

**RESOLUTION NO. 261-07**

Date Adopted: 12-5-2007

Date Published: 12-14-2007

**ARTICLE IV-- MECHANICAL CODE\***

**THE "STANDARD CODE" AS REFERRED TO HEREIN IS THE INTERNATIONAL MECHANICAL CODE, 5203 LEESBURG PIKE, SUITE 708, FALLS CHURCH, VIRGINIA, 22041, AND AS AMENDED HEREIN. THE STANDARD CODE SHALL INCLUDE ALL AMENDMENTS AND CODIFIED SUPPLEMENTS TO THE INTERNATIONAL MECHANICAL CODE, 2006 EDITION; THE INTERNATIONAL RESIDENTIAL CODE, 2006 EDITION, CHAPTERS 12 THRU 24 INCLUSIVE; AND THE INTERNATIONAL FUEL GAS CODE, 2006 EDITION. THE STANDARD CODES AND THEIR AMENDMENTS AS SET FORTH IN SECTION 6-102 ARE HEREBY ADOPTED AS THE MECHANICAL CODE FOR THE UNINCORPORATED AREA OF THE COUNTY, AND IS INCORPORATED BY REFERENCE HEREIN AS IF FULLY SET OUT IN THIS SECTION.**

(Res. No. 279-1995, § 1, 12-20-95; Res. No. 231-98, § I, 12-30-98)

**\*Editor's note:** Resolution No. 279-1995, § 1, adopted December 20, 1995, repealed §§ 6-101--6-106 and added new §§ 6-101--6-104. Formerly, such sections pertained to similar material and derived from Res. No. 251-1992, §§ I--IX, 11-4-92; Res. No. 208-1993, 11-24-93. **STATE LAW REFERENCES: ADOPTION BY REFERENCE, K.S.A. 12-3303.**

*Sec. 6-101. Standard code adopted.*

***Sec. 6-102. Amendments to the 2006 International Mechanical Code.***

***Section 101.1*** is deleted in its entirety.

***101.1 Title.*** These regulations shall be known as the “*Sedgwick County Mechanical Code*”, hereinafter referred to as “this code.”

***103.1 General.*** The department of mechanical inspection is hereby created and the executive official in charge thereof shall be known as the building official.

***103.2*** Appointments is deleted in its entirety.

***103.2 Mechanical Inspector - Position Created*** is hereby adopted and shall read as follows:

There is hereby created the position of mechanical inspector which shall be appointed by the building official. More than one mechanical inspector may be appointed at the discretion of the building official.

***103.3 Deputies*** is deleted in its entirety.

***103.3 Qualifications*** is hereby adopted and shall read as follows:

Person(s) chosen to fill the position of mechanical inspector shall be possessed of such executive ability as is requisite for the performance of assigned duties, have a thorough knowledge of the standard materials and methods used in the installation of mechanical equipment, be well-versed in approved methods of construction for safety to persons and property, the statutes of the state relating to mechanical work and any orders, rules, and regulations issued by authority thereof, and the standard code, have at least five (5) years experience as a certified master or journeyman mechanic in the installation of mechanical equipment, and hold a current master mechanic's certificate, or, in lieu of such experience and certification, shall hold a current and valid mechanical inspector certificate issued by the *International Code Council* or the *International Conference of Building Officials* and have two (2) years experience in mechanical installation.

***103.4 Liability*** is deleted in its entirety.

***103.4 Appointment*** is hereby adopted and shall read as follows:

Any person who is in the employ of the county and who holds a current and valid combination inspector certificate or an mechanical inspector certificate issued by the *International Code Council* or the *International Conference of Building Officials* shall

also be qualified as a mechanical inspector for the inspection of installations in one and/or two-family dwelling units.

**Section 103.5 Most Restrictive** is hereby adopted shall read as follows:

Where, in any specific case, different sections of this code specify different materials, methods of construction, or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. The design and testing of equipment regulated.

**104.1 General.** The building official shall enforce the provisions of this code and shall act on any question relative to the installation, alteration, repair, maintenance or operation of mechanical systems, except as otherwise specifically provided for by statutory requirements or as provided for in Sections 104.2 through 104.8.

**104.2 Rule-making authority.** The building official shall have authority as necessary in the interest of public health, safety and general welfare, to adopt and promulgate rules and regulations; to interpret and implement the provisions of this code; to secure the intent thereof; and to designate requirements applicable because of local climatic or other conditions. Such rules shall not have the effect of waiving structural or fire performance requirements specifically provided for in this code, or of violating accepted engineering methods involving public safety.

**104.3 Applications and permits.** The building official shall receive applications and issue permits for the installation and alteration of mechanical systems, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

**104.4 Inspections.** The building official shall make all of the required inspections, or shall accept reports of inspection by approved agencies or individuals. All reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The building official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

**104.5 Right of entry.** Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the building official has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code which makes the building or premises unsafe, insanitary, dangerous or hazardous, the building official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the building official by this code. If such building or premises is occupied, the building official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the building official shall first make a reasonable effort to locate the owner or other person having charge or control of the building or premises and request entry. If entry is refused, the building official has recourse to every remedy provided by law to secure

entry. When the building official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an owner or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the building official for the purpose of inspection and examination pursuant to this code.

**104.6 Identification.** The building official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

**104.7 Notices and orders.** The building official shall issue all necessary notices or orders to ensure compliance with this code.

**104.8 Department records.** The building official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records as long as the building or structure to which such records relate remains in existence, unless otherwise provided for by other regulations.

**105.2 Alternative materials, methods, equipment, and appliances.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material or method of construction shall be approved where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

Any applicant or appellant desiring to use alternate materials or types of construction shall guarantee payment of all expenses for any tests deemed necessary by the board.

**Section 106** of the standard code is deleted in its entirety.

**Section 106 Permits and Approvals** is hereby adopted and shall read as follows:

Permits and approvals shall conform to 106.1 through 106.5.3.

**106.1 Related fees.** The payment of the fee for the construction, alteration, removal or demolition for work done in accordance with or concurrently with the work authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

**106.2 Permits not required.** Permits shall not be required for the following:

1. Portable heating appliances;

2. Portable ventilation appliances and equipment;
3. Portable cooling units;
4. Steam, hot water or chilled water piping within any heating or cooling equipment or appliances regulated by this code;
5. The replacement of any minor part that does not alter the approval of equipment or an appliance or make such equipment or appliance unsafe;
6. Portable evaporative coolers;
7. Self-contained refrigeration systems that contain 10 pounds (4.5 kg) or less of refrigerant, or that are actuated by motors of 1 horsepower (0.75 kW) or less; and
8. Portable fuel cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of this code or other laws or ordinances of this jurisdiction.

**106.3 Application.** Activity authorized by a permit issued under this Code shall be conducted by the permittee or the permittee's agents or employees in compliance with all requirements of this Code applicable thereto and in accordance with the approved plans and specifications. No permit issued under this Code shall be interpreted to justify a violation of any provision of this Code or any other applicable law or regulation. The permit applicant shall be responsible for satisfying all requirements of applicable county codes and resolutions. Any addition or alteration of approved plans or specifications shall be approved in advance by the building official, as evidenced by the issuance of a new or amended permit.

**106.3.1 Construction documents.** Construction documents, engineering calculations, diagrams and other data shall be submitted in two or more sets with each application for a permit. The code official shall require construction documents, computations and specifications to be prepared and designed by a registered design professional having a valid State of Kansas license. Where special conditions exist, the code official is authorized to require additional construction documents to be prepared by a registered design professional. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents for buildings more than two stories in height shall indicate where penetrations will be made for mechanical systems, and the materials and methods for maintaining required structural safety, fire-resistance rating and fire blocking.

Exception: The code official shall have the authority to waive the submission of construction documents, calculations or other data if the nature of the work applied for is such that reviewing of construction documents is not necessary to determine compliance with this code.

**106.4 Issuance of Permits.** The building official shall be authorized to establish and issue permits, certificates, notices and approvals, or orders pertaining to mechanical safety hazards pursuant to the current *Sedgwick County Building Code*.

**106.4.1 Content.** Permits shall be issued by the building official and shall bear the name and signature of the authority having jurisdiction or that the building official's designated representative. In addition, the permit shall indicate the following:

- (1) Operation or activities for which the permit is issued;
- (2) Address or location where the operation or activity is to be conducted;
- (3) Name and address of the permittee;
- (4) Permit number and date of issuance;
- (5) Period of validity of the permit; and
- (6) Inspection requirements.

**106.4.2 Effect of Permit.** The issuance or granting of a permit or approval of plans shall not prevent the building official from thereafter requiring the correction of errors in said plans and specifications or from preventing electrical construction being carried on thereunder when in violation of the standard code or of this article or of any other article from revoking any certificate of approval when issued in error.

**106.4.3 Expiration.** Every permit issued by the building official shall expire one-hundred and eighty (180) days following the date it is issued or the date of the last inspection.

**106.4.4 Extensions.** Following a request by the permit holder, the building official is authorized to grant, in writing, one or more extensions of a permit of not more than one-hundred and eighty (180) days each.

**106.4.5 Revocation of permits.** Revocation of permits shall conform to the following:

- (1) The building official shall be permitted to revoke a permit or approval issued if any violation of this code is found upon inspection or in case there have been any false statements or misrepresentations submitted in the application or plans on which the permit or approval was based.

(2) Any attempt to defraud or otherwise deliberately or knowingly design, install, service, maintain, operate, sell, represent for sale, falsify records, reports, or applications, or other related activity in violation of the requirements prescribed by this code shall be a violation of this code. Such violations shall be cause for immediate suspension or revocation of any related licenses, certificates or permits issued by the building official. In addition, any such violation shall be subject to any other criminal or civil penalties as available by the laws of this jurisdiction.

(3) Revocation shall be constituted when the permittee is duly notified by the building official.

(4) Any person who engages in any business, operation, or occupation, or uses any premises, after the permit issued therefore has been suspended or revoked pursuant to the provisions of this code, and before such suspended permit has been reinstated or a new permit issued, shall be a violation of this code.

(5) A permit shall be predicated upon compliance with the requirements of this code and shall constitute written authority issued by the building official to install electrical equipment. Any permit issued under this code shall not take the place of any other license or permit required by other regulations or laws of this jurisdiction.

(6) The building official shall be permitted to require an inspection prior to the issuance of a permit.

(7) A permit issued under this code shall continue until revoked or for the period of time designated on the permit. The permit shall be issued to one person or business only and for the location or purpose described in the permit. Any change that affects any of the conditions of the permit shall require a new or amended permit.

**106.5. Permit Fees.** The fee for each mechanical permit shall be as set forth in Table 106.5.2 below, and shall accompany each application made for such a permit.

*Exception.* Installations for new one and two family dwellings shall not be required to obtain an individual mechanical permit or to pay a mechanical permit fee because the applicable building permit and fee which have been issued and paid are inclusive of the mechanical installation.

Refer to the adopting article of the Sedgwick County Building Code for building permit requirements and for the table of building permit fees for one- and two-family dwelling construction.

**106.5.1 Work commencing before permit issuance.** Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation shall be made before a permit may be issued for such work. An investigation fee, in addition to the permit fee shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code. The payment of such investigation fee shall not exempt

any person from compliance with all other provisions of this code nor from any other penalty prescribed by law.

The fee for each Mechanical permit shall be as set forth in Table 106.5.2 and shall accompany each application made for such a permit.

**Table No. 106.5.2 - MECHANICAL PERMIT FEES**

**Permit Issuance:**

- 1. For the issuance of each permit . . . \$25.00
- 2. For issuing each supplemental permit . . . \$4.50

**Unit Fee Schedule:**

- 1. For the installation of each forced-air or gravity-type furnace or burner, including ducts and vents attached to such appliance up to and including 100,000 Btu/h . . . . . \$9.00.
- 2. For the installation or relocation of each forced-air or gravity-type furnace or burner, including ducts and vents attached to such appliance over 100,000 Btu/h . . . . \$11.00.
- 3. For the installation or relocation of each floor furnace, including vent . . . . . \$9.00.
- 4. For the installation or relocation of each suspended heater, recessed wall heater or floor-mounted unit heater . . . . . \$9.00.
- 5. For the installation, relocation or replacement of each appliance vent installed and not included in an appliance permit. . . . . \$4.50.
- ....
- 6. For the repair of, alteration of, or addition to each heating appliance, refrigeration unit, cooling unit, absorption unit, or each heating, cooling, absorption, or evaporative cooling system, including installation of controls regulated by this code. . . . . \$9.00.
- 7. For the installation or relocation of each boiler or compressor to and including 3 horsepower or each absorption system to and including 100,000 Btu/h . . . . . \$9.00.
- 8. For the installation or relocation of each boiler or compressor over 3 horsepower to and including 15 horsepower, or each absorption system over 100,000 Btu/h and including 500,000 Btu/h . . . . . \$16.50.
- 9. For the installation or relocation of each boiler or compressor over 15 horsepower to and including 30 horsepower, or each absorption system over 500,000 Btu/h to and including 1,000,000 Btu/h . . . . . \$22.50.
- 10. For the installation or relocation of each boiler or compressor over 30 horsepower to and including 50 horsepower, or for each absorption system over 1,000,000 Btu/h to and including 1,750,000 Btu/h . . . . . \$33.50.

- 11. For the installation or relocation of each boiler or refrigeration compressor over 50 horsepower or each absorption system over 1,750,000 Btu/h . . . . . \$56.00.
- 12. For each air-handling unit to and including 10,000 cubic feet per minute, including ducts attached thereto . . . . . \$6.50.\*
- 13. For each air-handling unit over 10,000 cfm . . . . . \$11.00\*
- 14. For each evaporative cooler other than portable type . . . . . \$6.50
- 15. For each ventilation fan connected to a single duct . . . . . \$4.50
- 16. For each ventilation system which is not a portion of any heating or air-conditioning system authorized by a permit . . . . . \$6.50
- 17. For the installation of each hood which is served by mechanical exhaust, including the ducts for such hood . . . . . \$6.50
- 18. For the installation of each hood serving a Type I or Type II commercial kitchen hood...This requires a S-1 mechanical license..... \$25.00
- 19. For the installation or relocation of each commercial or industrial-type incinerator. . . . . \$45.00
- 20. For each appliance or piece of equipment regulated by this code but not classed in other appliance categories, or for which no other fee is listed in this code . . . . . \$6.50

*\*Note:* This fee shall not apply to an air-handling unit which is a portion of a factory-assembled appliance, cooling unit, evaporative cooler or absorption unit for which a permit is required elsewhere in this code.

***When the International Fuel Gas Code, Chapter 1, section 106.1 is applicable, permit fees for fuel-gas piping shall be as follows:***

- 21. For each gas-piping system of one to four outlets . . . . . \$3.00
- 23. For each gas-piping system of five or more outlets, per outlet . . . . . \$0.75

***Other Inspections and Fees:***

- 1. Inspections outside of normal business hours (minimum charge - two hours), per hour . . . . . \$30.00\*\*
- 2. Re-inspection fees assessed per hour . . . . . \$30.00\*\*
- 3. Inspections for which no fee is specifically indicated (minimum charge - one-half hour), per hour . . . . . \$30.00\*\*

4. Additional plan review required by changes, additions or revisions to approved plans (minimum charge - one-half hour), per hour . . . . . \$30.00\*\*

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

**106.5.3 Fee refunds.** The building official shall authorize the refunding of fees as follows:

1. The full amount of any fee paid hereunder which was erroneously paid or collected.
2. Not more than eighty (80) percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.
3. Not more than eighty (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 review effort has been expended. The code official shall not authorize the refunding of any fee paid, except upon written application filed by the original permittee not later than 180 days after the date of fee payment.

*Section 107* is deleted in its entirety

*Section 107* is hereby adopted and shall read as follows:

**107.0 Inspection and Approvals.**

1. Upon the completion of any installation of mechanical equipment that has been made under a permit, it shall be the duty of the person, firm, or corporation making the installation to notify the mechanical inspector having jurisdiction, who shall inspect the work within a reasonable time.
2. Where the mechanical inspector finds the installation to be in conformity with all applicable local ordinances and all rules and regulations, the inspector shall issue to the person, firm, or corporation making the installation a certificate of approval.
3. When any portion of the mechanical installation within the jurisdiction of an mechanical inspector is to be hidden from view by the permanent placement of parts of the building, the person, firm, or corporation installing the equipment shall notify the mechanical inspector, and such equipment shall not be concealed until it has been approved by the mechanical inspector. On large installations where the concealment of equipment proceeds continuously, the person, firm, or corporation installing the equipment shall give the mechanical inspector due notice in advance, and inspections shall be made periodically during the progress of the work.

4. Reinspections. The Authority Having Jurisdiction shall have the authority to assess a reinspection fee for each inspection or reinspection when such portion of work for which inspection is requested is not complete or when required corrections have not been made. This provision is not to be interpreted as requiring reinspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for inspection or reinspection.

**Section 108** is deleted in its entirety.

**Section 108** is hereby adopted and shall read as follows:

**108.1 Unlawful acts.** It shall be unlawful for a person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize a mechanical system, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

**108.2 Service of Notice of Violation and Order to Comply.** Whenever the building official or any code enforcement officer authorized under this article has probable cause to believe that a person, firm, or corporation is committing or has committed a violation of any provision of the standard code, the building official or such code enforcement officer may first cause a notice of violation and order to comply to be served upon said person, firm, or corporation responsible therefore. Such notice shall:

1. Be in writing;
2. Include a description of the real estate and/or street address sufficient for identification;
3. Specify the violation which exists and the correction ordered;
4. Allow a reasonable time for the performance of any act it requires. Such notice shall be deemed to be properly served upon such alleged violator if a copy thereof is delivered to such alleged violator personally, or, if not found, a copy thereof is left at such alleged violator's place of abode or business with a person of suitable age and discretion who shall be informed of the contents thereof. Such notice shall also be deemed to be properly served upon the alleged violator if a copy thereof is sent by mail to such alleged violator's last known address, or, if the letter with the copy is returned showing it has not been delivered, a copy thereof is posted in a conspicuous place in, on, or about the building or structure affected by the notice.

**108.3 Enforcement.** In case any notice of violation and order to comply authorized herein is not complied with, the building official or such code enforcement officer may request the county counselor to institute an appropriate action or proceeding against the person, firm, or corporation responsible for the violation:

1. To restrain, correct, or remove the violation or to compel such person, firm, or corporation to refrain from any further execution of work;

2. To restrain or correct the erection, construction, enlargement, alteration, repair, movement, improvement, removal, conversion, demolition, equipping, use, or maintenance of such mechanical system or equipment;

3. To require the removal of work in violation;

4. To prevent the use of the mechanical system or equipment or any part thereof, which is erected, constructed, enlarged, altered, repaired, moved, improved, removed, converted, demolished, equipped, used, or maintained in violation of the standard code or in violation of a plan or specification under which an approval, permit or certificate was issued. In addition, or in the alternative, the building official or a code enforcement officer may proceed with the penalties provision.

**108.4.1 Issuance of Uniform Complaint and Notice to Appear.** Whenever the building official or the code enforcement officer authorized under this article has probable cause to believe that a person, firm, or corporation is committing or has committed a violation of any provision of the standard code, the building official or such code enforcement officer may serve upon such accused person a uniform complaint and notice to appear, or in the alternative, may sign a complaint against the accused person and cause a notice to appear to be issued according to the provisions of K.S.A. 19-4701, et seq., the code for the enforcement of county codes and resolutions. Pursuant to K.S.A. 19-101d, prosecution for any such violation shall be conducted in the manner provided by law in the district court under the code for the enforcement of county codes and resolutions as provided by K.S.A. 19-4701, et seq. Writs or processes necessary for the prosecution of such violations shall be substantially in the form of writs and process as shown in K.S.A. 19-4738. The county shall provide all necessary supplies, forms and records at its own expense.

**108.4.2 Procedures.** Procedures for prosecution of violations of the standard code, and this article, shall be pursuant to chapter 8 of the Sedgwick County Code.

**108.4.3 Classification of Violations and Schedule of Fines.** An accused person who shall be convicted in district court for violation of any provision of the standard code or this article shall be deemed guilty of a violation thereof and in accordance with K.S.A. 19-4716, shall be subject to payment of a fine which shall be fixed by the court at a sum not to exceed \$500.00; provided further, the minimum fine for any violation of this article shall be assessed according to the classification of violations and schedules of fines in section 8-5, and subject to the enhancements contained therein, and each and every violation of this article shall be a class F violation, except that the following violations shall be classified as follows:

1. Failure to obtain required license, section 110.2 (*Mechanical Contractor License Required*), shall be a class I violation
2. Failure to obtain required certificate, section 110.4 (*Master and Journeyman Mechanical Certificate. Required*), shall be a class I violation.

3. Violation of section 10.4.7 (*Truth in Advertising*), shall be a class I violation.
4. Failure to obtain required a permit, 106.5 (*Permits*), shall be a class G violation.

**108.4.4 Separate Offense.** Each day that any violation of the standard code or this article occurs after the passage of the reasonable time for performance of any act required by a notice of violation and order to comply has been served in accordance with the terms and provisions hereof shall constitute a separate offense and shall be punishable as a separate violation. Provided, however, that if any person, firm or corporation is found guilty of a violation hereunder and it shall appear to the court that the violation complained of as prescribed in this article is continuing, then in addition to the penalty as set forth, the court shall enter such order as it deems appropriate to cause the violation to be abated.

**108.4.5 Authority to Permit.** The issuance or granting of a permit or approval of plans and specifications shall not be deemed or construed to be a permit for, or an approval of, any violation of any of the provisions of the standard code or of this article. No permit presuming to give authority to violate or cancel the provisions thereof shall be valid, except insofar as the work or use which it authorized is lawful.

**108.4.7 Appeals.** An appeal may be taken from any judgment under this article pursuant to the procedures at K.S.A. 19-4737, as amended.

**Section 109** is deleted in its entirety.

**Section 109** is hereby adopted and shall read as follows:

**109.1 Application for appeal.** A person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted there under have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.

**109.1.1 Limitation of authority.** The board of appeals shall have no authority relative to interpretation of the administration of this code nor shall such board be empowered to waive requirements of this code.

**109.2 Membership of board.** In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretations of the *Sedgwick County Mechanical Code* and to determine the suitability of alternate materials and types of construction, there shall be and is hereby created a board of mechanical examiners and appeals. The board members shall be appointed by the board

of county commissioners to serve for terms of three (3) years. The board shall consist of five (5) members who are qualified by experience and training to pass upon matters pertaining to mechanical design, construction and maintenance of mechanical systems and who are not employees of the county.

**109.2.1 Appointments.** The members of the board of mechanical examiners and appeals presently holding appointments shall continue as members of the board for the term of their appointment and until their successors have been appointed, qualified, and sworn to the oath of office before the county clerk. The duties of the *Sedgwick County Mechanical Board* shall be as follows:

1. The board shall oversee licensing of mechanical contractors and the testing and certification of master and journeyman mechanics.
2. The board may make an annual review of the mechanical code and shall recommend to the board of county commissioners such changes in the standard code as are necessary to be consistent with modern methods of construction.
3. The board shall adopt reasonable rules and regulations for conducting its business and shall render all findings and decisions in writing to the building official with a duplicate copy to the applicant or appellant.

**109.2.2 Qualifications.** The board shall consist of two (2) mechanical engineers currently licensed by the state of Kansas, two (2) mechanical contractors currently licensed by Sedgwick County (one contractor whose major business is single and multi-family construction and one contractor whose major business is commercial construction), and one (1) journeyman mechanic contractor currently licensed by Sedgwick County.

**109.3 Ex-officio Member.** The building official shall be an ex-officio member of the board and provide technical information to the board.

**109.4 Secretary.** The building official shall act as secretary of the board, but the building official shall not have a vote upon any matter before the board.

**109.5 Legal Council.** The Sedgwick County counselor shall provide legal counsel for the board.

**109.6 Appeals.** Any order of the board of mechanical examiners and appeals made as a result of a hearing under this sub-section may be appealed to the district court of the eighteenth judicial district.

**109.7 Quorum.** A quorum of the Board shall be required to conduct official business. A quorum shall consist of three (3) members of the Board.

**109.8 Bylaws, Rules and Procedures.** The Board may, by majority vote, adopt bylaws, rules and procedures for the conduct of its meetings and business. Such bylaws, rules and procedures shall not be in conflict with law.

**Section 110, Mechanical Contractor License,** is hereby adopted and shall read as follows:

**Section 110. Mechanical Contractor License.** Section 110 shall be added, adding and establishing a license for mechanical contractors, and establishing a license for **S-1 Commercial Kitchen Hood mechanical specialty contractors** ; requirements and penalties for violations thereof; establishing a certificate for master and journeyman mechanics; requirements and penalties for violations thereof; exceptions thereto; and for the process of suspension and revocation thereof.

**110.1 Licenses and Certificates required; penalties for violation; suspension; and revocation.** There are hereby established requirements for licensure of mechanical contractors; there are also hereby established requirements for certification of master and journeyman mechanics.

**110.2 Mechanical Contractor License Required.** It shall be unlawful for any person, firm, corporation, or other entity, to engage in the business of contracting to perform, provide, broker or sub-contract for mechanical construction without first having secured a mechanical contractors license.

**Exception:**

No mechanical contractor license is required of a person, firm, corporation or governmental entity not engaged in the business of mechanical construction who has in their regular and permanent employ a currently certified master mechanic who performs mechanical construction only for such employer and only on existing buildings and/or on existing premises that are owned, leased, operated or managed by the employer. Mechanical construction by said employee upon new buildings and new additions to existing buildings is prohibited. The person, firm, corporation or governmental entity for which such mechanical construction is permitted by this exception shall be required to obtain all permits and inspections otherwise required by the standard code.

**110.3 Obtain Mechanical Contractors License.** To obtain a mechanical contractor's license a person, firm, or corporation shall:

1. File a completed application with the Board of Mechanical Examiners and Appeals on forms provided by the Sedgwick County Department of Code Enforcement.
2. Pay an application fee of \$25.00.

3. Submit proof of a satisfactory score on one of the following standard examinations to determine the qualification of persons seeking licensure received by the person signing the master responsibility form:

(a) At least 75% on the "Block Test" for a master mechanic certificate, now administered by Thompson Prometric, 1260 Energy Lane, St. Paul, Minnesota 55108;

(b) At least 75% on the International Code Council test for a master mechanic certificate, administered by International Code Council, 900 Montclair Road, Birmingham, Alabama 35213; or

(c) A satisfactory score on any other standard examination to determine the qualification of a master mechanic that is approved and adopted by the State of Kansas following the effective date of this code.

Those persons who were licensed as of December 31, 1991, as required by this article, and whose license has not subsequently lapsed or been suspended or revoked, shall not be required to pass any such examination. Applicants who show satisfactory evidence to the building official or to the board of mechanical examiners and appeals of experience commensurate to that required by this article may thereupon be issued a license limited to one particular project.

4. Pay the appropriate biennial license fee as provided: The license fee for the year 2007 is \$100.00. The biennial license fee for the period beginning January 1, 2008, and biennially thereafter, is \$200.00.

5. Submit proof of insurance as follows:

(a) Worker's Compensation Insurance for all employees to be engaged in work on any site regulated by the standard code.

(b) Comprehensive General Liability Insurance in an amount not less than Three Hundred Thousand Dollars (\$300,000) each occurrence and aggregate for bodily injury and property damage combined.

(c) Automobile Liability Insurance in an amount not less than required per K.S.A. 40-3107. Said coverage shall cover all owned, non-owned or hired vehicles of the contractor.

6. Agree to obtain all required permits.

7. Submit a signed master responsibility form. The person signing the master responsibility form shall:

(a) (i) Have a current Master Mechanic Certificate; or

(ii) Have a Master Mechanic Specialty Certificate; (accepted only for the installation, replacement, relocation, alteration, addition to, or repair of specialty mechanical systems regulated by this code such as, but not limited to, product conveying duct systems, incinerators, kilns, special piping and storage systems, heat producing appliances used in the manufacturing process, and refrigeration systems used in the manufacturing process. Mechanical contractor's licenses issued under this provision must be approved by the building official and all work being performed under said licensee will be limited to those approved items.

(b) Be an active member or officer of the firm or corporation which is so licensed.

(c) Agree to obtain all required permits.

8. Have at least one person qualified and certified as a master mechanic in the employ of the licensee. Failure to do so will result in a citation being issued to the master who is responsible for the company.

9. Have a certified master or journeyman mechanic at the job site at all times mechanical work is being conducted. Failure to do so will result in a citation being issued to the master who is responsible for the company.

10. Comply with the truth in advertising requirements of Section 110.4.7. Failure to do so will result in citations being issued to the violator and the master who is responsible for the company.

11. Agree to obtain not less than twelve (12) hours biennially of continuing education, in accordance with K.S.A. 12-1542, as amended. Such continuing education shall be approved by the Director of Code Enforcement, and may be provided by the Department of Code Enforcement, a nationally recognized trade organization, community college, technical school or technical college. All 12 hours of such continuing education may consist of code update training on the standard code.

The first biennial period for this continuing education requirement shall begin January 1, 2008.

***110.4 Master and Journeyman Mechanical Certificate Required.*** It shall be unlawful for any person to engage in the business of contracting mechanical construction without first having secured a master mechanics certificate. It shall further be unlawful for any person to engage in the trade or otherwise perform the acts of mechanical installation within or on any building or premises without first having secured a master or journeyman mechanics certificate.

***110.4.1 To Obtain a Certificate.*** A master or journeyman mechanics certificate shall be obtained as follows:

1. File a completed application with the board of mechanical examiners and appeals on forms provided by the department of code enforcement identifying the classification of certificate sought.

2. Pay the biennial certificate fee to the building official at the time the application for a certificate is made.

3. Submit proof of a satisfactory score on one of the following standard examinations to determine the qualification of persons seeking a particular certificate:

(a) At least 75% on the "Block Test" for a master or journeyman mechanic certificate, now administered by Thompson Prometric, 1260 Energy Lane, St. Paul, Minnesota 55108.

(b) At least 75% on the International Code Council test for a master or journeyman mechanic certificate, administered by International Code Council, 900 Montclair Road, Birmingham, Alabama 35213; or

(c) A satisfactory score on any other standard examination to determine the qualification of a master mechanic that is approved and adopted by the State of Kansas following the effective date of this code.

4. Agree to obtain not less than twelve (12) hours biennially of continuing education, in accordance with K.S.A. 12-1542, as amended. Such continuing education shall be approved by the Sedgwick County Director of Code Enforcement, and may be provided by the Department of Code Enforcement, a nationally recognized trade organization, community college, technical school or technical college. All 12 hours of such continuing education may consist of code update training on the standard code.

The first biennial period for this continuing education requirement shall begin January 1, 2008.

**110.4.2 Biennial Certificate Fee.** Master or journeyman mechanics certificates shall be sold in two (2) year county-wide increments, and are valid for two (2) years, and are therefore referred to as "biennial" certificates. A certificate is renewable up to March 1st after expiration of any biennial certificate period. The certificate fee is Ten dollars (\$10.00) for the year 2007, and biennially thereafter. The first year of the biennial certificate shall begin January 1, 2008.

The certificate fee charged to new applicants will be prorated, based on the current year of the two-year cycle. Certificate fees are subject to change with the Sedgwick County Board of County Commissioners approval, and the official current certificate fee schedule shall be maintained by the building official.

Show proof of having obtained not less than twelve (12) hours biennially of continuing education, in accordance with K.S.A. 12-1542, as amended. Such continuing education

shall be approved by the Sedgwick County Director of Code Enforcement, and may be provided by the Department of Code Enforcement, a nationally recognized trade organization, community college, technical school or technical college. All twelve (12) hours of such continuing education may consist of code update training on the standard code.

The first biennial period for this continuing education requirement shall begin January 1, 2008.

***110.4.3 Renewal of Certificate.*** To renew a master or journeyman mechanics certificate, the certificate holder shall make application for a new certificate; pay the required biennial certificate fee; and satisfy the continuing education requirements as set forth above.

***110.4.4 Violations of Master and Journeyman Mechanics Certificate Requirements, Hearing, Penalties.***

1. At the request of the building official, a hearing before the board of mechanical examiners and appeals shall be held to determine whether there has been any violation of any of the master or journeyman mechanics certificate requirements contained herein, and whether the master or journeyman mechanics certificate, should be suspended or revoked. Cause for suspension or revocation shall be any one or a combination of the following:

- (a) The certificate holder demonstrates in competency or lack of knowledge in matters relating to the certificate issued.
- (b) The certificate holder obtained the certificate by fraud or misrepresentation.
- (c) The certificate holder transferred, loaned or otherwise allowed another person to use said certificate for the other person's purpose.
- (d) The certificate holder used the certificate to obtain permits for another person, firm, or corporation.
- (e) The certificate holder demonstrated carelessness or negligence in providing reasonable safety measures for the protection of the public.
- (f) The certificate holder refused to or failed to comply with any lawful and reasonable order(s) of the building official, mechanical inspector, or other authorized representative of the Sedgwick County Department of Code Enforcement.
- (g) The certificate holder committed an act in violation of any provision of the standard code or of any other resolution of Sedgwick County.

2. Certificates revoked shall cause the holder thereof to be barred from obtaining a certificate for a period of twelve (12) months from the date of the revocation order. Following a suspension or revocation period, a certificate holder who wishes to obtain a new certificate shall follow the procedure set forth in Section 110.4.1.

***110.4.5 Lapse of Certificate.*** A certificate that has not been suspended or revoked, but for which the request for renewal and the renewal fee have not been submitted on or before March 1 of the renewal year shall be deemed to have lapsed. Renewal of a lapsed certificate shall be allowed upon the certificate holder's request, making application for a new certificate, paying the required certificate fee, passing a written examination for the appropriate certificate, and show proof of having obtained not less than twelve (12) hours biennially of continuing education, in accordance with K.S.A. 12-1542, as amended. Such continuing education shall be approved by the Sedgwick County Director of Code Enforcement, and may be provided by the Department of Code Enforcement, a nationally recognized trade organization, community college, technical school or technical college. All 12 hours of such continuing education may consist of code update training on the standard code.

The first biennial period for this continuing education requirement shall begin January 1, 2008.

***110.4.6 Exceptions to Requirement of Master and Journeyman Mechanics Certificate.***

1. Apprentices shall be permitted to work under the on-site supervision of a certified master or journeyman mechanic provided the apprentice is performing said apprenticeship in the same trade as the certified master or journeyman.

2. Owners of new one-family dwellings which are being constructed as their residence and who will reside in the newly constructed residence where the work is taking place shall be permitted to work on the mechanical construction in that residence and/or out-buildings thereof, provided all other requirements of the standard code are met, and all of the following are complied with:

(a) The person who will be doing the mechanical work has taken and passed within the past calendar year a self-help mechanical examination as approved by the board of mechanical examiners and appeals. The examination fee is fifty dollars (\$50.00) per test.

(b) Said person must pass the examination with a score of 75% or more correct. If the person receives a score of less than 75%, he/she may retake test after waiting 60 days.

(c) Said person may only perform work that meets or exceeds current code standards.

(d) Mechanical plans for the structure must be approved by the building official.

(e) No individual may perform mechanical construction in more than one residence in any three-year period beginning with the date the self-help examination is passed. Special cases are subject to appeal to the board of electrical examiners and appeals.

***110.4.7 Truth in Advertising.***

1. Applicability. On or after July 1, 1993, any person, firm or corporation required by this resolution to obtain a mechanical contractor license shall be subject to this section.

2. Definition. For the purposes of this section, advertising or advertisement means the inclusion of any business card, announcement, and contract bid proposal, or other written or broadcast statement, including telephone directory display advertisements, but shall not include any white or yellow page listings in telephone directories.

3. Violations. It shall be a violation for any person, firm, corporation, or other entity that does not hold a valid mechanical contractor's license in good standing, to advertise or maintain any advertising or advertisement that:

(a) Advertises as a mechanical contractor;

(b) Appends the person's, firm's corporation's, or other entity's name to, or in connection with, the title "mechanical contractor," "master mechanic," or "journeyman mechanic," or

(c) Appends the person's, firm's corporations or other entity's name to any other words that tend to represent the person as a mechanical contractor, master mechanic, or journeyman mechanic.

***The 2006 International Mechanical Code is hereby adopted and shall read as follows:***

***Section 202 Definitions.***

***"Building official"***. The official or other designated authority charged with the administration and enforcement of the standard code, and that official's designee. The terms "building official" and "Department director of the department of code enforcement" are synonymous. The building official and "code enforcement officer," as code enforcement officer as defined in K.S.A. 19-101d (b)(2), shall have the power to sign, issue and execute uniform complaints and notices to appear as set out in K.S.A. 19-101d.

***"Registered Design Professional"***. An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed.

**303.3 Prohibited locations.** Fuel-fired appliances shall not be located in, or obtain combustion air from, any of the following rooms or spaces:

1. Sleeping rooms.
2. Bathrooms.
3. Storage closets.
4. Surgical rooms.

**Exception:**

This section shall not apply to the following appliances:

1. Direct-vent appliances that obtain all combustion air directly from the outdoors.
  
2. Solid fuel-fired appliances provided that the room is not a confined space and the building is not of unusually tight construction.
  
3. Appliances installed in a dedicated enclosure in which all combustion air is taken directly from the outdoors or other approved areas.

***Section 304- Installation***

**304.1 General.** Equipment and appliances shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer's installation instructions, Table 3-1 of the *Sedgwick County Mechanical Code*, and this code. Manufacturer's installation instructions shall be available on the job site at the time of inspection.

**304.1.1** is hereby created and shall read as follows:

**304.1.1 Standard Installation Clearances for Unlisted Heat-Producing Appliances** shall be in accordance with Table 3-1 of the *Sedgwick County Mechanical Code*.

**Table 3.1** is hereby created and shall read as follows:

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

in x 25.4 = mm

RESIDENTIAL-TYPE APPLIANCES		APPLIANCE					
		FUEL	ABOVE TOP OF CASING OR APPLIANCE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT <sup>1</sup>	FROM BACK	FROM SIDES
BOILERS AND WATER HEATERS <sup>11</sup> Steam Boilers—15 psi (103.4 kPa) Water Boilers—250°F (121°C) Water Heaters—200°F (93°C) All Water Walled or Jacketed	Automatic Oil or Comb. Gas-Oil	6		24	6	6	
	Automatic Gas	6		18	6	6	
	Solid	6		48	6	6	
FURNACES—CENTRAL; OR HEATERS <sup>11</sup> — ELECTRIC CENTRAL WARM-AIR FURNACES Gravity, Upflow, Downflow, Horizontal and Duct Warm-Air—250°F (121°C) max.	Automatic Oil or Comb. Gas-Oil	6 <sup>2</sup>	6 <sup>2</sup>	24	6	6	
	Automatic Gas	6 <sup>2</sup>	6 <sup>2</sup>	18	6	6	
	Solid	18 <sup>3</sup>	18 <sup>3</sup>	48	18	18	
	Electric	6 <sup>2</sup>	6 <sup>2</sup>	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°F (121°C) max.		1	1	1	1	1	
ROOM HEATERS <sup>4</sup> Circulating Type Radiant or Other Type	Oil or Solid	36		24	12	12	
	Gas	36		24	12	12	
	Oil or Solid	36		36	36	36	
	Gas	36		36	18	18	
	Gas with double metal or ceramic back	36		36	12	18	
Fireplace Stove	Solid	48*		54	48*	48*	
RADIATORS Steam or Hot Water <sup>8</sup>		36		6	6	6	
RANGES—COOKING STOVES							
	Oil	30 <sup>7</sup>			9	24	18
	Gas	30 <sup>7</sup>			6	6	6
	Solid Clay-Lined Firepot	30 <sup>7</sup>			24	24	18
	Solid Unlined Firepot	30 <sup>7</sup>			36	36	18
	Electric	30 <sup>7</sup>			6	6	6
INCINERATORS Domestic Types		36*		48	36	36	
COMMERCIAL INDUSTRIAL-TYPE APPLIANCES ANY AND ALL PHYSICAL SIZES EXCEPT AS NOTED <sup>11</sup>		APPLIANCE					
		FUEL	ABOVE TOP OF CASING OR APPLIANCE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT <sup>1</sup>	FROM BACK*	FROM SIDES*
BOILERS AND WATER HEATERS 100 cu. ft. (2.832 m <sup>3</sup> ) or less Steam, any pressure 50 psi (345 kPa) or less Any size	All Fuels	18		48	18	18	
	All Fuels	18		48	18	18	
UNIT HEATERS Floor Mounted or Suspended—Any Size Suspended—100 cu. ft. (2.832 m <sup>3</sup> ) or less Suspended—100 cu. ft. (2.832 m <sup>3</sup> ) or less Suspended—Over 100 cu. ft. (2.832 m <sup>3</sup> ) Floor Mounted—Any Size	Steam or Hot Water	1			1	1	
	Oil or Comb. Gas-Oil	6		24	18	18	
	Gas	6		18	18	18	
	All Fuels	18		48	18	18	
	All Fuels	18		48	18	18	
RANGES—RESTAURANT-TYPE Floor Mounted	All Fuels	48		48	18	18	
OTHER LOW-HEAT INDUSTRIAL APPLIANCES Floor Mounted or Suspended	All Fuels	18	18	48	18	18	

**TABLE 3-1 (Continued)**  
**Standard Installation Clearances in Inches for Unlisted Heat-Producing Appliances**

COMMERCIAL INDUSTRIAL-TYPE APPLIANCES ANY AND ALL PHYSICAL SIZES EXCEPT AS NOTED <sup>11</sup>	FUEL	APPLIANCE				
		ABOVE TOP OF CASING OR APPLIANCE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT <sup>1</sup>	FROM BACK <sup>2</sup>	FROM SIDES <sup>3</sup>
BOILERS AND WATER HEATERS Over 50 psi (345 kPa) Over 100 cu. ft. (2832 m <sup>3</sup> )	All Fuels	48		96	36	36
OTHER MEDIUM-HEAT INDUSTRIAL APPLIANCES All Sizes	All Fuels	48	36	96	36	36
INCINERATORS All Sizes		48		96	36	36
INDUSTRIAL-TYPE HIGH-HEAT APPLIANCES HIGH-HEAT INDUSTRIAL APPLIANCES All Sizes	All Fuels	180		360	120	120

**Footnotes for Table 3-1**

- <sup>1</sup> The minimum dimension shall be that necessary for servicing the appliance, including access for cleaning and normal care, tube removal, etc.
- <sup>2</sup> 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).
- <sup>3</sup> 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 (3.3 mm) water gauge.
- <sup>4</sup> 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.
- <sup>5</sup> The forty-eight (48) inch (1219 mm) clearance may be reduced to 36 inches (914 mm) when protection equivalent to that provided by (a)-(g) of Table 3-2 is applied to the combustible construction.
- <sup>6</sup> 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 emerge from a floor, wall, or ceiling, the clearance at the opening through the finish floorboards or wall-ceiling boards may be reduced to not less than one-half (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 casings 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.
- <sup>7</sup> To combustible material or metal cabinets. If the underside of such combustible material or metal cabinet is protected with insulating millboard at least one-quarter (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).
- <sup>8</sup> Clearance above charging door shall be at least forty-eight (48) inches (1,219 mm).
- <sup>9</sup> 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).
- <sup>10</sup> 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).
- <sup>11</sup> 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]

**304.2 Conflicts.**

Where conflicts between this code, any other applicable code, or the conditions of the listing or the manufacturer's installation instruction occur, the most restrictive code shall apply.

**306.5 Equipment and appliances on roofs or elevated structures.**

Where equipment and appliances requiring access are installed on roofs or elevated structures at a 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 eight (8) feet above grade 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). 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.
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/m<sup>2</sup>) 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.

**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, public way, or other areas so as to cause a nuisance.

**504.6.1 Maximum length.** The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet. Total developed length for rigid metal duct, and twenty (20) feet for metal flex duct, including four (4) 90-degree bends. The maximum developed length of the duct shall be reduced 2.5 feet for each 45 degree bend and 5 feet for each 90 degree bend beyond the four (4) allowed 90-degree bends. The maximum length of the exhaust duct does not include the transition duct or the initial 90-degree inlet connection.

**506.3.3.1 Grease duct test.** Prior to the use or concealment of any portion of a grease duct system, a leakage test shall be performed in the presence of the building official.

Ducts shall be considered to be concealed where installed in shafts or covered by coatings or wraps that prevent the ductwork from being visually inspected on all sides. The permit holder shall be responsible to provide the necessary equipment and perform the grease duct leakage test. A light test or an approved equivalent test method shall be performed to determine that all welded and brazed joints are liquid tight. A light test shall be performed by passing a halogen lamp having a power rating of not less than 100 watts through the entire section of duct work to be tested. The lamp shall be open so as to emit light equally in all directions perpendicular to the duct walls. A test shall be performed for the entire duct system, including the hood-to-duct connection. The ductwork shall be permitted to be tested in sections, provided that every joint is tested.

**506.3.10 Grease duct enclosure.** A grease duct serving a Type I hood that penetrates a ceiling, wall or floor shall be enclosed from the point of penetration to the outlet terminal. A duct shall penetrate exterior walls only at locations where unprotected openings are permitted by the *International Building Code*. Ducts shall be enclosed in accordance with the *International Building Code* requirements for shaft construction. The duct enclosure shall be sealed around the duct at the point of penetration and vented to the outside of the building through the use of weather-protected openings. Clearance from the duct to the interior surface of enclosures of combustible construction shall be not less than 18 inches. Clearance from the duct to the interior surface of enclosures of non-combustible construction or gypsum wall board attached to noncombustible structures shall be not less than three (3) inches. The duct enclosure shall serve a single grease exhaust duct system and shall not contain any other ducts, piping, wiring or systems.

*Exceptions:*

1. The shaft enclosure provisions of this section shall not be required where a duct penetration is protected with a through-penetration fire stop system classified in accordance with ASTM E 814 and having an “F” and “T” rating equal to the fire-resistance rating of the assembly being penetrated and where the surface of the duct is continuously covered on all sides from the point at which the duct penetrates a ceiling, wall or floor to the outlet terminal with a classified and labeled material, system, method of construction or product specifically evaluated for such purpose, in accordance with ASTM E 2336. Exposed duct wrap systems shall be protected where subject to physical damage.

2. The shaft enclosure provisions of this section shall not be required where a duct penetration is protected with a through-penetration fire stop system classified in accordance with ASTM E 814 and having an “F” and “T” rating equal to the fire resistance rating of the assembly being penetrated and where a prefabricated grease duct enclosure assembly is protected on all sides from the point at which the duct penetrates a ceiling, wall or floor to the outlet terminal with a classified and labeled prefabricated system specifically evaluated for such purposes in accordance with UL 2221.

3. A duct enclosure shall not be required for a grease duct that penetrates only a non fire-resistance-rated roof/ceiling assembly.

**507.2.1.1 Operation.** Type I hood systems shall be designed and installed to automatically activate the exhaust fan whenever cooking operations occur. The activation of the exhaust fan shall occur through an interlock system specified by a registered design professional and submitted for plan review with the complete construction document package.

**603.9 Joints, seams and connections.** All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA HVAC Duct Construction Standards—Metal and Flexible and NAIMA Fibrous Glass Duct Construction Standards. All joints, longitudinal and transverse seams, and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes. Tapes and mastics used to seal ductwork listed and labeled in accordance with UL 181A shall be marked “181A-P” for pressure-sensitive tape, “181 A-M” for mastic or “181 A-H” for heat-sensitive tape. Tapes and mastics used to seal 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 shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Unlisted duct tape is not permitted as a sealant on any metal ducts.

*Exception:*

Not required for low pressure systems.

**604.1 General.** Duct insulation shall conform to the requirements of Table M1601- Table of R-value of Duct Insulation.

**Table M1601**  
**Table of R-Values**

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.

**606.2.1 Return air systems.** Smoke detectors shall be installed in return or supply air systems with a design capacity greater than 2,000 cfm in the return air duct or plenum upstream of any filters, exhaust air connections, outdoor air connections, or decontamination equipment and appliances.

**Exception:** Smoke detectors are not required in the return air system where all portions of the building served by the air distribution system are protected by area smoke detectors connected to a fire alarm system in accordance with the *International Fire Code*. The area smoke detection system shall comply with Section 606.4.

**Section 802.8** is deleted in its entirety.

**Section 917.4** is hereby adopted and shall read as follows:

**917.4 Vertical Clearance.** Household cooking appliances (free-standing range or counter mounted cook-top) shall have a vertical clearance above the cooking top of not less than thirty (30) inches to combustible material or metal cabinets. A minimum clearance of twenty-four (24) inches 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 1/4 inch insulating millboard covered with sheet metal not less than 0.0122 inch thick.

(2) A metal ventilating hood of sheet metal not less than 0.0122 inch thick is installed above the cooking top with a clearance of not less than 1/4 inch 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 909.7** is hereby adopted and shall read as follows:

**909.7 Wall cavity.** The wall cavity directly above the wall furnace shall be ventilated by a 26 gage metal thimble into attic; or, an eight (8) inch by fourteen (14) inch metal grill a minimum of twelve (12) inches below the ceiling.

*Section 910.5* is hereby adopted and shall read as follows:

**910.5 Replacement of floor furnace.** 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.

**1205.1.5 Equipment and appliances.** Shutoff valves shall be installed on connections to mechanical equipment and appliances.

***The 2006 International Fuel Gas Code is hereby adopted and shall read as follows:***

**Chapter 1** is deleted in its entirety.

**Section 301** is deleted in its entirety.

**Section 302** is deleted in its entirety.

**303.3 Prohibited locations.** Appliances shall not be located in sleeping rooms, bathrooms, storage closets or surgical rooms, or in a space that opens 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 304.5.
3. A single wall-mounted unvented room heater is installed in a bathroom and such unvented room heater is equipped as specified in Section 621.6 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 304.5.
4. A single wall-mounted unvented room heater is installed in a bedroom and such unvented room heater is equipped as specified in Section 621.6 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 304.5.
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 and is provided with a solid weather-stripped door equipped with an approved self-closing device. All combustion air shall be taken directly from the outdoors in accordance with Section 304.6.

6. Equipment burning liquefied petroleum gas (LPG) or liquid fuel shall not be located in a pit, an under-floor space, below grade or similar location where vapors or fuel might unsafely collect unless an approved method for the safe collection, removal and containment or disposal of the vapors or fuel is provided.

*Exception:*

1. Equipment burning liquefied gas (LPG) that is equipped with an automatically controlled gas valve may be installed below grade of a R-1, R-2, R-3, or R-4 type occupancy, provided that each area where said appliance(s) are located is equipped with a listed and approved liquefied petroleum gas detection alarm. Detectors shall sound an alarm audible in all areas of the structure and be installed per the manufacturers installation instructions.

2. The detection device shall be a listed and labeled.

3. Only submersible type sump pumps will be acceptable for structures with LPG service.

4. No LPG log lighter valve shall be allowed to be installed below grade, but they shall be allowed on the main floor with a maximum 50 gallon LPG tank no closer than three feet to a structure. LPG tank must be secured. Valves and fittings must be listed for LPG.

**305.1 General.** Equipment and appliances shall be installed as required by the terms of their approval, in accordance with the conditions of listing, the manufacturer's instructions, Table 3-1 of the *Sedgwick County Mechanical Code*, and this code. Where conflicts between this code and any other applicable code, and the conditions of listing or the manufacturer's installation instructions occur the most restrictive code shall apply.

Manufacturers' installation instructions shall be available on the job site at the time of inspection. Where a code provision is less restrictive than the conditions of the listing of the equipment or appliance or the manufacturer's installation instructions, the conditions of the listing and the manufacturer's installation instructions shall apply.

Unlisted appliances approved in accordance with Section 301.3 shall be limited to uses recommended by the manufacturer and shall be installed in accordance with the manufacturer's instructions, the provisions of this code, Table 3-1 of the *Sedgwick County Mechanical Code*, and the requirements determined by the code official.

**305.1.1** is hereby created and shall read as follows:

**305.1.1 Standard Installation Clearances for Unlisted Heat-Producing Appliances** shall be in accordance with Table 3-1 of the *Sedgwick County Mechanical Code*.

**Section 306** is deleted in its entirety.

**Section 307** is deleted in its entirety.

**403.4.3 Copper and brass.** Copper and brass shall not be acceptable as piping material for liquid petroleum fuel gas.

**404.4 Piping through foundation wall.** All metallic liquidified petroleum gas (LPG) systems shall be installed with a swing joint located at the structure that the system serves. A “swing joint” shall be a joint in a threaded pipeline which permits movement in the line in a plane normal to the direction of one part of the line.

No gas piping shall be installed in or on the ground under any building or structure, and all exposed gas piping shall be kept at least six (6) inches above grade and enter or exit the structure above the exterior finish grade.

Concealed unprotected gas piping may be installed above grade in approved recesses or channels.

Service pipe shall be laid at a depth of not less than twelve (12) inches except plastic gas lines shall be laid at a depth of eighteen (18) inches, and shall be laid in a ditch separated from the ditches of water, sewer or other underground pipes or conduits by not less than eighteen (18) inches of solid undisturbed earth.

A gas service line laid parallel to a foundation wall shall be laid on a line not less than two (2) feet from such foundation wall and on solid undisturbed earth. In no case shall a service line be laid parallel to the building in the backfill along the foundation wall. Where a service or supply line passes through a foundation wall, except where such wall is on a property line, the same shall enter the building above grade.

Fuel-gas lines shall not be installed within conditioned air (supply), circulating air (return) or fresh air ducts and plenums of forced air systems.

**Section 403.5.2** is deleted in its entirety.

**404.9 Minimum burial depth.** Underground piping systems shall be installed a minimum depth of 12 inches for metallic piping and 18 inches for non-metallic piping below grade, except as provided for in Section 404.9.1.

**414.2 Interconnections for standby fuels.** Where supplementary gas for standby use is connected downstream from a meter or a service regulator where a meter is not provided, a device to prevent backflow shall be installed. A three-way valve installed to admit the standby supply and at the same time shut off the regular supply shall be permitted to be used for this purpose. In areas where natural gas is available for use as a fuel gas, it shall be used as the primary source of fuel gas for a R-1, R-2, R-3, and R-4 type occupancy.

**406.1.1 Inspections.** Inspection shall consist of visual examination, during or after manufacture, fabrication, assembly, or pressure tests as appropriate. Supplementary types of nondestructive inspection techniques, such as magnetic- particle, radiographic, ultrasonic, etc., shall not be required unless specifically listed herein or in the engineering design.

When installing any gas opening for a future gas burning appliance in residential gas piping systems, it shall be sized and located according to the following requirements:

1. The future appliance shall be assigned a minimum 55,000 BTU value for sizing the gas distribution piping system.
2. For future solid fuel burning fireplaces, the gas opening shall be run to within four (4) feet of the fire box and be controlled by an accessible approved shutoff valve outside the hearth and be properly capped or plugged.
3. For future gas-fired appliances, the gas opening shall be run to within three (3) feet of the appliance and be controlled by a readily accessible approved shut-off valve outside the hearth and be properly capped or plugged.
4. The approved required shutoff valve shall be outside of each appliance or fireplace and ahead of the union connection and in addition to any valve on the appliance.
5. When creating a new opening, all gas piping must be tested;

When extending an existing gas opening, only that branch must be tested;

When making a gas opening at the meter loop, only that branch must be tested.

Exception:

When approved by the Building Official, the above procedures may be waived and a soap test may be administered.

**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.

In performing the prescribed piping tests as required elsewhere in this code, a spring type gauge may be used provided:

The maximum capacity of the gauge used for the ten (10) psi for fifteen (15) minute test be thirty (30) psi;

and, the maximum capacity of the gauge used for the sixty (60) psi for thirty (30) minute test be one-hundred (100) psi.

*Section 502.4* is deleted in its entirety.

**503.2.2 Well-ventilated spaces.** Where located in a large and well-ventilated space, industrial appliances shall be permitted to be operated by discharging the flue gases directly into the space when approved by the building official.

*Section 503.6.3.* is deleted in its entirety.

*Section 503.6.12* is deleted in its entirety.

**603.1 General.** Log lighters shall be tested in accordance with CSA 8 and installed in accordance with the manufacturer's installation instructions. No LPG log lighter valve shall be allowed to be installed below grade, but they shall be allowed on the main floor with a maximum 50 gallon LPG tank no closer than three feet to a structure. LPG tank must be secured. Valves and fittings must be listed for LPG.

**608.2 Venting.** Vented wall furnaces shall be vented in accordance with Section 503. The wall cavity directly above the wall furnace shall be ventilated by a 26 gage metal thimble into attic; or, an eight (8) inch by fourteen (14) inch metal grill a minimum of twelve (12) inches below the ceiling.

*Section 609.7* is hereby adopted and shall read as follows:

**609.7 Replacement of floor furnace.** 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 613* is deleted in its entirety.

*Section 614* is deleted in its entirety.

*Section 615* is deleted in its entirety.

*Section 616* is deleted in its entirety.

*Section 617* is deleted in its entirety.

*Section 618* is deleted in its entirety.

**Chapters 13 thru 24 of the 2006 International Residential Code, is hereby adopted and shall read as follows:**

**M1306.1 Appliance clearance.** Appliances shall be installed with the clearances from unprotected combustible materials as indicated on the appliance label, Table 3-1 of the *Sedgwick County Mechanical Code*, and in the manufacturer's installation instructions.

M1306.1.1 is hereby created and shall read as

**M1306.1.1 Standard Installation Clearances for Unlisted Heat-Producing Appliances** shall be in accordance with Table 3-1 of the *Sedgwick County Mechanical Code*

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

RESIDENTIAL-TYPE APPLIANCES		APPLIANCE				
		ABOVE TOP OF CASING OR APPLIANCE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT <sup>1</sup>	FROM BACK	FROM SIDES
FUEL						
BOILERS AND WATER HEATERS <sup>11</sup> Steam Boilers—15 psi (103.4 kPa) Water Boilers—250°F (121°C) Water Heaters—200°F (93°C) All Water Walled or Jacketed	Automatic Oil or Comb. Gas-Oil	6		24	6	6
	Automatic Gas	6		18	6	6
	Solid	6		48	6	6
FURNACES—CENTRAL; OR HEATERS <sup>11</sup> — ELECTRIC CENTRAL WARM-AIR FURNACES Gravity, Upflow, Downflow, Horizontal and Duct Warm-Air—250°F (121°C) max.	Automatic Oil or Comb. Gas-Oil	6 <sup>2</sup>	6 <sup>2</sup>	24	6	6
	Automatic Gas	6 <sup>2</sup>	6 <sup>2</sup>	18	6	6
	Solid	18 <sup>2</sup>	18 <sup>2</sup>	48	18	18
	Electric	6 <sup>2</sup>	6 <sup>2</sup>	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°F (121°C) max.		1	1	1	1	1
ROOM HEATERS <sup>1</sup> Circulating Type Radiant or Other Type	Oil or Solid	36		24	12	12
	Gas	36		24	12	12
	Oil or Solid	36		36	36	36
	Gas	36		36	18	18
	Gas with double metal or ceramic back	36		36	12	18
Fireplace Stove	Solid	48 <sup>2</sup>		54	48 <sup>2</sup>	48 <sup>2</sup>
RADIATORS Steam or Hot Water <sup>2</sup>		36		6	6	6
RANGES—COOKING STOVES						
	Oil	30 <sup>7</sup>			9	24
	Gas	30 <sup>7</sup>			6	6
	Solid Clay-Lined Firepot	30 <sup>7</sup>			24	24
	Solid Unlined Firepot	30 <sup>7</sup>			36	36
Electric	30 <sup>7</sup>			6	6	
INCINERATORS Domestic Types		36 <sup>2</sup>		48	36	36
COMMERCIAL INDUSTRIAL-TYPE APPLIANCES ANY AND ALL PHYSICAL SIZES EXCEPT AS NOTED <sup>11</sup>		APPLIANCE				
		ABOVE TOP OF CASING OR APPLIANCE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT <sup>1</sup>	FROM BACK <sup>2</sup>	FROM SIDES <sup>2</sup>
FUEL						
BOILERS AND WATER HEATERS 100 cu. ft. (2.832 m <sup>3</sup> ) or less Steam, any pressure 50 psi (345 kPa) or less Any size	All Fuels	18		48	18	18
	All Fuels	18		48	18	18
UNIT HEATERS Floor Mounted or Suspended—Any Size Suspended—100 cu. ft. (2.832 m <sup>3</sup> ) or less Suspended—100 cu. ft. (2.832 m <sup>3</sup> ) or less Suspended—Over 100 cu. ft. (2.832 m <sup>3</sup> ) Floor Mounted—Any Size	Steam or Hot Water	1			1	1
	Oil or Comb. Gas-Oil	6		24	18	18
	Gas	6		18	18	18
	All Fuels	18		48	18	18
	All Fuels	18		48	18	18
RANGES—RESTAURANT-TYPE Floor Mounted	All Fuels	48		48	18	18
OTHER LOW-HEAT INDUSTRIAL APPLIANCES Floor Mounted or Suspended	All Fuels	18	18	48	18	18

**TABLE 3-1 (Continued)**  
**Standard Installation Clearances in Inches for Unlisted Heat-Producing Appliances**

COMMERCIAL INDUSTRIAL-TYPE APPLIANCES ANY AND ALL PHYSICAL SIZES EXCEPT AS NOTED <sup>11</sup>	APPLIANCE					
	FUEL	ABOVE TOP OF CASING OR APPLIANCE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT <sup>1</sup>	FROM BACK <sup>2</sup>	FROM SIDES <sup>3</sup>
BOILERS AND WATER HEATERS Over 50 psi (345 kPa) Over 100 cu. ft. (2832 m <sup>3</sup> )	All Fuels	48		96	36	36
OTHER MEDIUM-HEAT INDUSTRIAL APPLIANCES All Sizes	All Fuels	48	36	96	36	36
INCINERATORS All Sizes		48		96	36	36
INDUSTRIAL-TYPE HIGH-HEAT APPLIANCES HIGH-HEAT INDUSTRIAL APPLIANCES All Sizes	All Fuels	180		360	120	120

**Footnotes for Table 3-1**

- <sup>1</sup> The minimum dimension shall be that necessary for servicing the appliance, including access for cleaning and normal care, tube removal, etc.
- <sup>2</sup> 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).
- <sup>3</sup> 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 (3.3 mm) water gauge.
- <sup>4</sup> 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.
- <sup>5</sup> The forty-eight (48) inch (1219 mm) clearance may be reduced to 36 inches (914 mm) when protection equivalent to that provided by (a)–(g) of Table 3-2 is applied to the combustible construction.
- <sup>6</sup> 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 emerge from a floor, wall, or ceiling, the clearance at the opening through the finish floorboards or wall-ceiling boards may be reduced to not less than one-half (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 casings 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.
- <sup>7</sup> To combustible material or metal cabinets. If the underside of such combustible material or metal cabinet is protected with insulating millboard at least one-quarter (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).
- <sup>8</sup> Clearance above charging door shall be at least forty-eight (48) inches (1,219 mm).
- <sup>9</sup> 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).
- <sup>10</sup> 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).
- <sup>11</sup> 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]

***M1408 Vented Floor Furnaces.***

***M1408.3 Location.*** Location of floor furnaces shall conform to the following requirements:

1. Floor registers of floor furnaces shall be installed not less than 6 inches (152 mm) from a wall.
2. Wall registers of floor furnaces shall be installed not less than 6 inches (152 mm) from the adjoining wall at inside corners.
3. The furnace register shall be located not less than 12 inches (305 mm) from doors in any position, draperies or similar combustible objects.
4. The furnace register shall be located at least 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 12 inches (305 mm) of the grille opening.
8. Replacement of floor furnace. 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.

***M1409 Vented Wall Furnaces.***

***M1409.3 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 26 gage metal thimble into attic; or, an eight (8) inch by fourteen (14) inch metal grill a minimum of twelve (12) inches below the ceiling.

***M1502.6 Duct length.*** The maximum length of a clothes dryer exhaust duct shall not exceed 25 feet total developed length for rigid metal duct, and twenty (20) feet for metal flex duct, including four (4) 90-degree bends. The maximum developed length of the duct shall be reduced 2.5 feet for each 45 degree bend and 5 feet for each 90 degree bend beyond the four (4) allowed 90-degree bends. The maximum length of the exhaust duct does not include the transition duct or the initial 90-degree inlet connection.

***Section M1503.4*** is hereby adopted and shall read as follows:

***M1503.4 Vertical Clearance.*** Built-in top (or surface) cooking appliances shall have a vertical clearance above the cooking top of not less than thirty (30) inches to combustible material or metal cabinets. A minimum clearance of twenty-four (24) inches 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 1/4 inch insulating millboard covered with sheet metal not less than 0.0122 inch thick.

2. A metal ventilating hood of sheet metal not less than 0.0122 inch thick is installed above the cooking top with a clearance of not less than 1/4 inch 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.

***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 shall not discharge into an attic, crawl space or other areas inside the building.

***Exception:***

In R-3 type occupancies, the exhaust air from bathrooms and toilet rooms may be allowed to terminate in a properly ventilated attic space. The exhaust shall terminate above the top of the insulation with a "goose-neck" installed to prevent infiltration of insulating material into the duct.

***M1505.1*** is deleted in its entirety.

***M1505.2*** is deleted in its entirety.

**M1505.3 Ventilation Rate.** Ventilation systems shall be designed to have the capacity to exhaust the minimum air flow rate determined in accordance with Table M1507.3.

**TABLE M1507.3**

Minimum Required Exhaust Rates for One- and Two-Family Dwellings

<u>AREA TO BE VENTILATED</u>	<u>VENTILATION RATES</u>
Bathrooms—Toilet Rooms	Mechanical exhaust capacity of 50 cfm Intermittent or 20 cfm continuous

For SI: 1 cubic foot per minute = 0.0004719 m<sup>3</sup>/s

**M1601.2.1 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 25, and a smoke-developed index not over 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 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 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 M1601.2.1.1- Table of R-Values:

**Table M1601**  
**Table of R-Values**

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.

**M1601.3.1 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, gasketing 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 1 1/2 inches and shall be mechanically fastened by means of at least three sheet-metal screws or rivets equally spaced around the joint.

Exception: Low pressure systems.

**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:

<u>Square Footage of Area Served</u>	<u>Required Outside Air Duct Size</u>
1. 1,500 sq.ft. or less	4 inch diameter or 12.6 sq.in.
2. 1,501 sq.ft. to 2,000 sq.ft.	5 inch diameter or 19.6 sq.in.
3. 2,001 sq.ft. and larger	6 inch diameter or 28.3 sq.in.

All areas listed exclude finished basement area. The outside air duct shall be provided with a .25 inch wire mesh inlet screen. The outside air duct shall not draw air from contaminated sources.

***M1701.4 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.

Exception:

The following appliances shall be permitted to obtain combustion air from sleeping rooms and bathrooms.

1. Solid fuel-fired appliances provided that the room is not a confined space and the building is not of unusually tight construction.
2. Appliances installed in an enclosure in which all combustion air is taken from the outdoors and the enclosure is equipped with a solid weather stripped door and self-closing device.

***G2406.2 Prohibited locations.*** Appliances shall not be located in sleeping rooms, bathrooms, toilet rooms, storage closets or surgical rooms, or in a space that opens 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 and is provided with a solid weather-stripped door equipped with an approved self-closing device. All combustion air shall be taken directly from the outdoors in accordance with Section G2407.6.

**Section G2426.4** is deleted in its entirety.

#### ***G2436 Vented Wall Furnaces***

**G2436.2 Venting.** Vented wall furnaces shall be vented in accordance with Section G2427. The wall cavity directly above the wall furnace shall be ventilated by a 26 gage metal thimble into attic; or, an eight (8) inch by fourteen (14) inch metal grill a minimum of twelve (12) inches below the ceiling. 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.

#### ***G2437 Floor Furnaces***

**G2437.1 General.** Floor furnaces shall be tested in accordance with ANSI Z21.86/CSA 2.32 and shall be installed in accordance with the manufacturer's installation instructions. Replacement of existing 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.

**EFFECTIVE DATE:** This resolution shall take effect and be enforced from and after its approval and adoption by the Board of County Commissioners of Sedgwick County, Kansas and upon its publication once in the official county newspaper.

Commissioners present and voting were:

DAVID M. UNRUH	_____
TIM R. NORTON	_____
THOMAS G. WINTERS	_____
KELLY PARKS	_____
GWEN WELSHIMER	_____

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2007

BOARD OF COUNTY COMMISSIONERS  
OF SEDGWICK COUNTY, KANSAS

ATTEST:

\_\_\_\_\_  
DON BRACE, County Clerk

\_\_\_\_\_  
DAVID M. UNRUH, Chairman  
Commissioner, First District

\_\_\_\_\_  
THOMAS G. WINTERS, Chair Pro Tem  
Commissioner, Third District

APPROVED AS TO FORM:

\_\_\_\_\_  
BILL RAYMOND  
Assistant County Counselor

\_\_\_\_\_  
TIM R. NORTON  
Commissioner, Second District

\_\_\_\_\_  
KELLY PARKS  
Commissioner, Fourth District

\_\_\_\_\_  
GWEN WELSHIMER  
Commissioner, Fifth District