauges used to measure test
pressures shall have a range such that the highest end of the scale is not greater
than five times the test pressure.

G2417.4.1 (406.4.1) Test pressure. ~~The test pressure to be used shall be no less than 1 1/2 times the proposed maximum working pressure, but not less than 3 psig (20 kPa gauge), irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe. not be 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 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 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 ps), the test pressure shall be not less than 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 not be less than one and one-half time the proposed maximum working pressure.~~

G2417.4.2 (406.4.2) Test duration. ~~Test duration shall be not less than 10 minutes. held for a length of time satisfactory to the code official, but in no case less than 15 minutes. For welded piping, and for piping carting gas at pressures in excess of 14 inches water column pressure, the test duration shall be for a length of time satisfactory to the Code Official, but in no case less than 30 minutes.~~

Section 2420 Gas Shutoff Valves of the 2006 International Residential Code is added as follows:

G2420.1.4 (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.

G2420.6 Definition. Excessive gas flow valve shutoff device shall mean those valves or devices activated by the rupture of gas supply piping on or within a building or structure, and designed to automatically shutoff the gas supply when flow exceeds the design limits of the system or appliance served. These devices

shall also be capable of automatically resetting when repairs have been completed and pressure is restored to the system.

G2420.6.1 Excessive gas flow shutoff device. Excessive gas flow shutoff devices shall be installed in locations as specified in Section G2420.6.3 for fuel gas piping systems supplying residential dwellings. Devices shall be installed in accordance with the manufactures installation instructions and the requirements of this code.

G2420.6.2 Approval. Excessive gas flow shutoff devices shall be certified by Underwriter's Laboratories (UL), International Association of Plumbing and Mechanical Officials (IAPMO), American Gas Association (AGA) or other recognized listing and testing agency, and shall be approved by the Building Official.

G2420.6.3 Excessive Gas flow Shutoff Device/Location. All gas piping systems must have at least one excessive gas flow shutoff device installed at the meter.

Section 2421 Flow Controls of the 2006 International Residential Code is amended as follows:

G2421.1 (410.1) Pressure regulators. A line pressure regulator shall be installed where the appliance is designed to operate at a lower pressure than the supply pressure. Line gas pressure regulators shall be listed as complying with ANSI Z21.80. Access shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be approved for outdoor installation. Access to regulators shall comply with the requirements for access to appliances as specified in Section M1305.

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

Section 2439 Clothes Dryer Exhaust of the 2006 International Residential Code is amended as follows:

G2439.5.1 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. The maximum length of the duct shall be reduced 2½ feet (762 mm) for each 45 degree (0.79 rad) bend and 5 feet (1524 mm) for each 90 degree (1.6 rad) bend. The maximum length of the exhaust duct does not include the transition duct.

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)

Section 2445 Unvented Room Heaters of the 2006 International Residential Code is amended 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. Unvented room heaters shall not be installed in a residential subdivision regulated by Ordinance # 01-05-39 (Green Building Program) as it currently exists or may be amended.

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.

Chapter 25. Plumbing Administration of the 2006 International Residential Code is amended as follows:

Section 2503 Inspection and Test of the 2006 International Residential Code is amended as follows:

P2503.5.1 Rough plumbing. DWV systems shall be tested on completion of the rough piping installation by water or air with no evidence of leakage. Either test shall be applied to the drainage system in its entirety or in sections after rough piping has been installed, as follows:

1. Water test. Each section shall be filled with water to a point not less than 10 feet (3048 mm) above the highest fitting connection in that section, or to the highest point in the completed system. Water shall be held in the section under test for a period of 15 minutes. The system shall prove leak free by visual inspection. 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.

2. Air test. The portion under test shall be maintained at a gauge pressure of 5 pounds per square inch (psi) (34 kPa) or 10 inches of mercury column (34 kPa). This pressure shall be held without introduction of additional air for a period of 15 minutes. PVC shall not be tested with an air pressure test.

P2503.7.2 Testing. Reduced pressure principle backflow preventers, double check valve assemblies, double-detector check valve assemblies and pressure vacuum breaker assemblies shall be tested at the time of installation, immediately after repairs or relocation and at ~~least annually~~ regular intervals as required by applicable state or local provisions.

Chapter 26. General Plumbing Requirements of the 2006 International Residential Code is amended as follows:

Section 2603 Structural and Piping Protection of the 2006 International Residential Code is amended as follows:

P2603.6.1 Sewer depth. Building sewers ~~that connect to private sewage disposal systems shall be a minimum of [NUMBER] inches (mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of [NUMBER] inches (mm) below grade~~ shall be a minimum 12 inches (304 mm) below grade.

Chapter 27. Plumbing Fixtures of the 2006 International Residential Code is amended as follows:

Section 2709 Shower Receptors of the 2006 International Residential Code is amended as follows:

P2709.1 Construction. Shower receptors shall have a finished curb threshold not less than 1 inch (25 mm) below the sides and back of the receptor. The curb shall be not less than 2 inches (51 mm) and not more than 9 inches (229 mm) deep when measured from the top of the curb to the top of the drain. The finished floor shall slope uniformly toward the drain not less than 1/4 unit vertical in 12 units horizontal (2-percent slope) nor more than 1/2 inch (13 mm), and floor drains shall be flanged to provide a water-tight joint in the floor.

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

Chapter 28. Water Heaters of the 2006 International Residential Code is amended as follows:

Section 2803 Relief Valves of the 2006 International Residential Code is amended as follows:

P2803.6.1 Requirements for discharge pipe. The discharge piping serving a pressure-relief valve, temperature relief valve or combination valve shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap located in the same room as the water heater.

3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to ~~the floor, to~~ an indirect waste receptor or to the outdoors. When discharging outside the building, the point of discharge shall be with the end of the pipe six (6) inches (152 mm) above the ground or the floor level of the area receiving the discharge and pointing downward. ~~Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.~~
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed to flow by gravity.
10. Not terminate more than 6 inches (152 mm) above the floor or waste receptor.
11. Not have a threaded connection at the end of the piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials listed in Section P2904.5 or materials tested, rated and approved for such use in accordance with ASME A112.4.1.
14. Not discharge onto a pan required in Section 2801.5.
15. T&P discharge line requires union.

Chapter 29. Water Supply and Distribution of the 2006 International Residential Code is amended as follows:

Section 2902 Protection of Potable Water Supply of the 2006 International Residential Code is amended as follows:

P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by ~~an atmospheric type vacuum breaker, a pressure type vacuum breaker~~ a double check valve assembly or a reduced pressure principle backflow preventer. ~~A valve shall not be installed downstream from an atmospheric vacuum breaker.~~ Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer installed above grade.

Section 2903 Water-supply System of the 2006 International Residential Code is amended as follows:

P2903.3.1 Maximum pressure. Maximum static pressure shall be 80 psi (551 kPa). ~~When main pressure exceeds 80 psi (551 kPa), an approved pressure-reducing valve conforming to ASSE 1003 shall be installed on the domestic water~~

branch main or riser at the connection to the water service pipe. An approved water pressure reducing valve conforming to ASSE 1003 with strainer shall be installed on all water supply and distribution systems to protect the system from excessive pressure in the public water mains. Each pressure reducing valve shall be equipped with an integral bypass. Pressure shall be adjusted to a minimum of 40 psi and a maximum of 80 psi. Pressure reducing valves shall be located in the piping before entering residential structures.

Section 2904 Materials, Joints and Connections of the 2006 International Residential Code is amended as follows:

P2904.4.2 Water service installation. Trenching, pipe installation and backfilling shall be in accordance with Section P2604. Water-service pipe is permitted to be located in the same trench with a building sewer provided such sewer is constructed of materials listed for underground use within a building in Section P3002.1. ~~If the building sewer is not constructed of materials listed in Section P3002.1,~~ the Water-service pipe shall be separated from the building sewer by a minimum of 5 feet (1524 mm), measured horizontally, of undisturbed or compacted earth or placed on a solid ledge at least 12 inches (305 mm) above and to one side of the highest point in the sewer line.

Exception: The required separation distance shall not apply where a water service pipe crosses a sewer pipe, provided that the water service pipe is sleeved to at least 12 inches beyond the excavated sewer trench 5 feet (1524 mm), horizontally from the sewer pipe centerline, on both sides of the crossing with pipe materials listed in Tables P2904.4, P3002.1(1), P3002.1(2) or P3002.2.

Table 2904.4

Polybutylene (PB) plastic pipe and tubing ASTM D 2662; ASTM D 2666; ASTM D 3309; CSA B137.8M

Table 2904.5

Polybutylene (PB) plastic pipe and tubing ASTM D 3309; CSA CAN3 B137.8

Chapter 31. Sanitary Drainage of the 2006 International Residential Code is amended as follows:

Section 3005 Drainage system of the 2006 International Residential Code is amended as follows:

P3005.4 Drain pipe sizing. Drain pipes shall be sized according to drainage fixture unit (d.f.u.) loads. The size of the drainage piping shall not be reduced in size in the direction of flow. No building sewer, including cleanouts, shall be less than 4 inches (102 mm), nor smaller than the building drain. The following general procedure is permitted to be used:

1. Draw an isometric layout or riser diagram denoting fixtures on the layout.
2. Assign d.f.u. values to each fixture group plus individual fixtures using Table P3004.1.

3. Starting with the top floor or most remote fixtures, work downstream toward the building drain accumulating d.f.u. values for fixture groups plus individual fixtures for each branch. Where multiple bath groups are being added, use the reduced d.f.u. values in Table P3004.1, which take into account probability factors of simultaneous use.
4. Size branches and stacks by equating the assigned d.f.u. values to pipe sizes shown in Table P3005.4.1.
5. Determine the pipe diameter and slope of the building drain and building sewer based on the accumulated d.f.u. values, using Table P3005.4.2.

Chapter 31. Vents of the 2006 International Residential Code is amended as follows:

Section 3111 Combination Waste and Vent System of the 2006 International Residential Code is amended as follows:

SECTION P3111

COMBINATION WASTE AND VENT SYSTEM

~~**P3111.1 Type of fixtures.** A combination waste and vent system shall not serve fixtures other than floor drains, standpipes, sinks, lavatories and drinking fountains. A combination waste and vent system shall not receive the discharge of a food waste grinder.~~

~~**P3111.2 Installation.** The only vertical pipe of a combination drain and vent system shall be the connection between the fixture drain and the horizontal combination waste and vent pipe. The maximum vertical distance shall be 8 feet (2438 mm).~~

~~**P3111.2.1 Slope.** The horizontal combination waste and vent pipe shall have a maximum slope of 1/2 unit vertical in 12 units horizontal (4 percent slope). The minimum slope shall be in accordance with Section P3005.3.~~

~~**P3111.2.2 Connection.** The combination waste and vent pipe shall connect to a horizontal drain that is vented or a vent shall connect to the combination waste and vent. The vent connecting to the combination waste and vent pipe shall extend vertically a minimum of 6 inches (152 mm) above the flood level rim of the highest fixture being vented before offsetting horizontally.~~

~~**P3111.2.3 Vent size.** The vent shall be sized for the total fixture unit load in accordance with Section P3113.1.~~

~~**P3111.2.4 Fixture branch or drain.** The fixture branch or fixture drain shall connect to the combination waste and vent within a distance specified in Table P3105.1. The combination waste and vent pipe shall be considered the vent for the fixture.~~

~~**P3111.3 Size.** The minimum size of a combination waste and vent pipe shall be in accordance with Table P3111.3.~~

Section 3112 of the 2006 International Residential Code is amended as follows:

~~**P3112.3 Vent installation below the fixture flood level rim.** The vent located below the flood level rim of the fixture being vented shall be installed as required~~

~~for drainage piping in accordance with Chapter 30, except for sizing. The vent shall be sized in accordance with Section P3113.1. 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 drain board 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 not 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 (20.9mm/m) back to the drain shall be maintained. The return bend used under the drain board 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 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. The lowest point of the island fixture vent shall connect full size to the drainage system. The connection shall be to a vertical drain pipe or to the top half of a horizontal drain pipe. Cleanouts shall be provided in the island fixture vent to permit rodding of all vent piping located below the flood level rim of the fixtures. Rodding in both directions shall be permitted through a cleanout.~~

Section 3114 Air Admittance Valves of the 2006 International Residential Code is amended as follows:

P3114.3 Where permitted. Individual vents, branch vents, circuit vents and stack vents ~~may~~ shall be permitted to terminate with a connection to an air admittance valve. Air admittance valves shall only be installed with the prior approval of the Building Official.

Chapter 33. General Requirements of the 2006 International Residential Code is amended as follows:

Section 3306 Electrical conductors and Connections of the 2006 International Residential Code is amended as follows:

E3306.2 Conductor material. Conductors used to conduct current shall be of copper ~~except as otherwise~~ provided in Chapters 33 through 42. Where the conductor material is not specified, the material and the sizes given in these chapters shall apply to copper conductors. Where other materials are used, the conductor sizes shall be changed accordingly.

E3306.3 Minimum size of conductors. The minimum size of conductors for feeders and branch circuits shall be 12 ~~14~~ AWG copper and 12 AWG aluminum. The minimum size of service conductors shall be as specified in Chapter 35. The

minimum size of class 2 remote control, signaling and power-limited circuits conductors shall be as specified in Chapter 42.

Section 3509 Bonding of the 2006 International Residential Code is amended as follows:

E3509.7 Bonding other metal piping. Where installed in or attached to a building or structure, metal piping systems, including gas piping, capable of becoming energized shall be bonded to the service equipment enclosure, the grounded conductor at the service, the grounding electrode conductor where of sufficient size, or to the one or more grounding electrodes used. The bonding jumper shall be sized in accordance with Table E3808.12 using the rating of the circuit capable of energizing the piping. The equipment grounding conductor for the circuit that is capable of energizing the piping shall be permitted to serve as the bonding means. The points of attachment of the bonding jumper(s) shall be accessible. If a steel manifold is used, a bonding clamp shall be attached to the steel manifold. The corrugated stainless steel tube portion of a CSST gas piping system shall not be used as the bonding attachment point. In addition, bonding is required for all metal air ducts, metal chimneys, appliance vents and other metal structures that are likely to become energized.

Chapter 36. Branch Circuit Feeder Requirements of the 2006 International Residential Code is amended as follows:

Section 3602 Branch Circuit Ratings of the 2006 International Residential Code is amended as follows:

E3602.5 Branch circuits serving multiple loads or outlets. General-purpose branch circuits shall supply lighting outlets, appliances, equipment or receptacle outlets, and combinations of such. The rating of a fastened-in-place appliance or equipment, where used in combination on the same branch circuit with light fixtures, receptacles, and/or other appliances or equipment not fastened in place, shall not exceed 50 percent of the branch-circuit rating. Multi-outlet branch circuits serving lighting or receptacles shall be limited to a maximum branch-circuit rating of 20 amperes. The maximum number of receptacle outlets connected to general purpose branch circuits shall be ten (10) for 15-amp circuits, and thirteen (13) for 20 amp circuits.

End of Exhibit "A"