

**CITY OF GRAPEVINE**  
**Chapter 7, Buildings and Construction,**  
**Article V, Residential Code**

**ARTICLE V. - RESIDENTIAL CODE**

**Sec. 7-140 – Adoption.**

There is hereby adopted for the purpose of establishing rules and regulations for the construction, alteration, removal, demolition, equipment, use and occupancy, location and maintenance of buildings and structures, that a certain code known as the International Residential Code, particularly the 2021 Edition thereof, {remainder of section unchanged}

**Sec. 7-142. - Amendments**

**Section R101.1; [NAME OF JURISDICTION] changed to “City of Grapevine, TX”**

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

R102.4 Referenced codes and standards. The codes, when specifically adopted, and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2. When amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference made to NFPA 70 or the Electrical Code shall mean the Electrical Code as adopted. Where the enforcement of a provision of this code would violate the conditions of the listing of appliances or equipment, the conditions of the listing and the manufacturer’s installation instructions shall apply.

**Section R103 and R103.1 amend to insert the Department Name:**

R103.1 Creation of enforcement agency. The Building Services Department is hereby created and the official in charge thereof shall be known as the Building Official.

**Section R104.10.1 Flood Hazard areas; delete this section.**

**Section R105.2 Work exempt from permit; under sub-title entitled “Building” add text to items 1,5, and 8 and delete item 2 as follows:**

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m<sup>2</sup>) require permits but are exempt from fees. Such structures must comply with all provisions of the Zoning Ordinance.
2. {Deleted}
- 3.-4. {Remain Unchanged}
5. Sidewalks and driveways; however, all applicable provisions of the Zoning Ordinance must be met relative to required materials, maximum coverage, and required landscape areas.
7. {Remain Unchanged}
8. Swings and other playground equipment accessory to detached one- and two-family dwellings; however, such structures must comply with all applicable provisions of the Zoning Ordinance.
- 9.-10. {Remain Unchanged}

[Remainder of section unchanged]

**Section R105.3.1.1& R106.1.4; delete these sections.**

**Section R108 Fees, is hereby deleted and replaced with the following:**

Section R108 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 Table 1A, Building Permit Fees attached hereto as Exhibit "A" and Table 108A Mechanical, Electrical and Plumbing Permit Fees attached hereto as Exhibit "C" and incorporated herein by reference.

**TABLE NO. 1-A**

**BUILDING PERMIT FEES**

**PERMIT FEES OR ALL BUILDING PERMITS EXCEPT FOR RESIDENTIAL DWELLINGS**

<b>TOTAL VALUATION</b>	<b>FEE</b>
\$1.00 to \$500.00	\$50.00
\$501.00 to \$2,000.00	\$50.00 for the first \$500.00 plus \$4.00 for each additional \$100.00, or fraction thereof, to and including \$2,000.00
\$2,001.00 to \$25,000.00	\$75.00 for the first \$2,000.00 plus \$16.00 for each additional \$1,000.00, or fraction thereof, to and including \$25,000.00
\$25,001.00 to \$50,000.00	\$500.00 for the first \$25,000.00 plus \$13.50 for each additional \$1,000.00, or fraction thereof, to and including \$50,000.00
\$50,001.00 to \$100,000.00	\$750.00 for the first \$50,000.00 plus \$8.25 for each additional \$1,000.00, or fraction thereof, to and including \$100,000.00
\$100,001.00 to \$500,000.00	\$1,250.00 for the first \$100,000.00 plus \$6.25 for each additional \$1,000.00, or fraction thereof, to and including \$500,000.00
\$500,001.00 to \$1,000,000.00	\$4,000.00 for the first \$500,000.00 plus \$5.50 for each additional \$1,000.00, or fraction thereof, to and including \$1,000,000.00
\$1,000,001.00 and up	\$7,500.00 for the first \$1,000,000.00 plus \$5.00 for each additional \$1,000.00, or fraction thereof

**BUILDING PERMIT FEES FOR RESIDENTIAL DWELLINGS**

	<b>NEW CONSTRUCTION</b>	<b>ADDITIONS</b>	<b>ALTERATIONS</b>
<p><b><u>R3 RESIDENTIAL DWELLINGS</u></b>  (Detached one and two family dwellings, townhomes not more than 3-stores in height with a separate means of egress)</p>	<p>\$ .55 / Square Foot TOTAL AREA UNDER ROOF</p>	<p>\$ 1.00 / Square Foot TOTAL AREA of ADDITION</p>	<p>\$ 1.00 / Square Foot of ALTERATION AREA</p>
<p><b><u>R2 RESIDENTIAL DWELLINGS</u></b>  (Apartments, condominiums, three and four family dwellings, etc)</p>	<p>\$ .30 / Square Foot TOTAL AREA UNDER ROOF</p>	<p>\$ 1.00 / Square Foot TOTAL AREA of ADDITION</p>	<p>\$ 1.00 / Square Foot of ALTERATION AREA</p>

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**SIMPLE  
ALTERATION  
PERMITS**

Projects in which square footage does not apply as determined by the Building Official. (Window replacement, foundation repair, siding replacement, etc)

**FLAT FEE \$150.00**

**UNENCLOSED  
PATIO COVER**

***OTHER INSPECTIONS AND FEES:***

1. Certificate of Occupancy.....\$50.00
2. Inspections outside of normal business hours.....\$50.00 per hour\* (minimum charge- two hours)
3. Reinspection fees assessed under provisions of Section 108.5.....\$50.00
4. Inspections for which no fee is specifically indicated....\$50.00 per hour\* (minimum charge- one-half hour)
5. Additional plan review required by changes, additions or revisions to plans.....\$50.00 per hour\*
6. For use of outside consultants for plan checking and inspections, or both.....actual costs\*\*
7. Foundation only permits or any partial permit.....10% of building permit fee in addition to building permit fee
8. Plan review fee (not applicable to Group R-3 private residences).....65% of building permit fee in addition to building permit fee
9. Building permit fees for the Grapevine- Colleyville Independent School District.....25% of the fees established in Table No. 1-A- *Building Permit Fees*
10. Project valuation to be determined by the regional construction valuation table, adopted by the city, or the contract valuation whichever is greater.  
Permit valuations shall include all work required for a completed project, including profit, but need not include the value or cost of the land. Other methods for determining the project valuations for unique or unusual projects may be approved by the Building Official.
11. Public Works Antenna or Equipment Installation Charge on City Owned Water Towers Only.....\$350.00

\*Or the total hourly cost of the jurisdiction, whichever is the greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

\*\* Actual costs include administrative and overhead costs.

**LOT DRAINAGE FEES**

Single Family & Duplex	\$150.00
Swimming Pools	\$150.00
All remaining classifications	
Full Acre Cost	\$350.00 Per Acre
Portion Other than Full Acre	\$350.00 x Percentage of Full

**EXHIBIT "C"**

**CITY OF GRAPEVINE  
MECHANICAL, ELECTRICAL, PLUMBING AND FUEL GAS  
PERMIT FEES**

TYPE OF OCCUPANCY	BUILDING AREA (SQ FT)	PERMIT FEES	AMOUNT DUE
		<u>EACH TRADE</u>	
I. R-3 SINGLE FAMILY, DUPLEX TOWNHOUSE, NEW CONSTRUCTION & ADDITIONS (PER UNIT)  TOTAL SQ.FOOT UNDER ROOF _____	1 - 749 750 - 1,199 1,200 - 1,500 1,501 - 1,750 1,751 - 2,000 2,001 - 2,250 2,251 - 3,000 3,001 - 3,500 3,501 - 4,000 4,001 +	\$ 33.25 \$ 49.88 \$ 63.18 \$ 76.48 \$ 83.13 \$ 89.78 \$ 96.43 \$ 103.08 \$ 109.73 \$ 120.37	\$ _____
II. A, E, I, R-1  HOTELS, APARTMENTS, DRINKING/DINING, EDUCATIONAL, ASSEMBLY, INSTITUTIONAL	1 - 500 501 - 100,000 100,001 - 500,000 500,001 +	\$ 37.00 \$ 17.50+.035 \$ 3,500.00+.03 \$15,000.00+.02	PER SQUARE FOOT \$ _____
III. B, F, H, M, S, U  OFFICE, RETAIL, WHOLESALE, GARAGES, FACTORIES, WORKSHOPS, SERVICE STATIONS, WAREHOUSE	1 - 500 501 - 50,000 50,001- 100,000 100,001+	\$ 37.00 \$ 32.00+ .01 \$ 182.00+ .007 \$ 582.00+ .003	PER SQUARE FOOT \$ _____
IV. ANY OCCUPANCY GROUP, ALTERATIONS, FINISH-OUTS, SHELL COMPLETIONS  CONTRACT VALUATION OF WORK:  \$ _____	<u>CONTRACT VALUATION OF WORK</u>  0- 500 501- 1,500 1,501- 3,000 3,001- 5,000 5,001- 50,000 50,001- 100,000 100,001- 500,000 500,000+	\$ 37.00 \$ 45.00 \$ 57.00 \$ 72.00 \$ 27.00+ .009 \$ 127.00+ .007 \$ 327.00+ .005 \$ 1,327.00+ .003	PER DOLLAR VALUATION \$ _____
V. MISCELLANEOUS  IRRIGATION SYSTEMS MOBILE HOME SERVICE TEMPORARY POLE SERVICE SWIMMING POOLS SIGN ELECTRIC		\$ 37.00 \$ 37.00 \$ 37.00 \$ 37.00 \$ 37.00	\$ _____
<b>OTHER INSPECTIONS AND FEES</b>			
<ul style="list-style-type: none"> <li>• INSPECTIONS OUTSIDE NORMAL BUSINESS HOURS (2HR MINIMUM).....\$42.00/HOUR*</li> <li>• REINSPECTION FEES..... \$42.00</li> <li>• PERMITS FOR WHICH NO FEE IS SPECIFICALLY INDICATED..... \$37.00</li> <li>• INSPECTIONS FOR WHICH NO FEE IS SPECIFICALLY INDICATED (1/2 HOUR MINIMUM).....\$42.00/HOUR</li> <li>• ADDITIONAL PLAN REVIEW REQUIRED BY CHANGES, ADDITIONS, OR REVISIONS TO APPROVED PLANS.....\$42.00/HOUR</li> <li>• BUILDING PERMIT FEES FOR THE GRAPEVINE-COLLEYVILLE INDEPENDENT SCHOOL DISTRICT SHALL BE 25% OF THE FEES ESTABLISHED IN THIS TABLE</li> <li>• FOR USE OF OUTSIDE CONSULTANTS FOR PLAN CHECKING AND INSPECTIONS, OR BOTH.....ACTUAL COSTS**</li> </ul>			
*OR THE TOTAL HOURLY COST TO THE JURISDICTION WHICHEVER IS GREATER.			
**ACTUAL COSTS INCLUDE ADMINISTRATIVE AND OVERHEAD COSTS.			

Except for residential dwellings, all other building permits shall be determined by the building valuation data table attached hereto as Exhibit "B", Building Valuation Data or the contract valuation wherever is greater.

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

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

TOWNHOUSE UNIT. A single-family dwelling unit separated by property lines in a townhouse that extends from foundation to roof and that has a yard or public way on not less than two sides.

**Section R202; add definition of "Conditioned space" and "Appliance, Unvented" to read as follows:**

CONDITIONED SPACE. Conditioned Space. An area, room, or space that is enclosed within the building thermal envelope and is directly or indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate through openings with conditioned spaces, where they are separated from condition spaces by uninsulated walls, floor or ceilings, or where they contain insulated ducts, piping or other sources of heating or cooling. Additionally, the attic space shall be provided with active or passive heating systems capable of maintaining an indoor temperature of not less than 55 degrees F at a point 3 feet above the floor.

APPLIANCE, UNVENTED. An appliance designed or installed in such a manner that the products of combustion are not conveyed by a vent or chimney directly to the outside atmosphere. Such appliances are hereby prohibited by this code.

**Table R301.2; replace table as follows as follows:**

Delete remainder of table Manual J Design Criteria and footnotes “n” and “o”

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY f A	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMPERATURE	ICE BARRIER	FLOOD HAZARD	AIR FREEZING INDEX'	MEAN ANNUAL TEMPERATURE
	SPEED <sup>d</sup> (MPH)	Topographic Effects <sup>k</sup>	Special Wind Region <sup>L</sup>	Windborne Debris Zone <sup>m</sup>		Weathering <sup>a</sup>	Frost Line Depth	Termite <sup>c</sup>					
5 lb/ft	115 (3 sec-gust) / 76 fast est mile	No	No	No		Moderate	6"	Very Heavy	22 ° F	No	Local Code	150	64.9 ° F

**Section R302.1; Delete exceptions 3 and 4**

Exceptions 1, 2, and 5 remain unchanged

**Section R302.3; add text as follows:**

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

**Section R302.2.6; delete exception #6:**

Exceptions 1-5 remain unchanged.

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

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

**Section R302.7; change to read as follows:**

R302.7 Under-stair protection. Enclosed space under stairs that is accessed by a door or access panel shall have walls, under-stair surface and any soffits protected on the enclosed side with 5/8" Type X gypsum board.

**Section R313 Automatic Fire Sprinkler Systems is deleted and replaced with the following:**

R313 Automatic Fire Sprinkler Systems

R313.1 Automatic Fire Sprinkler Systems. Automatic fire sprinkler systems shall be regulated by the Fire Code as adopted by the city.

**Section R322 Flood Resistant Construction; deleted section.**

**Section 327.1 is amended as follows:**

Section 327.1 General. The design and construction of pools and spas shall comply with the International Swimming Pool and Spa Code as adopted and amended by the State of Texas.

**Section 329 is amended as follows:**

329.1 General. Stationary generators shall be listed and labeled in accordance with UL 2200 and shall comply with this section and the Electric Code and ordinance adopted by the city. The connection to the premise wiring system shall be by an approved method using listed materials. Generators installed for continuous use in non-emergency conditions are prohibited.

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

Section R401.2. Requirements. {existing text unchanged}...with accepted engineering practice. For all dwelling units, any foundation or any size addition to an existing foundation regulated by this code shall be designed, signed and sealed by a Professional Engineer registered in the State of Texas.

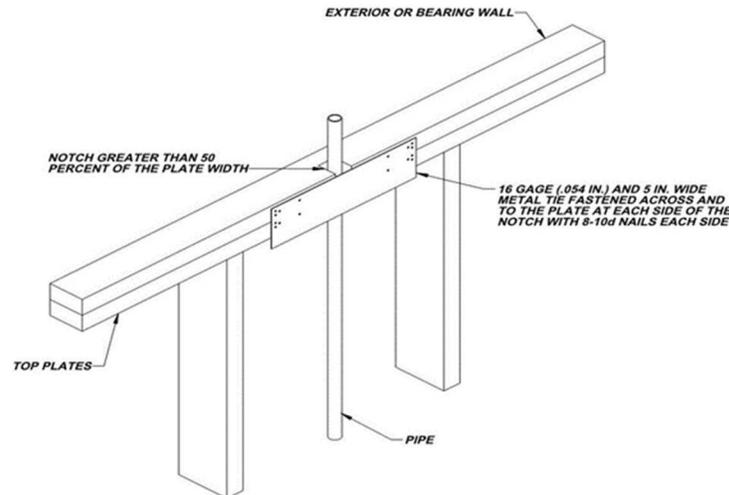
Exception: Buildings accessory to an R-3 occupancy not used as dwellings.

**Section R602.6.1; amend the following:**

R602.6.1 Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 Ga) and 5 inches (127 mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) having a minimum length of 1-1/2 inches (38 mm) at each side or equivalent. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening. See figure R602.6.1. {remainder unchanged}

(Amendment to 2015 IRC carried forward to 2018 IRC.)

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



(Amendment to 2018 IRC carried forward to 2021 IRC also provides additional assurance of maintaining the integrity of the framing by spreading the nailing pattern.)

**Add section R703.8.4.1.2 Veneer Ties for Wall Studs; to read as follows:**

R703.8.4.1.2 Veneer Ties for Wall Studs. In stud framed exterior walls, all ties may be anchored to studs as follows:

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

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

**Section R902.1; amend and add exception No. 5 to read as follows:**

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B, or C roofing shall be installed. {remainder unchanged}

Exceptions:

1. {text unchanged}
2. {text unchanged}
3. {text unchanged}
4. {text unchanged}
  
5. Non-classified roof coverings shall be permitted on one-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, provided the floor area does not exceed 120 square feet.

**Chapter 11 [RE] – Energy Efficiency is deleted in its entirety; Reference the IECC for energy code provisions as adopted by the State of Texas.**

**Section M1305.1.2; change to read as follows:**

M1305.1.2 Appliances in attics. Attics containing appliances shall be provided . . {bulk of paragraph unchanged} . . side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest appliance. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull-down stair with a minimum 300 lb. (136 kg) capacity.
3. An access door from an upper floor level.

Exceptions: [remaining text unchanged]

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

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

vent water heaters within an enclosure is not required. Water heaters shall not be installed in unconditioned attic spaces unless listed for installation outdoors.

**Section G2415.2 CSST; 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 G2415.12 and G2415.12.1; change to read as follows:**

G2415.12 Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches (457 mm) below grade.

G2415.12.1 Individual Outdoor Appliances; Deleted in its entirety.

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

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

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

G2417.4 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.

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

G2417.4.1 Test pressure. The test pressure to be used shall be no 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 tests requiring a pressure of 3 psig, diaphragm 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, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 1/2"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing.

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

G2417.4.2 Test duration. The test duration shall be held for a length of time satisfactory to the Building Official, but in no case for 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 Building Official, but in no case for less than thirty (30) minutes.

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

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

**Section G2420.5.1; change to read as follows:**

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

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

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

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

**Section G2422.1.2.3 Prohibited locations and penetrations; delete Exception 1 and Exception 4:**

**Section G2445 Unvented Room Heaters is deleted and replaced with the following:**

G2445 Unvented Room Heaters.

G2445.1 General. Unvented room heaters, and any other unvented heating appliance or fireplace are strictly prohibited by this code where installed indoors regardless of manufacturers listing.

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

G2448.1.1 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. Water heaters shall not be installed in unconditioned attic spaces unless listed for installation outdoors.

**Section P2603; add to read as follows:**

P2603.3 Protection against corrosion. Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to prevent direct contact, the sheathing shall have a thickness of not less than 0.008 inch (8 mil) (0.203 mm) and the sheathing shall be made of approved material plastic. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.

**Section P2603.5.1 Sewer Depth; change to read as follows:**

P2603.5.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of 12 inches (mm) below finished grade at the point

of septic tank connection. Building sewers shall be a minimum of 12 inches (304 mm) below grade.

**Section P2604; add to read as follows:**

P2604.2.1 Plastic sewer and DWV piping installation. Plastic sewer and DWV piping installed underground shall be installed in accordance with the manufacturer's installation instructions. Trench width shall be controlled to not exceed the outside the pipe diameter plus 16 inches or in a trench which has a controlled width equal to the nominal diameter of the piping multiplied by 1.25 plus 12 inches. The piping shall be bedded in 4 inches of granular fill and then backfilled compacting the side fill in 6-inch layers on each side of the piping. The compaction shall be to minimum of 85 percent standard proctor density and extend to a minimum of 6 inches above the top of the pipe.

**Section P2804.6.1; change to read as follows:**

P2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. {unchanged}
2. {unchanged}
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap. Flexible connectors are prohibited.
4. {unchanged}
5. Discharge to an approved location or to the outdoors.

{remainder unchanged}

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

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

**Section P2904; delete in entirety and replace with the following:**

Section P2904 Dwelling Unit Fire Sprinkler Systems

P2904.1 General. The design and installation of residential automatic fire sprinklers shall conform to the fire code adopted by the city and be *approved* by the fire code official.

**Section P2906.22; add Section as follows:**

P2906.22 Prohibited joints and connections. The following types of joints and connections shall be prohibited:

1. Cement or concrete joints.
2. Joints made with fittings not approved for the specific installation.
3. Solvent-cement joints between different types of plastic pipe.
4. {unchanged}
5. Joints in copper or copper-alloy pipe or tubing where underground beneath buildings shall only be made using wrought copper or copper-alloy fittings with brazed joints.

**Section P3003.9; change to read as follows:**

P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent cement joints shall be permitted above or below ground.

**Section P3111Combination waste and vent systems; delete this section in its entirety.**

**Section P3112.2 Vent Connection; 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 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 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.

**Chapters 34-43 are deleted in their entirety and replaced with the following:**

Chapter 34 Electrical Requirements  
Section 3401 General

Section 3401.1 Electrical installations shall comply with all applicable provisions of the Electric Code and ordinance adopted by the city.

**EXHIBITS A-L** {these exhibits are hereby deleted in their entirety}