

RESOLUTION NO.

Date Adopted:

Date Published:

A RESOLUTION TO AMEND THE WICHITA-SEDGWICK COUNTY UNIFIED BUILDING AND TRADE CODE BY MOVING MECHANICAL PROVISIONS LOCATED IN THE ARTICLE FOR THE BUILDING CODE INTO THE ARTICLE FOR THE MECHANICAL CODE. ALSO, THIS RESOLUTION AMENDS THE PLUMBING CODE TO REMOVE THE REQUIREMENT FOR TRACER WIRES CONTAINED WITHIN SEC. 604.9 OF THE UNIFORM PLUMBING CODE, 2012 EDITION.

WHEREAS, pursuant to K.S.A. 19-101d, the Kansas State Legislature granted the Board of County Commissioners of Sedgwick County the authority to enforce all resolutions passed pursuant to county home rule powers; and

WHEREAS, K.S.A. 19-4701 *et seq.* established the code for the enforcement of county codes and resolutions; and

WHEREAS, on the 25th day of August, 1993, the Board of County Commissioners adopted Resolution No. 159-1993, which resolution adopted the Sedgwick County Code; and

WHEREAS, the Board of County Commissioners and the City of Wichita consolidated code enforcement from their respective jurisdictions within the Metropolitan Area Building and Construction Department in Sedgwick County Resolution No. 135-2012 and City of Wichita Ordinance No. 49-333; and

WHEREAS, the Board of County Commissioners adopted the Wichita-Sedgwick County Unified Building and Trade Code pursuant to Sedgwick County Resolution 175-2012; and

WHEREAS, the Board of County Commissioners believes the following modifications to the Unified Building and Trade Code are necessary.

NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF COUNTY COMMISSIONERS OF SEDGWICK COUNTY, KANSAS, AMENDS THE WICHITA-SEDGWICK COUNTY UNIFIED BUILDING AND TRADE CODE AS FOLLOWS:

SECTION 1.

SECTION 2.4.590 - Part V - Mechanical Chapters Adopted is hereby amended to read as follows:

“Mechanical Chapters. Article 5, Section 4 of the Unified Building and Trade Code shall

govern all residential mechanical matters that apply to Article 2, Section 4 of the UBTC.”

SECTION 2.

SECTION 2.4.600 - Part VI - Fuel Gas is hereby amended to read as follows:

“**Fuel Gas.** Article 5, Section 4 of the Unified Building and Trade Code shall govern all Fuel Gas matters that apply to Article 2, Section 4 of the UBTC.”

SECTION 3.

SECTION 2.4.630 – M1305.1.4.1 is hereby deleted.

SECTION 4.

SECTION 2.4.640. – Appliance Clearance is hereby deleted.

SECTION 5.

SECTION 2.4.650. – Vented Floor Furnaces is hereby deleted.

SECTION 6.

SECTION 2.4.660 - Part VI – Vented Wall Furnaces is hereby deleted.

SECTION 7.

SECTION 2.4.670 – M1411.3.1 is hereby deleted.

SECTION 8.

SECTION 2.4.680 – M1411.4 is hereby deleted.

SECTION 9.

SECTION 2.4.690. Outdoor Discharge is hereby deleted.

SECTION 10.

SECTION 2.4.700. Vertical Clearance is hereby deleted.

SECTION 11.

SECTION 2.4.710. Outdoor Discharge is hereby deleted.

SECTION 12.

SECTION 2.4.720. Recirculation of Air is hereby deleted.

SECTION 13.

SECTION 2.4.730. Ventilation Rate is hereby deleted.

SECTION 14.

SECTION 2.4.660. Duct Insulation Materials is hereby deleted.

SECTION 15.

SECTION 2.4.740. Joints and Seams is hereby deleted.

SECTION 16.

SECTION 2.4.750. Return Air is hereby deleted.

SECTION 17.

SECTION 2.4.760. Combustion Air is hereby deleted.

SECTION 18.

SECTION 2.4.770. Water Heaters used for Space Heating is hereby deleted.

SECTION 19.

SECTION 2.4.780. Water Heaters is hereby deleted.

SECTION 20.

SECTION 2.4.790. Fuel Gas (Application) is hereby deleted.

SECTION 21.

SECTION 2.4.800. Section G2404.10 (307.5) is hereby deleted.

SECTION 22.

SECTION 2.4.810. Appliance Location is hereby deleted.

SECTION 23.

SECTION 2.4.820. Clearances from Grade is hereby deleted.

SECTION 24.

SECTION 2.4.830. Section G2410 (309) is hereby deleted.

SECTION 25.

SECTION 2.4.840. Section G2410 (309.2) is hereby deleted.

SECTION 26.

SECTION 2.4.850. Section G2411 (310) is hereby deleted.

SECTION 27.

SECTION 2.4.860. Sections of Chapter 24 (regulating gas piping) is hereby deleted.

SECTION 28.

SECTION 2.4.880. - Venting is hereby deleted.

SECTION 29.

SECTION 2.4.890. – Floor Furnaces is hereby deleted.

SECTION 30.

SECTION 2.4.900. Section G2448 (624) is hereby deleted.

SECTION 31.

SECTION 5.1.020 is hereby amended to read as follows:

Section 5.1.020 - Scope.

“Section 101.2 of the International Mechanical Code, as adopted by reference herein, shall be amended to read as follows: 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 equipment, fuel gas fired appliances and gas-fired appliance venting systems shall be regulated by the 2012 International Fuel Gas Code. Exception: Detached one- and two- family dwellings not more than three stories high with separate means of egress and their accessory structures shall comply with Article 5, Section 4 of the UBTC.”

SECTION 32.

SECTION 5.4.010 – Scope is hereby created to read as follows:

“**Section M1201.1. Scope.** The provisions of Chapters 12 through 24 of 2006 International Residential Code shall regulate the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently installed and used to control environmental conditions within buildings. These Chapters shall also regulate those mechanical systems, system components, equipment and appliances specifically addressed in this Code.”

SECTION 33.

SECTION 5.4.020 – Ground Clearance is hereby created to read as follows:

“**Section M1305.1.4.1. Ground clearance.** Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending above adjoining grade or shall be suspended a minimum of six (6) inches (152 mm) above adjoining grade. Supports for heat pumps shall be at least three (3) inches and conform to the manufacturer's specifications.”

SECTION 34.

SECTION 5.4.030 – Appliances Clearance is hereby created to read as follows:

“**Section M1306.1. Appliance clearance.** Appliances shall be installed with the clearances from unprotected combustible materials as indicated on the appliance label and in the manufacturer's installation instructions. Standard Installation Clearances for Unlisted Heat-Producing Appliances shall be in accordance with Table 3-1 as follows:

Table 3-1 shall be created as follows:

TABLE 3-1 - Standard Installation Clearances in Inches for Unlisted Heat-Producing Appliances
See Section 304.0.

In × 25.4 = mm

RESIDENTIAL-TYPE APPLIANCES		APPLIANCE				
	FUEL	ABOVE TOP OF CASING OR APPLIAN	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT	FROM BACK	FROM SIDES

		CE				
BOILERS AND WATER HEATERS¹¹						
Steam Boilers – 15psi (103.4 kPa)	Automatic oil or comb. gas-oil	6		24	6	6
Water Boilers - 250°F (121°C)	Automatic Gas	6		18	6	6
Water Heaters - 200°F (93°C) All water walled or jacketed	Solid	6		24	6	6
FURNACES – CENTRAL OR HEATERS¹¹						
Electric Central Warm-Air Furnaces	Automatic oil or comb. gas-oil	6 ²	6 ²	24	6	6
Gravity, Upflow, Downflow, Horizontal and Duct Warm Air - 250°F (121°C) max.	Automatic gas	6 ²	6 ²	18	6	6
	Solid	18 ²	18 ²	48	18	18
	Electric	6 ²	6 ²	18	6	6
FURNACES – FLOOR						
For Mounting in Combustible Floors	Automatic oil or comb. gas-oil	36		12	12	12
	Automatic gas	36		12	12	12
HEAT EXCHANGERS						
Steam-15 psi (103.4 kPa) max. Hot Water - 250° (121°C) max.	1	1	1	1	1	1
ROOM HEATERS⁴						
Circulating Type,	Oil or Solid	36		24	12	12
	Gas	36		24	12	12
Radiant	Oil or Solid	36		36	36	36
	Gas	36		36	18	18
or Other Type	Gas with double metal or ceramic back	36		36	12	18

Fireplace Stove	Solid	48 ⁵		54	48 ⁵	48 ⁵
RADIATORS						
Steam or Hot Water ⁶		36		6	6	6
RANGES-COOKING STOVES						
					Firing Side	Opp. Side
	Oil	30 ⁷		9	24	18
	Gas	30 ⁷		6	6	6
	Solid Clay-Lined	30 ⁷		24	24	18
	Firepot	30 ⁷		36	36	18
	Electric	30 ⁷		6	6	6
INCINERATORS						
Domestic Types		36 ⁸		48	36	36
COMMERCIAL INDUSTRIAL-TYPE APPLIANCES ANY AND ALL PHYSICAL SIZES EXCEPT AS NOTED ¹¹		APPLIANCE				
	FUEL	ABOVE TOP OF CASING OR APPLIAN. CE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT	FROM BACK ⁹	FROM SIDES ⁹
BOILERS AND WATER HEATERS						
100 cu. ft. (2.832 m ³) or less	All fuels	18		48	18	18
Steam, any pressure of 50 psi (345 kPa) or less Any size	All fuels	18		48	18	18
UNIT HEATERS						
Floor Mounted or Suspended – any size	Steam or hot Water	1			1	1
	Oil or comb. gas-oil	6		24	18	18
Suspended – 100 cu. ft. (2.832 m ³) or	Gas	6		18	18	18

less						
Suspended – 100 cu. ft. (2.832 m ³)	All fuels	18		48	18	18
Floor Mounted – any size	All fuels	18		48	18	18
RANGES – RESTAURANT –TYPE						
Floor Mounted	All fuels	18		48	18	18
OTHER LOW-HEAT INDUSTRIAL APPLIANCES						
Floor Mounted or Suspended	All fuels	18	18	48	18	18
Boilers and Water Heaters						
Over 50 psi (345 KPa)	All fuels	48		96	36	36
Over 100 cu. ft. (2832 m ³)						
OTHER MEDIUM-HEAT INDUSTRIAL APPLIANCES						
All sizes	All fuels	48	36	96	36	36
INCINERATORS						
All sizes		48		96	36	36
HIGH-HEAT INDUSTRIAL APPLIANCES						
All sizes	All fuels	180		360	120	120

Footnotes for Table 3-1

1. The minimum dimension shall be that necessary for servicing the appliance, including access for cleaning and normal care, tube removal, etc.
2. For a listed oil, combination gas-oil, gas, or electric furnace, this dimension may be two (2) inches (51 mm) if the furnace limit control cannot be set higher than 250°F (121°C), or this dimension may be one (1) inch (25.4 mm) if the limit control cannot be set higher than 200°F (93°C), or the appliance shall be marked to indicate that the outlet air temperature cannot exceed 200°F (93°C).
3. The dimension may be six (6) inches (152 mm) for an automatically stoker-fired forced-warm-air furnace equipped with 250°F (121°C) limit control and with barometric draft control operated by draft intensity and permanently set to limit draft to a maximum intensity of 0.13 inch (3.3mm) water gauge.
4. Unlisted appliances shall be installed on noncombustible floors and may be installed on protected combustible floors. Heating appliances approved for installation on protected combustible flooring shall be so constructed that flame and hot gases do not come in contact with the appliance base. Protection for combustible floors shall consist of four (4) inch (102 mm) hollow masonry covered with sheet metal at least 0.021 inch (0.53 mm) thick (No. 24 manufacturer's standard gauge). Masonry shall be permanently fastened in place in an approved manner with the ends unsealed and joints matched so as to provide free circulation of air through

the masonry. Floor protection shall extend twelve (12) inches (305 mm) at the sides and rear of the appliance, except that at least eighteen (18) inches (457 mm) shall be required on the appliance-opening side or sides measured horizontally from the edges of the opening.

5. The forty-eight (48) inch (1219 mm) clearance may be reduced to thirty-six (36) inches (915 mm) when protection equivalent to that provided by (a)—(g) of Table 3-2 is applied to the combustible construction.

6. Steam pipes and hot water heating pipes shall be installed with a clearance of at least one (1) inch (25 mm) to all combustible construction or material, except that at the points where pipes carrying steam at not over fifteen (15) pounds gauge pressure (103.4 kPa) or hot water that emerges from a floor, wall, or ceiling, the clearance at the opening through the finished floorboards or wall-ceiling boards may be reduced to not less than one-half ($\frac{1}{2}$) inch (12.7 mm). Each such opening shall be covered with a plate of noncombustible material. Such pipes passing through stock shelving shall be covered with not less than one (1) inch (25.4 mm) of approved insulation. Wood boxes or casing enclosing uninsulated steam or hot water heating pipes or wooden covers to recesses in walls in which such uninsulated pipes are placed shall be lined with metal or insulating millboard. Where the temperature of the boiler piping does not exceed 160°F (71°C), the provisions of this table shall not apply. Coverings or insulation used on steam or hot water pipes shall be of material suitable for the operating temperature of the system. The insulation or jackets shall be of noncombustible materials, or the insulation or jackets and lap-seal adhesives shall be tested as a composite product. Such composite product shall have a flame-spread rating of not more than twenty-five (25) and a smoke-developed rating not to exceed fifty (50) when tested in accordance with UBC Standard No. 42-1.

7. Thirty (30) inches to combustible material or metal cabinets, or if the underside of such combustible material or metal cabinet is protected with insulating millboard at least one-quarter ($\frac{1}{4}$) inch (6.4 mm) thick covered with sheet metal of not less than 0.013 inch (0.33 mm) (No. 28 gauge), the distance may be reduced to twenty-four (24) inches (610 mm).

8. Clearance above charging door shall be at least forty-eight (48) inches (1.219 m).

9. If the appliance is encased in brick, the eighteen (18) inch (457 mm) clearance above and at the sides and rear may be reduced to twelve (12) inches (305 mm).

10. If the appliance is encased in brick, the clearance above may be reduced to thirty-six (36) inches (914 mm) and at the sides and rear may be reduced to eighteen (18) inches (457 mm).

11. A central heating boiler or furnace shall be installed in accordance with the manufacturer's instructions and shall be installed on a floor of noncombustible construction with noncombustible flooring and surface finish and with no combustible material against the underside thereof, or on fire-resistive slabs or arches having no combustible material against the underside thereof.

Exception No. 1: Appliances listed for installation on a combustible floor.

Exception No. 2: Installation on a floor protected in an approved manner. [NFPA 54:9.3.3]"

SECTION 35.

SECTION 5.4.040 - Location is hereby created to read as follows:

"Section M1408.3 of the International Residential Code is amended to read as follows:

Vented Floor Furnaces. Location of floor furnaces shall conform to the following requirements:

1. Floor registers of floor furnaces shall be installed not less than six (6) inches (152 mm) from a wall.
2. Wall registers of floor furnaces shall be installed not less than six (6) inches (152 mm) from the adjoining wall at inside corners.
3. The furnace register shall be located not less than twelve (12) inches (305 mm) from doors in any position, draperies or similar combustible objects.
4. The furnace register shall be located at least five (5) feet (1524 mm) below any projecting combustible materials.
5. The floor furnace burner assembly shall not project into an occupied under-floor area.
6. The floor furnace shall not be installed in concrete floor construction built on grade.
7. The floor furnace shall not be installed where a door can swing within twelve (12) inches (305 mm) of the grille opening.
8. Replacement of floor furnaces with the same or lesser B.T.U. rating may be installed in the same location with prior approval by the building official."

SECTION 36.

SECTION 5.4.050 – Installation is hereby created to read as follows:

"Section M1409.3 of the International Residential Code is amended to read as follows:

Installation. Vented wall furnace installations shall conform to the following requirements:

1. Required wall thicknesses shall be in accordance with the manufacturer's installation instructions.
2. Ducts shall not be attached to a wall furnace. Casing extensions or boots shall be installed only when listed as part of a listed and labeled appliance.
3. A manual shut off valve shall be installed ahead of all controls.
4. The wall cavity directly above the wall furnace shall be ventilated by a twenty-six (26) gauge (0.016 inch) (0.4 mm) metal thimble into attic; or, an eight (8) inch (203 mm) by fourteen (14) (356 mm) inch metal grill a minimum of twelve (12) inches (305 mm) below the ceiling."

SECTION 37.

SECTION 5.4.060 – Auxiliary and Secondary Drain Systems is hereby created to read as follows:

Section M1411.3.1 of the International Residential Code is created to read as follows:

"M1411.3.1. Auxiliary and secondary drain systems. In addition to the requirements of Section M1411.3, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil when located above finished ceilings or furred spaces. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than 1/8 vertical in twelve (12) units horizontal (1-percent slope). Drain piping shall be a minimum of ¾-inch (19 mm) nominal pipe size. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be installed 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 three (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).

2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. This 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 installed under the coils on which condensate will occur. This 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 the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan.”

SECTION 38.

SECTION 5.4.070 – Auxiliary Drain Pan is hereby created to read as follows:

“M1411.4. Auxiliary drain pan. Category IV condensing appliances shall have an auxiliary drain pan when located above finished ceilings or furred spaces. These pans shall be installed in accordance with the applicable provisions of Section M1411.3.1.

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

SECTION 39.

SECTION 5.4.090 – Bathroom Exhaust is hereby created to read as follows:

“Section M1501.1. Outdoor discharge. The air removed by mechanical exhaust systems shall be discharged to the outdoors in accordance with Section M1506.2.

Exceptions:

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

(2). Ventilation air from residential bathrooms or toilet rooms may be exhausted into a properly ventilated attic when all of the following are met:

1. The duct(s) conveying exhaust into the attic shall terminate a minimum of thirty-six (36) inches above the top of the ceiling framing members, and shall not discharge upon any building element.

2. Attics into which bath and/or toilet room exhausts are discharged must be properly ventilated, in accordance with Section R806, and shall not discharge into an unvented attic

assembly.

3. The exhaust duct(s) shall terminate above the top of the attic insulation with a "goose-neck" installed to prevent infiltration of insulating material into the duct.
4. Exhaust duct(s) run above the insulation inside of attics, with a developed length greater than five (5) feet, shall be insulated."

SECTION 40.

SECTION 5.4.130 – Vertical Clearance is hereby created to read as follows:

"Section M1505.5. Vertical clearance. Domestic cooking appliances either built-in or freestanding shall have a vertical clearance above the cooking top of not less than thirty (30) inches (760 mm) to combustible material or metal cabinets. A minimum clearance of twenty-four (24) inches (610 mm) is permitted when one of the following is installed:

1. The underside of the combustible material or metal cabinet above the cooking top is protected with not less than ¼ inch (6.4 mm) insulating millboard covered with sheet metal not less than 0.0122 inch (0.3 mm) thick.
2. A metal ventilating hood of sheet metal not less than 0.0122 inch (0.3 mm) thick is installed above the cooking top with a clearance of not less than ¼ inch (6.4 mm) between the hood and the underside of the combustible material or metal cabinet, and the hood is at least as wide as the appliance and is centered over the appliance.
3. A listed cooking appliance or microwave oven is installed over a listed cooking appliance and will conform to the terms of the upper appliance's listing and the manufacturers' instructions."

SECTION 41.

SECTION 5.4.140 – Overhead Exhaust Hoods is hereby created to read as follows:

"Section M1505.1. General. Domestic open-top broiler units shall be provided with a metal exhaust hood, not less than twenty-eight (28) gauge, with ¼ inch (6 mm) between the hood and the underside of combustible material or cabinets. A clearance of at least thirty (30) inches (760 mm) shall be maintained between the cooking surface and the combustible material or cabinet. The hood shall be at least as wide as the broiler unit and shall extend over the entire unit. Such exhaust hood shall discharge to the outdoors and shall be equipped with a backdraft damper or other means to control infiltration/exfiltration when not in operation. Broiler units incorporating an integral exhaust system, and listed and labeled for use without an exhaust hood, need not be provided with an exhaust hood."

SECTION 42.

SECTION 5.4.150 – Recirculation of Air is hereby created to read as follows:

"Section M1507.2. Recirculation of air. Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another dwelling unit and shall be exhausted directly to

the outdoors. Exhaust air from bathrooms and toilet rooms may discharge into an attic when the following are met:

1. The duct(s) conveying exhaust into the attic shall terminate a minimum of thirty-six (36) inches above the top of the ceiling framing members, and shall not discharge upon any building element.
 2. Attics into which bath and/or toilet room exhausts are discharged must be properly ventilated, in accordance with Section R806, and shall not discharge into an unvented attic assembly.
 3. The exhaust duct(s) shall terminate above the top of the attic insulation with a "goose-neck" installed to prevent infiltration of insulating material into the duct.
- Exhaust duct(s) run above the insulation inside of attics, with a developed length greater than five (5) feet, shall be insulated."

SECTION 43.

SECTION 5.4.160 – Table 1601.1.1(2) is hereby created to read as follows:

"Section M1601.1.1(2). Table 1601.1.1(2). Gauges for metal ducts and plenums used for heating or cooling shall meet current SMACNA HVAC Duct Construction Standards."

SECTION 44.

SECTION 5.4.170 – Duct Insulation Materials is hereby created to read as follows:

"Section M1601.3. Duct insulation materials. Duct insulation materials shall conform to the following requirements:

1. Duct coverings and linings, including adhesives where used, shall have a flame spread index not higher than twenty-five (25), and a smoke-developed index not over fifty (50) when tested in accordance with ASTM E 84, using the specimen preparation and mounting procedures of ASTM E 2231.
2. Duct coverings and linings shall not flame, glow, smolder or smoke when tested in accordance with ASTM C 411 at the temperature to which they are exposed in service. The test temperature shall not fall below 250°F (121°C).
3. External duct insulation and factory-insulated flexible ducts shall be legibly printed or identified at intervals not longer than thirty-six (36) inches (914 mm) with the name of the manufacturer; the thermal resistance *R*-value at the specified installed thickness; and the flame spread and smoke-developed indexes of the composite materials. All duct insulation product *R*-values shall be based on insulation only, excluding air films, vapor retarders or other duct components, and shall be based on tested *C*-values at 75°F (24°C) mean temperature at the installed thickness, in accordance with recognized industry procedures. The installed thickness of duct insulation used to determine its *R*-value shall be determined as follows:
 - 3.1. For duct board, duct liner and factory-made rigid ducts not normally subjected to compression, the nominal insulation thickness shall be used.
 - 3.2. For duct wrap, the installed thickness shall be assumed to be seventy-five (75) percent (25-percent compression) of nominal thickness.

3.3. For factory-made flexible air ducts, the installed thickness shall be determined by dividing the difference between the actual outside diameter and nominal inside diameter by two.

3.4. Duct insulation shall conform to the requirements of the Table of R-Values of Duct Insulation.

R-Values of Duct Insulation

Location of Duct*	R-Value
Inside of conditioned space	None
Inside of building envelope but outside of conditioned space	R-4.2
Outside of building envelope	R-6

* In addition, insulation shall be applied to all ductwork located in an environment that may result in the formation of condensation when operating within the normal design limits of the system, including exhaust and outside air intake ductwork."

SECTION 45.

SECTION 5.4.180 – Joints and Seams is hereby created to read as follows:

"Section M1601.4.1. Joints and seams. All joints and seams of that portion of supply and/or return ductwork installed outside of the conditioned envelope shall be made substantially airtight by means of tapes, mastics, gaskets, and other approved closure systems, commercially available and specially designed for sealing. "Duct Tape" shall not be an acceptable method. Closure systems used with rigid fibrous glass ducts shall comply with UL 181A and shall be marked "181A-P" for pressure-sensitive tape, "181 A-M" for mastic or "181 A-H" for heat-sensitive tape. Closure systems used with flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181B-FX" for pressure-sensitive tape or "181B-M" for mastic. Duct connections to flanges of air distribution system equipment or sheet metal fittings shall be mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimp joints for round metal ducts shall have a contact lap of at least 1½ inches (38 mm) and shall be mechanically fastened by means of at least three (3) sheet-metal screws or rivets equally spaced around the joint.

Exception: Low pressure systems."

SECTION 46.

SECTION 5.4.190 – Return Air is hereby created to read as follows:

“Section M1602.1. Return air. Return air shall be taken from inside the dwelling. Dilution of return air with outdoor air shall be permitted. In new dwellings and additions to existing one and two family dwellings where a new separate heating and/or cooling system is being added to serve, but not necessarily limited to only serve the new addition, an outside air duct shall be connected to the main return air duct, prior to the filter, of each heating and/or cooling system for the habitable space served. Duct size shall be based on the square footage of habitable space served as follows:

1. 1500 sq. ft. or less: 4 inch diameter or 12.6 square inches.
2. 1501 sq. ft. to 2000 sq. ft.: 5 inch diameter or 19.6 square inches.
3. 2001 sq. ft. and larger: 6 inch diameter or 28.3 square inches.

All areas listed exclude finished basement area. The outside air duct shall be provided with a ¼ inch wire mesh inlet screen. The outside air duct shall not draw air from contaminated sources.”

SECTION 47.

SECTION 5.4.200 – Prohibited Sources is hereby created to read as follows:

“Section M1701.5. Prohibited sources. Combustion air ducts and openings shall not connect appliance enclosures with space in which the operation of a fan may adversely affect the flow of combustion air. Combustion air shall not be obtained from an area in which flammable vapors present a hazard. Fuel-fired appliances shall not obtain combustion air from any of the following rooms or spaces:

1. Sleeping rooms.
2. Bathrooms.
3. Toilet rooms.

Exception: The following appliances shall be permitted to obtain combustion air from sleeping rooms, bathrooms and toilet rooms:

1. Solid fuel-fired appliances provided that the room is not a confined space and the building is not of unusually tight construction.
2. Replacement of fuel-fired appliances installed in toilet rooms if approved by the building official.”

SECTION 48.

SECTION 3.1.115 – Plastic Materials is hereby created to read as follows:

Section 604.9 of the Uniform Plumbing Code is amended to read as follows: Approved plastic materials shall be permitted to be used in building supply piping, provided that where metal building supply piping is used for electrical grounding purposes, replacement piping therefore shall be of like materials.

Exception: Where a grounding system acceptable to the Authority Having Jurisdiction is installed, inspected, and approved, metallic pipe shall be permitted to be replaced with nonmetallic pipe.

SECTION 49.

SECTION 3.1.300 – Licenses is hereby amended to read as follows:

Any person engaging or desiring to engage in the business of plumbing, plumbing repair, drain laying, lawn irrigation, water conditioning, gas fitting or gas fitting repair shall, before obtaining any permit or transacting any business, obtain a license therefore from the Director of the MABCD, which license shall expire on the thirty-first (31st) day of December of each odd-numbered year, such that the maximum term of any such license may be two (2) years.

SECTION 50.

SECTION 5.1.330 – Licenses is hereby amended to read as follows:

Any authorized individual or entity seeking to engage in the business of mechanical heating, air conditioning or refrigeration shall first designate an individual to be the Qualified Master for their license and then acquire a license from the Office of the MABCD. Each such license shall expire on the thirty-first (31st) day of December of each odd-numbered year, such that the maximum term of any such license may be two (2) years.

SECTION 51.

This ordinance shall be included in the Wichita/Sedgwick County Unified Building and Trade Code, and shall be effective upon its passage and publication once in the official city paper.

Commissioners present and voting were:

DAVID M. UNRUH
TIM R. NORTON
KARL PETERJOHN
RICHARD RANZAU
JAMES M. HOWELL

Dated this _____ day of _____, 2015.

BOARD OF COUNTY COMMISSIONERS
OF SEDGWICK COUNTY, KANSAS


ATTEST:

KELLY B. ARNOLD, County Clerk

RICHARD RANZAU, Chairman
Commissioner, Fourth District

KARL PETERJOHN, Chair Pro Tem
Commissioner, Third District

APPROVED AS TO FORM:



JUSTIN M. WAGGONER
Assistant County Counselor

DAVID M. UNRUH
Commissioner, First District

TIM R. NORTON
Commissioner, Second District

JAMES M. HOWELL
Commissioner, Fifth District