

Sec. 40-592. Amendments to the International Mechanical Code.

The International Mechanical Code, 2006 edition, is hereby amended, altered, modified and changed in the following respects:

Amend the first three sentences of Section 101.2 to read as follows:

101.2 Scope. This code shall regulate the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently or temporarily installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those mechanical systems, system components, equipment and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be regulated by the *National Fuel Gas Code*. (Remainder of section 101.2 remains the same as written in the International Mechanical Code.)

Amend Section 101.2.1 to read as follows:

*101.2.1 *Appendices.* Provisions in the appendices shall not apply unless specifically adopted.

Amend Section 102.4 as follows:

Delete the second paragraph.

Amend Section 102.5 to read as follows:

102.5 Change in occupancy. It shall be unlawful to make a change in the occupancy of any structure which will subject the structure to any special provision of this code applicable to the new occupancy without approval. Changes in occupancy shall be made in accordance with the provisions of the city's building code.

Amend Section 102.8 to read as follows:

102.8 Referenced codes and standards. The codes and standards referenced herein shall be those that are listed in Chapter 15 of this code and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference. Standards listed elsewhere in Chapter 40 of the Omaha Municipal Code shall also be considered part of the requirements of this code to the prescribed extent of their reference. Where differences occur between provision of this code and the referenced standards, the provisions of this code shall apply.

Amend Sections 103.2 and 103.3 as follows:

Delete Sections 103.2 and 103.3 in their entirety.

Amend Section 104.2 to read as follows:

104.2 Interpretation authority. The code official shall have authority as necessary in the interest of public health, safety and general welfare, 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.

Amend Section 106.3 to read as follows:

106.3 Application for permit. Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by a licensed contractor. The permit application shall indicate information required by the code official.

Amend Section 106.4.1 to read as follows:

106.4.1 Reviewed construction documents. When the code official issues the permit where construction documents are required, the construction documents shall be endorsed

in writing and stamped "REVIEWED". Such endorsed construction documents shall not be changed, modified or altered without authorization from the code official. Work shall be done in accordance with the reviewed construction documents.

The code official shall have the authority to issue a permit for the construction of part of a mechanical system before the construction documents for the entire system have been submitted or reviewed, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of such permit shall proceed at his or her own risk without assurance that the permit for the entire mechanical system will be granted.

Amend Section 106.4.2, first paragraph, as follows:

106.4.2 Validity. The issuance of a permit or review of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of other ordinances of the jurisdiction. A permit presuming to give authority to violate or cancel the provisions of this code shall be invalid.

Amend Section 106.4.3 to read as follows:

106.4.3 Expiration. Every permit issued by the code official under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work recommences, a new permit shall be first obtained and the fee, therefore, shall be the full amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year.

If the work has commenced and been inspected by the code official or his/her designee within 180 days of the date of permit issuance, the permit shall be valid for a period of 30 months from the date of issuance.

Amend Section 106.4.4 as follows:

Delete this section in its entirety.

Amend Section 106.4.6 to read as follows:

106.4.6 Retention of construction documents. One set of construction documents shall be retained by the code official until final approval of the work covered therein. One set of reviewed construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or job at all times during which the work authorized thereby is in progress.

Amend Section 106.5 as follows:

Delete this section in its entirety.

Amend Section 107.1 as follows:

Delete the exception in its entirety.

Amend Section 108.4 as follows:

108.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair mechanical work in violation of the reviewed construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code shall be punished as provided in section 1-10 of this Code. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Amend Section 108.5, the last sentence, to read as follows:

108.5 Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be punished as provided in section 1-10 of this Code.

Amend Section 109 as follows:

Delete this section in its entirety.

Amend Section 201.3 as follows:

Delete this section in its entirety.

Amend Section 301.3 to read as follows:

301.3 Fuel gas appliances and equipment. The approval and installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be in accordance with the *National Fuel Gas Code*.

Amend Section 301.7 to read as follows:

301.7 Electrical. Electrical wiring, controls and connections to equipment and appliances regulated by this code shall be in accordance with the Chapter 44, Omaha Municipal Code and the *National Electric Code* adopted therein. Chapter 44, Omaha Municipal Code and the *National Electric Code* adopted therein shall be substituted for any and all references in this code to the *ICC Electrical Code*.

Amend Section 301.8 to read as follows:

301.8 Plumbing connections. Potable water supply and building drainage system connections to equipment and appliances regulated by this code shall be in accordance with the Chapter 49 - Plumbing, Omaha Municipal Code. Chapter 49 - Plumbing, Omaha Municipal Code shall be substituted for any and all references in this code to the International Plumbing Code.

Amend Section 303.1 as follows:

Add the following exception:

Exception: Natural gas-fired equipment and appliances shall be located as required by NFPA 54, the Metropolitan Utilities District Rules and Regulations and the conditions of the equipment and appliance listing.

Amend Section 304.1 as follows:

Add the following exception:

Exception: Natural gas-fired equipment and appliances shall be located as required by NFPA 54, the Metropolitan Utilities District Rules and Regulations and the conditions of the equipment and appliance listing.

Amend Section 307.2.1 to read as follows:

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 including roof drains, service sinks, floor sinks, floor drains, grade and other approved devices. Condensate shall not discharge into a street, alley, walkway, sidewalk, deck or other area so as to cause a nuisance.

Amend Section 403.2 to read as follows:

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

Exceptions:

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

(2) Where the ventilation system is designed in accordance with ANSI/ASHRAE 62.1. Amend Section 404.1 to read as follows:

404.1 Enclosed parking garages. Mechanical ventilation systems for enclosed parking garages shall be permitted to operate intermittently where the system is arranged to operate automatically by carbon monoxide detection not to exceed 50 ppm and nitrous dioxide detection at 0.5 ppm.

Amend the exceptions in Section 504.6.1 to read as follows:

Exceptions:

1. Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions.

2. In Group B and R occupancies, clothes dryer exhaust ducts may terminate in a vertical duct enclosed by a shaft that complies with Section 607.5.5 Exceptions 1 and 2 that will exhaust heat and moisture out of the building. The following requirements apply:

2.1. The clothes dryer exhaust must be contained in a duct within the shaft. The duct must be constructed of corrosion resistant metal and shall have a smooth interior.

2.2. Duct openings into the shaft enclosure(s) shall be protected per Section 607.5.5 Exceptions 1 and 2.

2.3. Duct offsets within the shaft are prohibited.

2.4. Accessible cleanouts shall be provided at the lowest point of the shaft. Cleanout access doors shall have the same fire rating as the shaft.

2.5. The vertical dryer exhaust duct shall be protected by an automatic fire sprinkler system per NFPA 13.

2.6. Upward airflow in the vertical dryer duct shall be maintained according to Section 607.5.5 Exception 2.

2.6.1. The fan may be sized at a constant airflow equal to 50% of the sum of the listed airflows of the dryers connected to the vertical duct, OR

2.6.2. The airflow of the fan may vary based on the number of dryers operating.

2.6.3. In no case shall airflow be less than the rated airflow of the smallest connected dryer.

2.7. Dryer duct exhaust fans must allow for removal of lint and debris from both the fan and the vertical duct.

2.8. Dryer duct exhaust fans must convey lint and operate at the temperatures encountered.

2.9. Dryer duct exhaust fan motors must be located outside the air stream.

3. The maximum length of exhaust duct may be increased by use of a boost fan that is appropriately listed for clothes dryer use. The boost fan shall operate when the clothes dryer is in use.

Amend Section 506.1 to read as follows:

506.1 General. Commercial kitchen hood ventilation ducts and exhaust equipment shall comply with the requirements of this section. Type I hoods shall comply with the requirements of NFPA 96 and this section. Commercial kitchen grease ducts shall be designed for the type of cooking appliance and hood served.

Amend Section 507.1 to read as follows:

507.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of this section. Type I hoods shall comply with the requirements of NFPA 96 and this section. Hoods shall be Type I or Type II and shall be designed to capture and confine cooking vapors and residues. Commercial kitchen exhaust hood systems shall operate during the cooking operation.

Amend Section 509.1 to read as follows:

509.1 Where required. Commercial cooking appliances required by Section 507.2.1 to have a Type I hood shall be provided with an approved automatic fire suppression system complying with *NFPA*, the *International Building Code* and the *International Fire Code*.

Amend Section 512.2 to read as follows:

512.2 Materials. Subslab soil exhaust system duct material shall be air duct material listed and labeled to the requirements of UL 181 for Class 0 air ducts, or any of the following building sanitary drainage and vent pipe: cast iron; galvanized steel; brass or copper pipe; copper tube of a weight not less than that of copper drainage tube; Type DWV; and plastic piping.

Amend Section 603.6.1.1 to read as follows:

603.6.1.1 Duct length. Flexible air ducts shall not be permitted except as final connectors to equipment or outlets.

Amend Section 603.6.2.1 to read as follows:

603.6.2.1 Connector length. Flexible air connectors shall be limited in length to 6 feet with no change in direction greater than 45 degrees.

Amend the last sentence of Section 603.17 to read as follows:

Each volume damper or other means of supply air adjustment used in balancing shall be provided with access for adjustment.

Amend Section 606.2.1 as follows:

Delete Section 606.2.1, including the exception, in its entirety and substitute the following:

606.2.1 Supply air systems. Smoke detectors shall be installed in supply air systems with a design capacity greater than 2000 cfm (0.9m³/sec), in the supply air duct or plenum downstream of any filters, exhaust air connections, outdoor air connections or decontamination equipment and appliances.

Amend Section 701.1 to read as follows:

701.1 Scope. The provisions of this chapter shall govern the requirements for combustion and dilution air for fuel-burning appliances other than gas-fired appliances. The requirements for combustion and dilution air for gas-fired appliances shall be in accordance with the *National Fuel Gas Code*, *NFPA* and *Metropolitan Utilities District Rules and Regulations*.

Amend Section 801.1 to read as follows:

801.1 Scope. This chapter shall govern the installation, maintenance, repair and approval of factory-built chimneys, chimney liners, vents and connectors. This chapter shall also

govern the utilization of masonry chimneys. Gas-fired appliances shall be vented in accordance with the *National Fuel Gas Code* , NFPA and *Metropolitan Utilities District Rules and Regulations*.

Amend 804.3.3 to read as follows:

804.3.3 Termination. The termination of chimneys or vents equipped with power exhausters shall be located a minimum of 10 feet (3048 mm) from the property line of a lot that can be built upon and from adjacent buildings. The exhaust shall be directed away from the building.

Amend Section 901.1 to read as follows:

901.1 Scope. This chapter shall govern the approval, design, installation, construction, maintenance, alteration and repair of the appliances and equipment specifically identified herein and factory-built fireplaces. The approval, design, installation, construction, maintenance, alteration and repair of gas-fired appliances shall be regulated by the *National Fuel Gas Code* , *NFPA* and *Metropolitan Utilities District Rules and Regulations*.

Amend Section 906.1 to read as follows:

906.1 General. Factory-built barbecue appliances shall be of an approved type and shall be installed in accordance with the manufacturer's installation instructions, this chapter and Chapters 3, 5, 7, 8 the *National Fuel Gas Code* , *NFPA* and *Metropolitan Utilities District Rules and Regulations*.

Amend Section 908.7 to read as follows:

908.7 Refrigerants and hazardous fluids. Heat exchange equipment that contains a refrigerant and that is part of a closed refrigeration system shall comply with Chapter 11. Heat exchange equipment containing heat transfer fluids which are flammable, combustible or hazardous shall comply with NFPA and the *International Fire Code*.

Amend Section 916.1 to read as follows:

916.1 General. Pool and spa heaters shall be installed in accordance with Chapter 49, Omaha Municipal Code, the Nebraska Boiler Act and the manufacturer's installation instructions. Oil-fired pool and spa heaters shall be tested in accordance with UL 726. Electric pool and spa heaters shall be tested in accordance with UL 1261.

Amend Section 918.3 as follows:

Add the following exception at the end of Section 918.3:

Exception: The total area of the supply air ducts and outdoor and return air ducts shall not be required to be larger than the minimum size required by the heat pump manufacturer's installation instructions.

Amend Section 926.1 to read as follows:

926.1 Installation. The installation of gaseous hydrogen systems shall be in accordance with the applicable requirements of this code, the *International Fire Code* , the *National Fuel Gas Code* , *NFPA* , *Metropolitan Utilities District Rules and Regulations*, and the *International Building Code*.

Amend Section 1001.1 as follows:

Delete all exceptions to Section 1001.1.

Amend Section 1002.1 to read as follows:

1002.1 General. Potable water heaters and hot water storage tanks shall be listed and labeled and installed in accordance with the Nebraska Boiler Act, ASME Sections 4 or 8, the manufacturer's installation instructions, and this code. All water heaters shall be

capable of be removed without first removing a permanent portion of the building structure or in-service mechanical equipment. The potable water connections and relief valves shall conform to the requirements of the Nebraska Boiler Act, ASME Sections 4 or 8. Domestic electric water heaters shall comply with the Nebraska Boiler Act, ASME Section 4, NFPA 70 and UL 174 or UL 1453. Commercial electric water heaters shall comply with the Nebraska Boiler Act, ASME Section 4, NFPA 70 and UL 1453. Domestic electric water heaters shall comply the Nebraska Boiler Act, ASME Section 4, NFPA 31 and 30 and UL 732.

Exception: Listed and approved potable water heaters operating:

- 1) Under 200,000 Btu/hr input or,
- 2) Under 150 psi or
- 3) Under 210 degrees F or,
- 4) Under 120 gallons.

Amend Section 1002.2 to read as follows:

1002.2 Water heaters utilized for space heating. All vessels used for space heating will be constructed to the minimum standards of ASME. The vessel must bear an ASME "H" or "S" stamping.

Amend Section 1002.3 to read as follows:

1002.3. Supplemental water-heating devices. Potable water-heating devices that utilize refrigerant-to-water heat exchangers shall be approved and installed in accordance with the Nebraska Boiler Act, ASME Sections 4 or 8, and the manufacturer's installation instructions.

Amend Section 1003.1 to read as follows:

1003.1 General. All pressure vessels shall bear the ASME Code stamping and be manufactured to the requirements of ASME Section 8 Divisions 1, 2, and 3 or Section 10, and shall be installed in accordance with the State Boiler Act and the manufacturer's installation instructions.

Amend Section 1003.3 to read as follows:

1003.3 Welding. Welding on pressure vessels shall be performed by a current holder of a National Board "R" Stamp certificate.

Amend Section 1004.1 to read as follows:

1004.1 Standards. Oil-fired boilers and their control systems shall be listed and labeled in accordance with UL 726, the Nebraska Boiler Act, ASME Section 1, or Section 4, ASME CSD-1, NFPA 30, and 31. Electric boilers and their control systems shall be listed and labeled in accordance with UL 834 the Nebraska Boiler Act, ASME Section 1, or Section 4, ASME CSD-1, NFPA 70. All boilers shall be designed and constructed in accordance with the requirements of ASME CSD-1, ASME Boiler and Pressure Vessels Code, Sections I, II, IV, V, and IX; NFPA 85.

Amend Section 1004.2 to read as follows:

1004.2 Installation. In addition to the requirements of this code, the installation of boilers shall conform to the Nebraska Boiler Act, ASME Sections 1 and 4, the authority having jurisdiction and the manufacturer's installation instructions. Operating instructions of a permanent type shall be attached to the boiler. Boilers shall have all controls set, adjusted and tested by the installer. The manufacturer's rating data reports, CSD-1 reports, and the nameplate shall be attached to the boiler.

Amend Section 1004.3 to read as follows:

1004.3 Working clearance. Clearances shall be maintained around boilers, generators, heaters, tanks, and related equipment and appliances so as to permit inspection, servicing, repair, replacement and visibility of all gauges. When boilers are installed or replaced, clearance shall be provided to allow access for inspection, maintenance and repair. Passageways around all sides of boilers have an unobstructed width of not less the 18 inches (457mm) unless otherwise approved by the Nebraska Boiler Act or allowed by the authority having jurisdiction.

Amend Section 1004.4 to read as follows:

1004.4 Mounting. Equipment shall be set or mounted on a level base capable of supporting and distributing the weight contained thereon. Boilers, tanks and equipment shall be secured in accordance with the Nebraska Boiler Act, ASME, the authority having jurisdiction and the manufacturer's installation instructions.

Amend Section 1005.1 to read as follows:

1005.1 Valves. Every boiler or modular boiler shall have a positive shutoff valve in the supply and return piping. For multiple boiler or multiple modular boiler installations, each boiler or modular boiler shall have individual shutoff valves in the supply and return piping.

Amend Section 1005.2 to read as follows:

1005.2 Potable water supply. The water supply to all boilers shall be connected in accordance with the Omaha Plumbing Code and the rules and regulations of the Metropolitan Utilities District.

Amend Section 1006.6 to read as follows:

1006.6 Safety and relief valves discharge. Safety and relief valve discharge pipes shall be of rigid pipe that is approved for the temperature of the system. The discharge pipe shall be the same diameter as the safety or relief valve outlet. Safety and relief valves shall not be a hazard, a potential cause of damage or otherwise a nuisance. High-pressure-steam safety valves shall discharge to the outside of the structure. Where a low-pressure safety valve or a relief valve discharges to drainage system, the installation shall comply with the Omaha Plumbing Code.

Amend Section 1006.9 to read as follows:

1006.9 Safety and pressure relief valves and controls. All safety valves, safety relief valves, boiler safety devices, controls, and electrical requirements shall be listed and labeled for their appropriate use and conditions. The installation of all safety and pressure relief valves, and controls shall comply with the Nebraska Boiler Act, ASME Boiler and Pressure Code Sections: I, VI, VIII Div. 1, 2, 3, X, CSD-1, the authority having jurisdiction and the manufacturer's installation instructions

Amend Section 1007.1 to read as follows:

1007.1 General. All steam and hot water boilers shall be protected with a low-water cutoff control as required by the Nebraska Boiler Act, ASME Sections I, IV, and CSD-1.

Amend Section 1008.2 to read as follows:

1008.2 Discharge. Blow off or blow down valves shall discharge to a safe place of disposal. Where discharging to the drainage system, the installation shall conform to the Omaha Plumbing Code.

Amend Section 1009.3 to read as follows:

1009.3 Open-type expansion tanks. Open-type expansion tanks shall be located a minimum of 4 feet (1219mm) above the highest heating element. The tank shall be

adequately sized for the hot water systems. An overflow with a minimum diameter of 1 inch (25mm) shall be installed at the top of the tank. The overflow shall discharge to the drainage system in accordance with the Omaha Plumbing Code.

Amend Condition 6 of Section 1104.2.2, to read as follows:

6. All electrical equipment and appliances conform to Class 1, Division 2, hazardous location classification requirements of NFPA 70 where the quantity of any Group A2, B2, A3 or B3 refrigerant, other than ammonia, in a single independent circuit would exceed 25 percent of the lower flammability limit (LFL) upon release to the space.

Amend Section 1201.1 to read as follows:

1201.1 Scope. The provisions of this chapter shall govern the construction, installation, alteration and repair of hydronic piping systems. This chapter shall apply to hydronic piping systems that are part of heating, ventilation and air-conditioning systems. Such piping systems shall include steam, hot water chilled water, steam condensate, condenser water, and ground source heat pump loop systems. Potable cold and hot water distribution systems shall be installed in accordance with the Omaha Plumbing Code.

Amend Section 1202.4 to read as follows:

1202.4 Piping materials and standards: Hydronic piping shall conform to the standards listed in Table 1202.4 and Table 1202.5 as amended by this section. The exterior of the pipe shall be protected from corrosion and degradation. Approved piping, valves, fittings and connections shall be installed in accordance with the installations instructions. Pipe and fittings shall be rated for use at the operating temperature and pressure of the hydronic system. Acrylonitrile butadiene styrene pipe, tubing, and fittings (ABS), Chlorinated poly vinyl chloride (CPVC) pipe, tubing and fittings, Cross-linked polyethylene (PEX) pipe, tubing and fittings, Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe, tubing and fittings, Polybutylene (PB) pipe, tubing and fittings, Polyethylene (PE) pipe, tubing and fittings and Polypropylene (PP) pipe, tubing and fittings Polyvinyl chloride (PVC) pipe, tubing and fittings, will not be permitted for above ground use in a hydronic heating or cooling system. Except as otherwise acceptable to the authority having jurisdiction.

Amend Section 1205.2 to read as follows:

1205.2 Reduced pressure. A pressure relief valve shall be installed on the low-pressure side of a hydronic piping system that has been reduced in pressure. The relief valve shall be set at no greater than the lowest rated design pressure of any component installed downstream of the pressure reducing valve. The valve shall be installed in accordance with Section 1006.

Amend Section 1208.1.1 to read as follows:

1208.1.1 Ground source heat pump loop systems. Before connection (header) trenches are backfilled, the assembled loop system shall be pressure tested with water at 100 psi (689kPa) for 30 minutes with no observed leaks.

Amend Section 1209.5 to read as follows:

1209.5 Termination: Final termination of all embedded piping systems is required to terminate to listed and labeled equipment or to a piping manifold. The maximum length from piping system entering the structure to equipment or manifold is 48 inches (1219mm).

Amend Chapter 15 as follows:

Add the following ASHRAE Standard:

62.1 - 2004 Ventilation for Acceptable Air Quality
(Ord. No. 38165, § 2, 7-15-08)
Secs. 40-593--40-600. Reserved.