

ORDINANCE NO. 27112

An ordinance amending Chapter 55, "Dallas Mechanical Code," of the Dallas City Code, as amended; adopting with certain changes the 2006 Edition of the International Mechanical Code of the International Code Council, Inc.; regulating the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use, and maintenance of mechanical work in the city; providing a penalty not to exceed \$2,000; providing a saving clause; providing a severability clause; and providing an effective date.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Chapter 55, "Dallas Mechanical Code," of the Dallas City Code, as amended, is amended by adopting the 2006 Edition of the International Mechanical Code of the International Code Council, Inc. (which is attached as Exhibit A and made a part of this ordinance), with the following amendments:

1. Page v, "Ordinance," is deleted.
2. Chapter 1, "Administration," of the 2006 International Mechanical Code is deleted and replaced with a new Chapter 1, "Administration," to read as follows:

**"CHAPTER 1
ADMINISTRATION**

**SECTION 101
GENERAL**

101.1 Title. These regulations shall be known as the *Dallas Mechanical Code*, hereinafter referred to as 'this code.'

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101.2 Scope. This code shall regulate the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those mechanical systems, system components, equipment and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be regulated by the *Dallas Fuel Gas Code*.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the *Dallas One- and Two-Family Dwelling Code*.
2. Mechanical systems in existing buildings undergoing repair, alterations, or additions, and change of occupancy shall be permitted to comply with the *Dallas Existing Building Code*.

101.3 Administrative procedures. Except as otherwise specified in this code, all provisions of Chapter 52, 'Administrative Procedures for the Construction Codes,' of the *Dallas City Code* apply to this code.

101.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference only when such codes and standards have been specifically adopted by the city of Dallas. Whenever amendments have been adopted to the referenced codes and standards, each reference to the codes and standards shall be considered to reference the amendments as well. Any reference made to NFPA 70 or the *ICC Electrical Code* means the *Dallas Electrical Code*, as amended. References made to the *International Plumbing Code*, the *International Building Code*, the *International Fire Code*, the *International Energy Conservation Code*, the *International Fuel Gas Code*, the *International Existing Building Code*, and the *International Residential Code*, respectively mean the *Dallas Plumbing Code*, the *Dallas Building Code*, the *Dallas Fire Code*, the *Dallas Energy Conservation Code*, the *Dallas Fuel Gas Code*, the *Dallas Existing Building Code*, and the *Dallas One- and Two-Family Dwelling Code*, as amended. Where the requirements of referenced codes and standards or manufacturer's installation instructions do not conform to minimum provisions of this code, the provisions of this code shall apply."

3. Subsection [B] 302.3, "Cutting, Notching and Boring in Wood Framing," of Section 302, "Protection of Structure," of Chapter 3, "General Regulations," of the 2006 International Mechanical Code is amended to read as follows:

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“[B] 302.3 Cutting, notching and boring in wood framing. When permitted by the Dallas Building Code, t[F]he cutting, notching and boring of wood framing members shall comply with Sections 302.3.1 through 302.3.4.”

4. Subsection 304.6, “Private Garages,” of Section 304, “Installation,” of Chapter 3, “General Regulations,” of the 2006 International Mechanical Code is deleted.

5. Subsection 304.9, “Clearances From Grade,” of Section 304, “Installation,” of Chapter 3, “General Regulations,” of the 2006 International Mechanical Code is amended to read as follows:

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

6. Subsection 306.3, “Appliances in Attics,” of Section 306, “Access and Service Space,” of Chapter 3, “General Regulations,” of the 2006 International Mechanical Code is amended to read as follows:

“**306.3 Appliances in attics.** Attics containing appliances requiring access shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest appliance. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length measured along the center line of the passageway from the opening to the appliance. The passageway shall have continuous solid flooring not less than 24 inches (610 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm) or larger, where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, access to the attic space shall be provided by one of the following:

1. A permanent stair.
2. A pull down stair.
3. An access door from an upper floor level.
4. An access panel in lieu items 1, 2 or 3 with prior approval of the code official due to structural conditions.

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Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.”
2. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches wide for its entire length, the passageway shall be not greater than 50 feet (15,250 mm) in length.
7. Subsection 306.5, “Equipment and Appliances on Roofs or Elevated Structures,” of Section 306, “Access and Service Space,” of Chapter 3, “General Regulations,” of the 2006 International Mechanical Code is amended to read as follows:

“306.5 Equipment and appliances on roofs or elevated structures. Where equipment and appliances requiring access are installed on roofs or elevated structures at an [a] aggregate height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access. ~~[, the extent of which shall be from]~~ Permanent exterior ladders providing roof access need not extend closer than 12 feet (3038 mm) to the finish grade or floor level below and shall extend to the equipment and appliances’ level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) high or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope).

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

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).
2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center.
3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be a minimum of 18 inches (457 mm) between rails.
5. Rungs shall have a minimum 0.75-inch (19 mm) diameter and be capable of withstanding a 300-pound (136.1 kg) load.
6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds (488.2 kg/m²) per square foot.

7. Ladders shall be protected against corrosion by approved means.

Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 occupancies.

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

306.5.1.1 Catwalk. On roofs having slopes greater than 4 units vertical in 12 units horizontal, a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to the working platform at the appliance.

306.5.2 Electrical requirements. A receptacle outlet shall be provided at or near the equipment location in accordance with the *Dallas [ICC] Electrical Code*.

8. Section 306, "Access and Service Space," of Chapter 3, "General Regulations," of the 2006 International Mechanical Code is amended by adding a new Subsection 306.6, "Water Heaters Above Ground or Floor," to read as follows:

306.6 Water heaters above ground or floor. When the mezzanine or platform in which a water heater is installed is more than 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 water heater may be reached by portable ladder if the water heater has a capacity of no more than 10 gallons (or larger with approval), it is capable of being accessed through a lay-in ceiling, and it is installed not more than 10 feet (3048 mm) above the ground or floor level.

306.6.1 Lighting, receptacle outlet. Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 306.3.1."

9. Subsection 307.2, "Evaporators and Cooling Coils," of Section 307, "Condensate Disposal," of Chapter 3, "General Regulations," of the 2006 International Mechanical Code is amended to read as follows:

307.2 Evaporators and cooling coils. Condensate drain systems shall be provided for equipment and appliances containing evaporators or cooling coils. Condensate drain systems shall be designed, constructed and installed in accordance with Sections 307.2.1 through 307.2.4.

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

307.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be schedule 80 PVC pipe or tubing when they are exposed to ultra violet light. When not exposed to ultraviolet light, components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. All components shall be selected for the pressure, [~~and~~] temperature and exposure rating of the installation. Condensate waste and drain line size shall be not less than ¾-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

307.2.3 Auxiliary and secondary drain systems. In addition to the requirements of Section 307.2.1, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil or fuel-fired appliance that produces condensate, where damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1.5 inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Metallic pans shall have a minimum thickness of not less than 0.0276-inch (0.7 mm) galvanized sheet metal. Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm).

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2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.
3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water-level detection device conforming to UL 508 that will shut off the equipment served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.
4. A water level detection device conforming to UL 508 shall be provided that will shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line, or in the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan.
5. Discharge, as noted, shall be to a conspicuous point of disposal to alert occupants in the event of a stoppage of the drain. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.

Exception: Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

307.2.3.1 Water-level monitoring devices. On down-flow units and all other coils that do not have a secondary drain and do not have a means to install an auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the equipment served in the event that the primary drain becomes restricted. Externally installed devices and devices installed in the drain line shall not be permitted.

307.2.4 Traps. Condensate drains shall be trapped as required by the equipment or appliance manufacturer.”

10. Subsection 401.4, “Opening Location,” of Section 401, “General,” of Chapter 4, “Ventilation,” of the 2006 International Mechanical Code is amended to read as follows:

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“401.4 Opening location. Outside air exhaust and intake openings shall be located a minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot. Where openings front on a street or public way, the distance shall be measured to the centerline of the street or public way.

Exceptions:

1. Group R-3.
2. Exhaust outlets for environmental air exhaust openings shall be located not less than 3 feet (914 mm) from property lines and not less than 3 feet (914 mm) from openings into the building.
3. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.”

11. Subsection 403.2, “Outdoor Air Required,” of Section 403, “Mechanical Ventilation,” of Chapter 4, “Ventilation,” of the 2006 International Mechanical Code is amended to read as follows:

“403.2 Outdoor air required. The minimum ventilation rate of required outdoor air shall be determined in accordance with Section 403.3.

Exceptions:

1. Where the registered design professional demonstrates that an engineered ventilation system design will prevent the maximum concentration of contaminants from exceeding that obtainable by the rate of outdoor air ventilation determined in accordance with Section 403.3, the minimum required rate of outdoor air shall be reduced in accordance with such engineered system design.
2. Where the registered design professional demonstrates that an engineered ventilation system is designed in accordance with ASHRAE 62, the minimum required rate of outdoor air shall be reduced in accordance with such engineered system designs.

403.2.1 Recirculation of air. The air required by Section 403.3 shall not be recirculated. Air in excess of that required by Section 403.3 shall not be prohibited from being recirculated as a component of supply air to building spaces, except that:

1. Ventilation air shall not be recirculated from one dwelling unit to another or to dissimilar occupancies.

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2. Supply air to a swimming pool and associated deck areas shall not be recirculated unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less. Air from this area shall not be recirculated to other spaces where 10 percent or more of the resulting supply airstream consists of air recirculated from these spaces.
3. Where mechanical exhaust is required by Note b in Table 403.3, recirculation of air from such spaces shall be prohibited. All air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.
4. Where mechanical exhaust is required by Note h in Table 403.3, mechanical exhaust is required and recirculation is prohibited where 10 percent or more of the resulting supply airstream consists of air recirculated from these spaces.
5. Toilet rooms within private dwellings that contain only a water closet, lavatory or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

403.2.2 Transfer air. Except where recirculation from such spaces is prohibited by Table 403.3, air transferred from occupied spaces is not prohibited from serving as makeup air for required exhaust systems in such spaces as kitchens, baths, toilet rooms, elevators and smoking lounges. The amount of transfer air and exhaust air shall be sufficient to provide the flow rates as specified in Sections 403.3 and 403.3.1. The required outdoor air rates specified in Table 403.3 shall be introduced directly into such spaces or into the occupied spaces from which air is transferred or a combination of both.”

12. Footnote g to Table 403.3, “Required Outdoor Ventilation Air,” of Subsection 403.3, “Ventilation Rate,” of Section 403, “Mechanical Ventilation,” of Chapter 4, “Ventilation,” of the 2006 International Mechanical Code is amended to read as follows:

“g. Transfer air permitted in accordance with Section 403.2.2. Toilet rooms within private dwellings that contain only a water closet, lavatory or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.”

13. Subsection 501.2, “Exhaust Discharge,” of Section 501, “General,” of Chapter 5, “Exhaust Systems,” of the 2006 International Mechanical Code is amended to read as follows:

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

Exceptions:

1. Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of dwelling units having private attics.
2. Commercial cooking recirculating systems.
3. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.”

14. Subsection 504.6, “Domestic Clothes Dryer Ducts,” of Section 504, “Clothes Dryer Exhaust,” of Chapter 5, “Exhaust Systems,” of the 2006 International Mechanical Code is amended to read as follows:

“504.6 Domestic clothes dryer ducts. Exhaust ducts for domestic clothes dryers shall be constructed of metal and shall have a smooth interior finish. The exhaust duct shall be a minimum nominal size of 4 inches (102 mm) in diameter. The entire exhaust system shall be supported and secured in place. The male end of the duct at overlapped duct joints shall extend in the direction of airflow. Clothes dryer transition ducts used to connect the appliance to the exhaust duct system shall be limited to single lengths not to exceed 8 feet (2438 mm) and shall be listed and labeled for the application. Transition ducts shall not be concealed within construction. The size of duct shall not be reduced along its developed length nor at the point of termination.

504.6.1 Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 25 ft (7620 mm) from the dryer location to the outlet terminal. The maximum length of the duct shall be reduced 2 ½ 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:

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Warning: Dryer shall be approved for vent length not to exceed 40 feet total developed length (TDL.)

Duct Size: (Number)

Total Developed Length: (Number).

504.6.2 Rough-in required. Where a compartment or space for a domestic clothes dryer is provided, an exhaust duct system shall be installed in accordance with Sections 504.6 and 504.6.1.”

15. Paragraph [B] 607.5.1, “Fire Walls,” of Subsection [B] 607.5, “Where Required,” of Section [B] 607, “Ducts and Transfer Openings,” of Chapter 6, “Duct Systems,” of the 2006 International Mechanical Code is amended to read as follows:

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

16. Appendix A of the 2006 International Mechanical Code is adopted.

17. Appendix B of the 2006 International Mechanical Code is not adopted.

18. All chapters of the 2006 International Mechanical Code adopted by this ordinance are subchapters of Chapter 55 of the Dallas City Code, as amended.

19. All references in the 2006 International Mechanical Code to the fire code, building code, plumbing code, electrical code, residential code, existing building code, energy conservation code, and fuel gas code refer, respectively to Chapters 16, 53, 54, 56, 57, 58, 59, and 60 of the Dallas City Code.

SECTION 2. That a person violating a provision of this ordinance, upon conviction, is punishable by a fine not to exceed \$2,000. No offense committed and no liability, penalty, or forfeiture, either civil or criminal, incurred prior to the effective date of this ordinance will be discharged or affected by this ordinance. Prosecutions and suits for such offenses, liabilities, penalties, and forfeitures may be instituted, and causes of

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action pending on the effective date of this ordinance may proceed, as if the former laws applicable at the time the offense, liability, penalty, or forfeiture was committed or incurred had not been amended, repealed, reenacted, or superseded, and all former laws will continue in effect for these purposes.

SECTION 3. That Chapter 55 of the Dallas City Code, as amended, will remain in full force and effect, save and except as amended by this ordinance. Any existing structure, system, development project, or registration that is not required to come into compliance with a requirement of this ordinance will be governed by the requirement as it existed in the former law last applicable to the structure, system, development project, or registration, and all former laws will continue in effect for this purpose.

SECTION 4. That the terms and provisions of this ordinance are severable and are governed by Section 1-4 of Chapter 1 of the Dallas City Code, as amended.

SECTION 5. That this ordinance will take effect on April 1, 2008, and it is accordingly so ordained.

APPROVED AS TO FORM:

THOMAS P. PERKINS, JR., City Attorney

By  Assistant City Attorney

Passed **MAR 26 2008**