

ORDINANCE NO. _____

1 AN ORDINANCE amending Chapter 25.04 of the Lincoln Municipal Code, the
2 Lincoln Mechanical Code, by amending Section 25.04.010 to adopt the 2009 edition of the
3 International Mechanical Code (IMC); amending Section 25.04.090 to increase and establish certain
4 fees; amending Section 25.04.180 relating to registration of master mechanical contractors and
5 mechanical technicians; adding a new Section 25.04.305 to delete Section 110 of the IMC,
6 Temporary Equipment, Systems and Uses; amending Section 25.04.310 relating to prohibited
7 locations for fuel-fired appliances; amending Section 24.04.320 to reflect an IMC section numbering
8 change; amending Section 25.04.330 relating to equipment and appliances on roofs or elevated
9 structures; adding a new Section 25.04.335 to amend IMC Section 307.2.2 relating to drain pipe
10 materials; adding a new Section 25.04.355 to amend IMC Section 501.2.1 relating to location of
11 exhaust outlets; adding a new Section 25.04.362 to amend IMC Section 504.8 relating to common
12 exhaust systems for clothes dryers located in multistory buildings; adding a new section 25.04.365
13 to amend IMC Section 505.2 relating to kitchen exhaust rates; adding a new section 25.04.385 to
14 amend IMC Section 507.2.1 relating to commercial kitchen Type I hoods; amending Section
15 25.04.390 relating to the operation of Type I hoods; adding a new Section 25.04.405 to amend IMC
16 Section 5058.1 relating to makeup air in commercial kitchens; adding a new section 25.04.445 to
17 amend IMC Section 606.4.1 relating to the operation and supervision of smoke detection systems;
18 adding a new section 25.04.460 to amend IMC Section 801.20 relating to vent joints; adding a new
19 Section 25.04.470 to amend IMC Section 918.6 relating to prohibited sources for forced-air
20 furnaces; adding a new Section 25.04.480 to amend IMC Section 1101.1 relating to Refrigeration,
21 Scope of Chapter; adding a new Section 25.04.490 to amend IMC Section 1105.6 relating to
22 ventilation of machinery rooms; adding a new Section 25.04.500 to amend IMC Section 1107.1

1 relating to refrigerant piping; adding a new Section 25.04.510 to amend IMC Section 1201.1 relating
2 to hydronic piping; adding a new Section 25.04.520 to amend IMC Section 1202.4 relating to piping
3 materials standards; adding a new Section 25.04.530 to amend IMC Section 1202.6 hydronic piping
4 valves; adding a new Section 25.04.540 to amend IMC Section 1202.7 relating flexible connectors,
5 expansion and vibration compensators; adding a new Section 25.04.550 to amend IMC Section
6 1203.3.6 relating to welded joints; adding a new Section 25.04.560 to add Section 1203.20 to the
7 IMC relating to gaskets; adding a new Section 25.04.570 to amend IMC Section 1206.10 relating
8 to pipe support; adding a new Section 25.04.580 to amend IMC Section 1208.1.1 relating to building
9 interior ground source heat pump loop systems; adding new Sections 25.04.590 through 25.04.680
10 to add a new Chapter 16 to the IMC relating to Decorative Fireplace/Gas Log Installations and
11 Contractors; adding a new Section 25.04.690 to adopt Chapters 10, 13, 14, and Appendix A of the
12 IMC as reference guides only; adding new Sections 25.04.700 through 25.04.870 to adopt and
13 incorporate Chapter 14 of the International Residential Code, as amended, as part of the Lincoln
14 Mechanical Code; and repealing Sections 25.04.010, 25.04.090, 25.04.180, 25.04.310, 25.04.320,
15 25.04.330, and 25.04.390 of the Lincoln Municipal Code as hitherto existing.

16 BE IT ORDAINED by the City Council of the City of Lincoln, Nebraska:

17 Section 1. That Section 25.04.010 of the Lincoln Municipal Code be amended to
18 read as follows:

19 **25.04.010 Adoption of the International Mechanical Code, ~~2006~~ 2009 Edition.**

20 Except as hereinafter provided by specific amendment, the ~~2006~~ 2009 edition of the
21 International Mechanical Code, including Appendix Chapters A and B, as published by the
22 International Code Council, is hereby adopted. One printed copy of the International Mechanical
23 Code, ~~2006~~ 2009 Edition, has been filed in the office of the City Clerk for use and examination by
24 the public.

1 Section 2. That Section 25.04.090 of the Lincoln Municipal Code be amended to
2 read as follows:

3 **25.04.090 Section 106.5.2 Amended; Fee Schedule.**

4 Section 106.5.2 of the International Mechanical Code is amended to read as follows:

5 **106.5.2 Fee schedule.** Any person desiring a permit required by this code or the Lincoln
6 Fuel Gas Code shall, at the time of filing an application therefor, pay a fee to the Code Official as
7 set forth below.

8 Where work for which a permit is required by this code is started or proceeded with prior
9 to obtaining said permit, the fees hereinafter specified shall be doubled; but the payment of such
10 double fees shall not relieve any person or persons from fully complying with the requirements of
11 this code in the execution of the work or any other penalties prescribed herein.

12 **MECHANICAL SYSTEMS**
13 **PERMIT FEE SCHEDULE**

14	Electric Furnace	\$28.00 <u>30.00</u>
15	Gas Furnace	\$28.00 <u>30.00</u>
16	Air Conditioner	\$25.00 <u>30.00</u>
17	Heat Pump	\$25.00 <u>30.00</u>
18	Roof Top Heating/Cooling	\$50.00 <u>60.00</u>
19	Air Handling Unit	\$25.00 <u>30.00</u>
20	Residential Exhaust System	\$15.00 <u>25.00</u>
21	Vent Fan (Single Duct)	\$7.00 <u>10.00</u>
22	Clothes Dryer Vent	\$7.00 <u>10.00</u>
23	Vent or Chimney Liner	\$23.00 <u>25.00</u>
24	Alteration of Existing Work/Duct	\$23.00 <u>25.00</u>
25	Decorative Fireplace	\$50.00 <u>60.00</u>
26	Underground Duct Work (per System)	\$23.00 <u>30.00</u>
27	Vent System	\$23.00 <u>30.00</u>
28	Type II Hood	\$50.00

1	Make-up Air System	\$50.00
2	Heat Recovery System	\$28.00 30.00
3	Paint Booth/ Fume Hood Exhaust	\$50.00 90.00
4	<u>Fume Hood Exhaust</u>	\$60.00
5	Mixing/VAV Boxes	\$12.00 15.00
6	Unit Heater	\$32.00 30.00
7	Infrared Pipe Heating System (per Burner)	\$32.00 30.00
8	Type I Hood, including Ducts	\$200.00 300.00
9	<i><u>Refrigeration Fees (Chapter 11)</u></i>	
10	<u>Remote Condensing Units</u>	\$25.00
11	<i><u>Refrigeration Systems</u></i>	
12	<u>10-25 tons</u>	\$25.00
13	<u>26-50 tons</u>	\$35.00
14	<u>51-75 tons</u>	\$40.00
15	<u>76 tons and larger</u>	\$50.00
16	<i><u>Hydronics Fees (Chapter 12)</u></i>	
17	<u>Boiler Piping, less than 200,000 BTU</u>	\$35.00
18	<u>Each additional 120,000 BTU</u>	\$10.00
19	<u>Fluid Cooler Piping, less than 20 tons</u>	\$30.00
20	<u>Each additional 10 tons</u>	\$10.00
21	<u>Heat Pump and Fan Coil</u>	\$25.00
22	<u>Heating, Chilled, and Condenser Piping</u>	\$10.00
23	<u>Heat Pump, Heat Recovery Piping</u>	\$10.00
24	<u>Radiant Panel and Coil Piping</u>	\$10.00
25	Gas New Construction (1-5 outlets)	\$25.00
26	Each Additional Outlot	\$1.00
27	Gas Piping Replacement Appliance	\$5.00

1	Gas Piping Replacement	\$15.00
2	Gas Piping Alteration	\$15.00
3	Minimum Fee	\$25.00 <u>30.00</u>
4	Reinspection Fee	\$30.00 <u>35.00</u>

5 Section 3. That Section 25.04.180 of the Lincoln Municipal Code be amended to
6 read as follows:

7 **25.04.180 Registration of Master Mechanical Contractors and Mechanical Technicians.**

8 There shall be three classes of registration as follows:

9 (a) Master mechanical contractor is hereby defined to be any person skilled in the
10 planning, superintending, and material installation of mechanical (heating, ventilating, and cooling)
11 and fuel gas equipment and their accessories and who is familiar with the ordinances and regulations
12 governing the same, and who is competent to install, repair, alter, or remove mechanical (heating,
13 ventilating, and cooling) equipment, fuel gas equipment, or gas piping with the full responsibility
14 of supervision, whether doing such work by himself or employing journeyman mechanical
15 technicians and apprentice mechanical technicians to assist him. **A master mechanical contractor**
16 **may supervise a maximum of three apprentices on a job site.**

17 Inactive master mechanical contractor is hereby defined to be any person meeting the
18 qualifications of a master mechanical contractor but will not be active as an mechanical contractor
19 and will not be issued mechanical permits.

20 (b) Journeyman mechanical technician is hereby defined to be any person employed by
21 a master mechanical contractor, other than an apprentice mechanical technician, who as his principal
22 occupation is engaged in the practical installation, alteration, repair, or removal of mechanical
23 (heating, ventilating, and cooling) or fuel gas equipment. A journeyman may supervise a maximum
24 of **five three** apprentices on a job site.

1 (c) Apprentice mechanical technician is hereby defined to be any person, other than a
2 master mechanical contractor or journeyman mechanical technician, who as his principal occupation
3 is engaged in learning and assisting in the installation, repair, alteration, or removal of mechanical
4 (heating, ventilating and cooling) or fuel gas equipment and their accessories as an employee under
5 the supervision of a master mechanical contractor or journeyman mechanical technician.

6 No person shall engage in or hold himself out as engaging in the mechanical (heating,
7 ventilating and cooling) or fuel gas business in the city or within three miles thereof or install any
8 mechanical (heating, ventilating and cooling) systems or fuel gas systems or their accessories (unless
9 duly authorized to do so by registration) except as provided for in Section 25.04.310.

10 Section 4. That Chapter 25.04 of the Lincoln Municipal Code be amended by adding
11 a new section numbered 25.04.305 to read as follows:

12 **25.04.305 Section 110 Deleted; Temporary Equipment, Systems and Uses.**

13 Section 110 of the International Mechanical Code is hereby deleted in its entirety.

14 Section 5. That Section 25.04.310 of the Lincoln Municipal Code be amended to
15 read as follows:

16 **25.04.310 Section 303.3 Amended; Prohibited Locations.**

17 Section 303.3 of the International Mechanical Code is amended to read as follows:

18 **303.3 Prohibited locations.** Fuel-fired appliances shall not be located in, or obtain
19 combustion air from, any of the following rooms or spaces:

20 1. Sleeping rooms.

21 2. Bathrooms.

22 ~~**Exception:** Fuel-burning equipment may be approved for replacement in a~~
23 ~~bathroom with combustion air obtained in accordance with Chapter~~
24 ~~7 of the International Mechanical Code.~~

25 3. Toilet rooms.

26 4. Storage closets.

27 5. Surgical rooms.

1 **Exception:** This section shall not apply to the following appliances:

- 2 1. Direct-vent appliances that obtain all combustion air directly from the outdoors.
- 3 2. Solid fuel-fired appliances, provided that the room is not a confined space and the
4 building is not of unusually tight construction.
- 5 3. Appliances installed in a dedicated enclosure in which all combustion air is taken
6 directly from the outdoors, in accordance with Section 703. Access to such enclosure
7 shall be through a solid door, weather-stripped in accordance with the exterior door
8 air leakage requirements of the International Energy Conservation Code and
9 equipped with an approved self-closing device.
- 10 4. Fuel burning equipment may be approved for replacement in a bathroom with
11 combustion air obtained in accordance with ~~Chapter 7 of the International~~
12 ~~Mechanical Code~~ Chapter 3 of the International Fuel Gas Code.

13 Section 6. That Section 25.04.320 of the Lincoln Municipal Code be amended to
14 read as follows:

15 **25.04.320 Section 304.910 Amended; Clearances From Grade.**

16 Section 304.910 of the International Mechanical Code is amended to read as follows:

17 **304.910 Clearances from grade.** Equipment and appliances installed at grade level shall
18 be supported on a level concrete slab or other approved material extending above adjoining grade
19 or shall be suspended a minimum of two inches (51 mm) above adjoining grade or according to the
20 manufacturer's instructions.

21 Section 7. That Section 25.04.330 of the Lincoln Municipal Code be amended to
22 read as follows:

23 **25.04.330 Section 306.5 Amended; Equipment and Appliances on Roofs or Elevated**
24 **Structures.**

25 Section 306.5 of the International Mechanical Code is amended to read as follows:

1 **306.5 Equipment and appliances on roofs or elevated structures.** Equipment shall only
2 be accessed through the area that it serves. Equipment shall not be accessed through other parts of
3 a building where there is separate ownership or separate tenants. Equipment shall be accessed
4 through a common area or accessed on the outside of the building on new commercial construction.

5 Where equipment and appliances requiring access are installed on roofs or elevated structures at a
6 height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means
7 of access, the extent of which shall be from grade or floor level to the equipment and appliances'
8 level services space. Such access shall not require climbing over obstructions greater than 30 inches
9 (762 mm) high or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal
10 (33-percent slope).

11 Exception: Equipment on roofs of existing commercial and Group R-1 residential
12 buildings less than 24 feet in height may be accessed by portable ladders. Permanent level
13 platforms or staging areas such as roofs or balconies having a minimum dimension of 6 feet by 6 feet
14 may be considered to reduce the 24-foot minimum height. This section shall not apply to Group R-3
15 occupancies.

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

- 18 1. The side railing shall extend above the parapet or roof edge not less than 30 inches.
- 19 2. Ladders shall have rung spacing not to exceed 14 inches on center.
- 20 3. Ladders shall have a toe spacing not less than 6 inches deep.
- 21 4. There shall be a minimum of 18 inches between rails.
- 22 5. Rungs shall have a minimum 0.75-inch diameter and be capable of withstanding a
23 300-pound load.

1 6. Ladders over 30 feet in height shall be provided with offset sections and landings
2 capable of withstanding 100 pounds per square foot. Landing dimensions shall not
3 be less than 18 inches and not less than the width of the ladder served.

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

5 8. All buildings requiring permanent ladder access shall have the bottom of ladders
6 accessible at a height of ten feet or less from grade or floor level.

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

9 **Exception:** This section shall not apply to ~~Group R-3~~ single family residence occupancies.

10 Section 8. That Chapter 25.04 of the Lincoln Municipal Code be amended by
11 adding a new section numbered 25.04.335 to read as follows:

12 **25.04.335 Section 307.2.2 Amended; Drain Pipe Materials and Sizes.**

13 Section 307.2.2 of the International Mechanical Code is amended to read as follows:

14 **307.2.2 Drain pipe materials and sizes.** Components of the condensate disposal system
15 shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene,
16 ABS, CPVC, or PVC pipe or tubing. All components shall be selected for the pressure and
17 temperature rating of the installation. Joints and connections shall be made in accordance with the
18 applicable provisions of the Lincoln Plumbing Code relative to the material type. Condensate waste
19 and drain pipe shall not be less than 3/4 inch internal diameter and shall not decrease in size until
20 the condensate is flowing vertically towards the place of condensate disposal. Where the drain pipes
21 from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall
22 be sized in accordance with Table 307.2.2.

23 Section 9. That Chapter 25.04 of the Lincoln Municipal Code be amended by
24 adding a new section numbered 25.04.355 to read as follows:

1 **25.04.355 Section 501.2.1 Amended; Location of Exhaust Outlets.**

2 Section 501.2.1 of the International Mechanical Code is amended to read as follows:

3 **501.2.1 Location of exhaust outlets.** The termination point of exhaust outlets and ducts
4 discharging to the outdoors shall be located with the following minimum distances:

5 1. For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet from
6 property lines; 10 feet from operable openings into buildings; 6 feet from exterior walls and roofs;
7 30 feet from combustible walls and operable openings into buildings which are in the direction of
8 the exhaust discharge; 10 feet above adjoining grade.

9 2. For other product-conveying outlets: 10 feet from the property lines; 3 feet from
10 exterior walls and roofs; 10 feet from operable openings into buildings; 10 feet above adjoining
11 grade.

12 3. For all environmental air duct exhaust: 3 feet from property lines; 3 feet from
13 operable openings into buildings for all occupancies other than Group U, and 10 feet from
14 mechanical air intakes.

15 **Exception:** Environmental air exhaust from a dwelling unit shall be exempt from the
16 3 foot clearance from operable openings into the dwelling unit from which it originates.

17 4. For specific systems: For clothes dryer exhaust, see Section 504.4; for kitchen hoods,
18 see Section 506.3; for dust, stock and conveying systems, see Section 511.2; and for subslab soil
19 exhaust systems, see Section 512.4.

20 Section 10. That Chapter 25.04 of the Lincoln Municipal Code be amended by
21 adding a new section numbered 25.04.362 to read as follows:

22 **25.04.362 Section 504.8 Amended; Common Exhaust Systems for Clothes Dryers Located**
23 **in Multistory Buildings.**

24 Section 504.8 of the International Mechanical Code is amended to read as follows:

1 **504.8. Common exhaust systems for clothes dryers located in multistory buildings.**

2 Where a common multistory duct system is designed and installed to convey exhaust from multiple
3 clothes dryers, the construction of the system shall be in accordance with all of the following:

4 1. The shaft in which the duct is installed shall be constructed and fire resistance rated
5 as required by the International Building Code.

6 2. Dampers shall be prohibited in the exhaust duct. Penetrations of the shaft and
7 ductwork shall be protected in accordance with Section 607.5.5, Exception 2.

8 3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The
9 ductwork shall be constructed of sheet steel having a minimum thickness of 0.0187 inch (No. 26
10 gage) and in accordance with SMACNA Duct Construction Standards.

11 4. The ductwork within the shaft shall be designed and installed without offsets.

12 5. The exhaust motor design shall be in accordance with Section 503.2.

13 6. The exhaust fan motor shall be located outside of the airstream.

14 7. The exhaust fan shall run continuously.

15 8. Exhaust fan operation shall be monitored in an approved location and shall initiate
16 a labeled audible or visual signal when the fan is not in operation.

17 9. Makeup air shall be provided for the exhaust system.

18 10. A cleanout opening shall be located at the base of the shaft to provide access to the
19 duct to allow for cleaning and inspections. The finished opening shall be not less than 12 inches by
20 12 inches.

21 11. Screens shall not be installed at the termination.

22 Section 11. That Chapter 25.04 of the Lincoln Municipal Code be amended by
23 adding a new section numbered 25.04.365 to read as follows:

24 **25.04.365 Section 505.2 Amended; Kitchen Exhaust Rates.**

25 Section 505.2 of the International Mechanical Code is amended to read as follows:

1 **505.2 Kitchen exhaust rates.** Where domestic kitchen cooking appliances are equipped
2 with ducted range hoods or down-draft exhaust systems, the fans shall be sized in accordance with
3 Section M1507.3 of the International Residential Code. Residential kitchen exhaust fans shall not
4 be sized with air flow exceeding 400 cfm.

5 **Exception:** Residential kitchen exhaust may exceed 400 cfm provided makeup air
6 is provided into the structure. The makeup air shall be controlled by a motorized damper that is
7 electrically interlocked to open with operation of the kitchen exhaust fan. The makeup air shall be
8 conditioned to within 10 degrees F. of the space designed temperature during the winter heating
9 mode. The makeup air may be conditioned by circulation with a forced air furnace system or by
10 other means approved by the Building Official.

11 Section 12. That Chapter 25.04 of the Lincoln Municipal Code be amended by
12 adding a new section numbered 25.04.385 to read as follows:

13 **25.04.385 Section 507.2.1 Amended; Commercial Kitchen, Type I Hoods.**

14 Section 507.2.1 of the International Mechanical Code is amended to read as follows:

15 **507.2.1 Type I hoods.** Type I hoods shall be installed where cooking appliances produce
16 grease or smoke. Type I hoods shall be installed over medium duty, heavy duty, and extra heavy
17 duty cooking appliances. Type I hoods shall be installed over light duty cooking appliances that
18 produce grease or smoke.

19 **Exception:** Conveyor type pizza ovens not using solid fuel shall be exempt from
20 requiring a Type I hood and shall be placed under a Type II hood.

21 Section 13. That Section 25.04.390 of the Lincoln Municipal Code is amended
22 to read as follows:

23 **25.04.390 Section 507.2.1.1 Deleted Amended; Type I Hoods; Operation.**

24 Section 507.2.1.1 of the International Mechanical Code is ~~hereby deleted~~ amended to read
25 as follows:

1 **507.2.1.1 Operation.** Type I hoods systems may be designed and installed to automatically
2 activate the exhaust whenever cooking operations occur. The activation may occur through an
3 interlock with the cooking appliances, by means of heat sensors or by other approved means.

4 Section 14. That Chapter 25.04 of the Lincoln Municipal Code be amended by
5 adding a new section numbered 25.04.405 to read as follows:

6 **25.04.405 Section 508.1 Amended; Commercial Kitchen, Makeup Air.**

7 Section 508.1 of the International Mechanical Code is amended to read as follows:

8 **508.1 Makeup air.** Makeup air shall be supplied during the operation of commercial
9 kitchen exhaust systems that are provided for commercial cooking appliances. The amount of
10 makeup air supplied shall be within 10% of the required exhaust air CFM. The makeup air shall not
11 reduce the effectiveness of the exhaust system. Makeup air shall be provided by mechanical means.
12 A heated makeup air system separate from the general heating and air conditioning system shall
13 provide a minimum of 80% of the required makeup air. The additional makeup air may be provided
14 from other conditioned equipment. All sources of mechanical makeup air shall be automatically
15 controlled to start and operate simultaneously with the exhaust system. Makeup air intake opening
16 locations shall comply with Sections 401.4 and 401.4.1.

17 **Exception:** Other methods of controlling the operation of the makeup air system
18 may be submitted by a Registered Mechanical Engineer for review.

19 Section 15. That Chapter 25.04 of the Lincoln Municipal Code be amended by
20 adding a new section numbered 25.04.445 to read as follows:

21 **25.04.445 Section 606.4.1 Amended; Smoke Detection Systems, Controls Operation;**
22 **Supervision.**

23 Section 606.4.1 of the International Mechanical Code is amended to read as follows:

24 **606.4.1 Supervision.** The duct smoke detectors shall be connected to a fire alarm system
25 where a fire alarm system is required by Section 907.2 of the International Fire Code. The actuation

1 of a duct smoke detector shall activate a visible and audible supervisory signal at a constantly
2 attended location.

3 **Exceptions:**

4 1. The supervisory signal at a constantly attended location is not required where the
5 duct smoke detector activates the building's alarm-indicating appliances.

6 2. In occupancies not required to be equipped with a fire alarm system, actuation of
7 a smoke detector shall activate a visible and audible signal in an approved location. Duct smoke
8 detector trouble conditions shall activate a visible or audible signal in an approved location and shall
9 be identified as air duct detector trouble.

10 3. On existing installations that do not comply with Section 605, the audio/ visual
11 notification required may only be installed on the units being replaced.

12 Section 16. That Section 25.04.450 of the Lincoln Municipal Code is hereby
13 repealed in its entirety.

14 ~~**25.04.450 — Section 708.1 Amended; Combustion Air Ducts.**~~

15 ~~Section 708.1 of the International Mechanical Code is amended to read as follows:~~

16 ~~**708.1 General.** Combustion air ducts shall:~~

17 ~~1. Be of galvanized steel complying with Chapter 6 or of equivalent corrosion-resistant~~
18 ~~material approved for this application.~~

19 ~~2. Have a minimum cross-sectional dimension of 3 inches (76 mm):~~

20 ~~3. Terminate in an unobstructed space allowing free movement of combustion air to the~~
21 ~~appliances.~~

22 ~~4. Have the same cross-sectional areas as the free area of the openings to which they~~
23 ~~connect.~~

24 ~~5. Serve a single appliance enclosure.~~

25 ~~6. Not serve both upper and lower combustion air openings where both such openings~~
26 ~~are used. The separation between ducts serving upper and lower combustion air openings shall be~~
27 ~~maintained to the source of combustion air.~~

28 ~~7. Not be screened where terminating in an attic space.~~

29 ~~8. Not slope downward toward the source of combustion air, where serving the upper~~
30 ~~required combustion air opening.~~

31 Section 17. That Chapter 25.04 of the Lincoln Municipal Code be amended by
32 adding a new section numbered 25.04.460 to read as follows:

1 **25.04.460 Section 801.20 Amended; Plastic Vent Joints.**

2 Section 801.20 of the International Mechanical Code is amended to read as follows:

3 **801.20 Plastic vent joints.** Plastic pipe and fittings used to vent appliances shall be installed
4 in accordance with the appliance manufacture's installation instructions. Where a primer is required
5 it shall be of a contrasting color. PVC pipe shall be of Schedule 40 material. Cellular Core PVC shall
6 not be allowed for venting of appliances.

7 Section 18. That Chapter 25.04 of the Lincoln Municipal Code be amended by
8 adding a new section numbered 25.04.470 to read as follows:

9 **25.04.470 Section 918.6 Amended; Forced-Air Furnaces; Prohibited Sources.**

10 Section 918.6 of the International Mechanical Code is amended to read as follows:

11 **918.6 Prohibited sources.** Outdoor or return air for a forced-air heating system shall not
12 be taken from the following locations:

13 1. Less than 10 feet from an appliance vent outlet, a vent opening from a plumbing
14 drainage system or the discharge outlet of an exhaust fan, unless the outlet is 3 feet above the
15 outdoor air inlet.

16 2. Where there is the presence of objectionable odors, fumes or flammable vapors; or
17 where located less than 10 feet above the surface of any abutting public way or driveway; or where
18 located at grade level by a sidewalk, street, alley or driveway.

19 3. A hazardous or insanitary location or a refrigeration machinery room as defined in
20 this code.

21 4. A room or space, the volume of which is less than 25 percent of the entire volume
22 served by such system. Where connected by a permanent opening having an area sized in accordance
23 with Sections 918.2 and 918.3, adjoining rooms or spaces shall be considered as a single room or
24 space for the purpose of determining the volume of such rooms or spaces.

1 **Exception:** The minimum volume requirement shall not apply where the amount of
2 return air taken from a room or space is less than or equal to the amount of supply air delivered to
3 such room or space.

4 5. A closet, bathroom, toilet room, kitchen, garage, mechanical room, boiler room,
5 furnace room or unconditioned attic.

6 **Exception 1:** Where return air intakes are located not less than 10 feet from cooking
7 appliances, and serve the kitchen area only, taking return air from a kitchen shall not be prohibited.

8 **Exception 2:** A walk in closet provided with a supply air outlet shall not be
9 prohibited from having a return air inlet.

10 6. An unconditioned crawl space by means of direct connection to the return side of a
11 forced air system. Transfer openings in the crawl space enclosure shall not be prohibited.

12 7. A room or space containing a fuel-burning appliance where such room or space
13 serves as the sole source of return air.

14 **Exceptions:**

15 7.1. This shall not apply where the fuel-burning appliance is a direct-vent appliance.

16 7.2. This shall not apply where the room or space complies with the following
17 requirements:

18 7.2.1. The return air shall be taken from a room or space having a volume
19 exceeding 1 cubic foot for each 10 Btu/h (9.6 L/W) of combined input rating of all fuel-burning
20 appliances therein.

21 7.2.2. The volume of supply air discharged back into the same space shall be
22 approximately equal to the volume of return air taken from the space.

23 7.2.3. Return-air inlets shall not be located within 10 feet of any appliance
24 firebox or draft hood in the same room or space.

1 7.3. This shall not apply to rooms or spaces containing solid-fuel-burning appliances,
2 provided that return-air inlets are located not less than 10 feet from the firebox of the appliances.

3 Section 19. That Chapter 25.04 of the Lincoln Municipal Code be amended by
4 adding a new section numbered 25.04.480 to read as follows:

5 **25.04.480 Section 1101.1 Amended; Refrigeration; Scope of Chapter.**

6 Section 1101.1 of the International Mechanical Code is amended to read as follows:

7 **1101.1 Scope.** This chapter shall govern the design, installation, construction and repair of
8 refrigeration systems that vaporize and liquefy a fluid during the refrigeration cycle. Refrigerant
9 pipng design and installation, including pressure vessels and pressure relief devices, shall conform
10 to this code. Permanently installed refrigerant storage systems and other components shall be
11 considered as part of the refrigeration system to which they are attached. Permits and inspections
12 shall be required on all systems rated greater than 5 Tons, 5 Horse Power, or 65,000 BTU's.

13 Section 20. That Chapter 25.04 of the Lincoln Municipal Code be amended by
14 adding a new section numbered 25.04.490 to read as follows:

15 **25.04.490 Section 1105.6 Amended; Machinery Rooms; Ventilation.**

16 Section 1105.6 of the International Mechanical Code is amended to read as follows:

17 **1105.6 Ventilation.** Machinery rooms shall be mechanically ventilated to the outdoors.
18 Mechanical ventilation shall be capable of exhausting the minimum quantity of air both at normal
19 operating and emergency conditions. Multiple fans or multispeed fans shall be allowed in order to
20 produce the emergency ventilation rate and to obtain a reduced airflow for normal ventilation.

21 **Exception:** Where a refrigerating system is located outdoors more than 20 feet (6096
22 mm) from any building opening and is enclosed by a penthouse, lean-to or other open structure,
23 natural or mechanical ventilation shall be provided. Location of the openings shall be based on the

1 relative density of the refrigerant to air. The free-aperture cross section for the ventilation of the
2 machinery room shall be not less than:

3 **Equation 11-1:**

$$F = \sqrt{G}$$

4 For SI: = $F = 0.138 \sqrt{G}$

5 where:

6 F = The free opening area in square feet.

7 G = The mass of refrigerant in pounds in the largest system, any part of which is located in the
8 machinery room.

9 This section (1105.6) shall only apply to Building and Mechanical permits issued on or after
10 June 1, 2012.

11 Section 21. That Chapter 25.04 of the Lincoln Municipal Code be amended by
12 adding a new section numbered 25.04.500 to read as follows:

13 **25.04.500 Section 1107.1 Amended; Refrigerant Piping; General.**

14 Section 1107.1 of the International Mechanical Code is amended to read as follows:

15 **1107.1 General.** All refrigerant piping shall be installed, tested and placed in operation in
16 accordance with this chapter.

17 **Exception 1.** Factory piped package units shall not require pipe pressure testing.

18 **Exception 2.** Refrigeration systems with less than 65,000 BTU's shall not require
19 pipe pressure testing.

20 Section 22. That Chapter 25.04 of the Lincoln Municipal Code be amended by
21 adding a new section numbered 25.04.510 to read as follows:

22 **25.04.510 Section 1201.1 Amended; Hydronic Piping; General.**

23 Section 1201.1 of the International Mechanical Code is amended to read as follows:

24 **1201.1 Scope.** The provisions of this chapter shall govern the construction, installation,
25 alteration and repair of hydronic piping systems. This chapter shall apply to hydronic piping systems

1 that are part of heating, ventilation and air-conditioning systems. Such piping systems shall include
2 steam, hot water, chilled water, condenser water, steam condensate and ground source heat pump
3 loop systems. Potable cold and hot water distribution systems shall be installed in accordance with
4 the Lincoln Plumbing Code. Portions of Hydronic piping systems installed underground by Well
5 Drilling Contractors shall terminate where the piping enters the building it serves. The Well
6 Drilling Contractor, at the contractor's option, may extend the piping into the building a maximum
7 of twenty feet. Any piping installed beyond the allowed twenty feet shall be installed by a Registered
8 Mechanical or Plumbing Contractor. All installations shall terminate with an approved Purge Block
9 valve system. Purge Block valve systems provided on equipment shall be listed for such use. The
10 purge block, and all hydronic piping extending into the building from the purge block, shall have
11 a permit and be inspected by the City of Lincoln Department of Building and Safety.

12 **Exception:** Purge Block valve systems shall not be required on well water/ pump and
13 dump systems.

14 Section 23. That Chapter 25.04 of the Lincoln Municipal Code be amended by
15 adding a new section numbered 25.04.520 to read as follows:

16 **25.04.520 Section 1202.4 Amended; Piping Materials Standards.**

17 Section 1202.4 of the International Mechanical Code is amended to read as follows:

18 **1202.4 Piping materials standards.** Hydronic pipe shall conform to the standards listed
19 in Table 1202.4. The exterior of the pipe shall be protected from corrosion and degradation. Piping
20 material shall be a minimum of Schedule 40 wall thickness. Copper tubing shall be a minimum of
21 Type "L" material.

22 Section 24. That Chapter 25.04 of the Lincoln Municipal Code be amended by
23 adding a new section numbered 25.04.530 to read as follows:

24 **25.04.530 Section 1202.6 Amended; Valves.**

25 Section 1202.6 of the International Mechanical Code is amended to read as follows:

1 **1202.6 Valves.** Valves shall be constructed of materials that are compatible with the type
2 of piping material and fluids in the system. Valves shall be rated for the temperatures and
3 pressures of the systems in which the valves are installed. Valves shall be rated for 125 lbs. SWP
4 pressure or greater.

5 Section 25. That Chapter 25.04 of the Lincoln Municipal Code be amended by
6 adding a new section numbered 25.04.540 to read as follows:

7 **25.04.540 Section 1202.7 Amended; Flexible Connectors, Expansion and Vibration**
8 **Compensators.**

9 Section 1202.7 of the International Mechanical Code is amended to read as follows:

10 **1202.7 Flexible connectors, expansion and vibration compensators.** Flexible connectors,
11 expansion and vibration control devices and fittings shall be of an approved type and rated for
12 temperature and pressure of system.

13 Section 26. That Chapter 25.04 of the Lincoln Municipal Code be amended by
14 adding a new section numbered 25.04.550 to read as follows:

15 **25.04.550 Section 1203.3.6 Amended; Welded Joints.**

16 Section 1203.3.6 of the International Mechanical Code is amended to read as follows:

17 **1203.3.6 Welded joints.** Joint surfaces shall be cleaned by an approved procedure. Joints
18 shall be welded with an approved filler metal. In accordance with ASME “Boiler and Pressure
19 Vessel Code,” Section IX “Welding and Brazing Qualifications.” Welded steel fittings shall be a
20 minimum of Schedule 40 wall thickness.

21 Section 27. That Chapter 25.04 of the Lincoln Municipal Code be amended by
22 adding a new section numbered 25.04.560 to read as follows:

1 **25.04.560** **Section 1203.20 Added; Gaskets.**

2 Section 1203.20 is added to the International Mechanical Code to read as follows:

3 **1203.20 Gaskets.** Flange gaskets shall be metal, fibre, or other approved materials.

4 Section 28. That Chapter 25.04 of the Lincoln Municipal Code be amended by
5 adding a new section numbered 25.04.570 to read as follows:

6 **25.04.570** **Section 1206.10 Amended; Pipe Support.**

7 Section 1206.10 of the International Mechanical Code is amended to read as follows:

8 **1206.10 Pipe support.** Pipe shall be supported in accordance with Section 305, ASHRAE
9 guide, and/or manufacturers instructions.

10 Section 29. That Chapter 25.04 of the Lincoln Municipal Code be amended by
11 adding a new section numbered 25.04.580 to read as follows:

12 **25.04.580** **Section 1208.1.1 Amended; Building Interior Ground Source Heat Pump Loop**
13 **Systems.**

14 Section 1208.1.1 of the International Mechanical Code is amended to read as follows:

15 **1208.1.1 Building interior ground source heat pump loop systems.** Before connection
16 (header) trenches are backfilled, the assembled loop system shall be pressure tested with water at
17 100 psi for 30 minutes with no observed leaks. Flow and pressure loss testing shall be performed
18 and the actual flow rates and pressure drops shall be compared to the calculated design values. If
19 actual flow rate or pressure drop values differ from calculated design values by more than 10
20 percent, the problem shall be identified and corrected.

21 Section 30. That Chapter 25.04 of the Lincoln Municipal Code be amended by
22 adding a new section numbered 25.04.590 to read as follows:

1 **25.04.590 Chapter 16 Added; Decorative Fireplace/Gas Log Installations and Contractors.**

2 Chapter 16 is added to the International Mechanical Code to read as follows:

3 **Chapter 16**

4 **DECORATIVE FIREPLACE/GAS LOG INSTALLATIONS AND CONTRACTORS**

5 Section 31. That Chapter 25.04 of the Lincoln Municipal Code be amended by
6 adding a new section numbered 25.04.600 to read as follows:

7 **25.04.600 Section 1601 Added; General Provisions.**

8 Section 1601 is added to the International Mechanical Code to read as follows:

9 **Section 1601 -- General Provisions.** The provisions of this chapter shall control the design
10 and installation, alteration, removal, or repair of decorative fireplace equipment, the registration of
11 decorative fireplace/gas log contractors, and the issuance of permits and collection of fees therefor.

12 Section 32. That Chapter 25.04 of the Lincoln Municipal Code be amended by
13 adding a new section numbered 25.04.610 to read as follows:

14 **25.04.610 Section 1601.1 Added; Definitions.**

15 Section 1601.1 is added to the International Mechanical Code to read as follows:

16 **1601.1 Definitions.** For the purpose of this chapter, the following definitions shall apply:

17 (a) **Decorative Appliances, Vented,** are appliances whose only function lies in the
18 aesthetic effect of the flames.

19 (b) **Decorative Appliances for Installation in Solid-fuel-burning Fireplaces** are self-
20 contained, freestanding, fuel-gas-burning appliances designed for installation only in a vented solid-
21 fuel-burning fireplace and whose primary function lies in the aesthetic effect of the flame.

22 Section 33. That Chapter 25.04 of the Lincoln Municipal Code be amended by
23 adding a new section numbered 25.04.620 to read as follows:

1 **25.04.620 Section 1602 Added; Permits and Fees.**

2 Section 1602 is added to the International Mechanical Code to read as follows:

3 **1602. Permits and Fees.** It shall be unlawful for any person to install, alter, remove, or
4 repair any decorative fireplace/gas log appliance, or cause the same to be done, without first
5 obtaining a permit therefor from the Building Official.

6 A permit to install a decorative fireplace/gas log appliance may be issued only to a duly
7 registered decorative fireplace/gas log contractor or registered master HVAC contractor or home-
8 owner complying with Section 25.04.240. It shall be unlawful for any person, firm, or corporation
9 to cause or permit any decorative fireplace/gas log system installation to be done on any property
10 owned, managed, or controlled by such person, firm, or corporation unless such work is done by said
11 duly registered decorative fireplace/gas log contractor or registered master HVAC contractor.

12 Application for a permit may be made in writing to the Building Official on a form furnished
13 by the Building Official for that purpose.

14 A fee shall be paid to the Building Official as follows:

15 For each decorative fireplace/gas log installation \$45.00

16 Reinspection fee (wrong address, work
17 that does not pass inspection, work
18 not complete, inaccessibility) \$25.00

19 Gas shall not be turned on to any decorative fireplace/gas log appliance until it has been
20 inspected and approved by the Building Official.

21 Section 34. That Chapter 25.04 of the Lincoln Municipal Code be amended by
22 adding a new section numbered 25.04.630 to read as follows:

23 **25.04.630 Section 1603 Added; Installation and Inspection.**

24 Section 1603 is added to the International Mechanical Code to read as follows:

1 **1603. Installation and Inspection.** The gas to any decorative fireplace/gas log appliance
2 shall be of materials and methods of installation approved for gas distribution in this code. The
3 venting of decorative fireplace/gas log appliance systems shall be of any material approved by the
4 Building Official.

5 All decorative fireplace and gas log installations shall be inspected by the Building Official
6 to ensure compliance with all the requirements of this code. It shall be the duty of the person doing
7 the work authorized by the permit to notify the Building Official orally or in writing that said work
8 is ready for inspection, and for said person doing the work to provide access and means for proper
9 inspection. It shall be the duty of the person doing the work to call for inspection of the decorative
10 fireplace or gas log installation not later than three days after the completion of the installation.

11 Section 35. That Chapter 25.04 of the Lincoln Municipal Code be amended by
12 adding a new section numbered 25.04.640 to read as follows:

13 **25.04.640 Section 1604 Added; Decorative Fireplace/Gas Log Board of Examiners.**

14 Section 1604 is added to the International Mechanical Code to read as follows:

15 **1604. Board of Examiners.** The Board of Examiners shall have authority to adopt such
16 rules and regulations as are consistent with the provisions of this chapter, subject to approval of the
17 Mayor, for the examination of applicants for registration under the terms of this chapter. All
18 decisions of the Board of Examiners shall be subject to review by the Mayor upon written request
19 by an aggrieved party to the Mayor. The Board of Examiners shall determine the character of the
20 examination to be given applicants for registration and shall elect annually a chairman who shall
21 preside at all meetings.

22 Section 36. That Chapter 25.04 of the Lincoln Municipal Code be amended by
23 adding a new section numbered 25.04.650 to read as follows:

1 **25.04.650 Section 1605 Added; Registration of Decorative Fireplace/Gas Log Contractors**
2 **and Installers.**

3 Section 1605 is added to the International Mechanical Code to read as follows:

4 **1605. Registration of Decorative Fireplace/Gas Log Contractors and Installers.**

5 (a) All persons, other than a master HVAC contractor, installing decorative fireplace and
6 gas log appliances shall be registered as decorative fireplace/gas log contractors or shall be
7 registered as decorative fireplace gas log installers. All decorative fireplace gas log installers must
8 be employed by a registered decorative fireplace/gas log contractor.

9 (b) Application for registration as a decorative fireplace/gas log contractor or decorative
10 fireplace/gas log installer shall be made to the Building Official on a form furnished by him for such
11 purpose. Such form shall require the name and address of the applicant, the business location of the
12 applicant, a statement of the practical experience of the applicant, and such other relevant
13 information as may be required by the Building Official.

14 (c) Any corporation may be registered as a decorative fireplace/gas log contractor in the
15 name of such corporation; provided, such corporation shall have a registered decorative fireplace/
16 gas log contractor as a bona fide officer or employee of such corporation and who shall at all times
17 be in actual charge of decorative fireplace or gas log work done by such corporation. The
18 registration certificate shall also be issued in the name of the person registered as a decorative
19 fireplace/gas log contractor. In the event such decorative fireplace/gas log contractor shall sever his
20 relationship with such corporation as a bona fide officer or employee, he must immediately notify
21 the Building Official who shall forthwith recommend to the Board of Examiners that the certificate
22 of registration of such corporation be revoked. It shall be unlawful for any corporation to act, engage
23 in, advertise, or to otherwise represent itself as a decorative fireplace/gas log contractor in the City

1 of Lincoln unless a bona fide officer or employee of such corporation is duly registered as a
2 decorative fireplace/gas log contractor as provided in this chapter.

3 (d) Any firm or partnership may be registered as a decorative fireplace/gas log contractor
4 in the name of such firm or partnership, provided such firm or partnership shall have a registered
5 decorative fireplace/gas log contractor as a bona fide employee or partner of such firm or partnership
6 and who shall at all times be in actual charge of the decorative fireplace/gas log work done by such
7 firm or partnership. The registration certificate shall also be issued in the name of the person
8 registered as the decorative fireplace/gas log contractor. In the event such decorative fireplace/gas
9 log contractor shall sever his relationship with such firm or partnership as a bona fide employee or
10 partner, he must immediately notify the Building Official and the Board of Examiners who shall
11 forthwith recommend to the Mayor that the certificate of registration of such firm or partnership be
12 revoked. It shall be unlawful for any firm or partnership to act, engage in, advertise or otherwise
13 represent themselves as a decorative fireplace/gas log contractor in the City of Lincoln, unless a
14 bona fide member or employee of such firm or partnership is duly registered as a decorative
15 fireplace/gas log contractor as provided in this chapter.

16 (e) Application for registration as a decorative fireplace/gas log installer may be made
17 to the Building Official. Before a registration certificate shall be issued, the applicant shall be
18 required to submit to and pass a written examination to determine his qualifications and fitness for
19 executing the class of work covered by the registration. Such examination shall be given under the
20 direction of the Board of Examiners. Any applicant who fails to pass the required examination shall
21 not be eligible to take another examination until at least six months shall have elapsed from the date
22 of last examination.

1 Section 37. That Chapter 25.04 of the Lincoln Municipal Code be amended by
2 adding a new section numbered 25.04.660 to read as follows:

3 **25.04.660 Section 1606 Added; Examination and Registration Fees.**

4 Section 1606 is added to the International Mechanical Code to read as follows:

5 **1606. Examination and Registration Fees.** Each applicant for a new registration shall
6 pay to the Building Official an examination fee of fifty dollars.

7 Upon initial issuance or subsequent renewal of a registration certificate, annual registration
8 fees shall be paid as follows:

9 Decorative fireplace/gas log contractor registration fee. . . . \$50.00

10 Decorative fireplace/gas log installer registration fee \$25.00

11 All registrations provided by this section shall expire on the last day of December following
12 the date of issuance thereof, and shall not be assignable.

13 Any person registered under the provisions of this code as a decorative fireplace/gas log
14 contractor or a decorative fireplace/gas log installer who does not renew his certificate of registration
15 within a period of sixty days after the expiration of same shall pay the examination fee required by
16 this code and shall submit himself to and pass the regularly scheduled written examination given by
17 the Board of Examiners before such person can be again registered hereunder.

18 Section 38. That Chapter 25.04 of the Lincoln Municipal Code be amended by
19 adding a new section numbered 25.04.670 to read as follows:

20 **25.04.670 Section 1607 Added; Certificate of Insurance.**

21 Section 1607 is added to the International Mechanical Code to read as follows:

1 **1607. Certificate of Insurance.** Before any decorative fireplace/gas log contractor may be
2 issued a permit or registered under the provisions of this chapter, such contractor shall have a
3 regularly established place of business, and shall be required to:

4 (a) At all times maintain public liability insurance coverage for all claims arising out of
5 all work in the City of Lincoln and within three miles of the corporate limits thereof done by or
6 under the supervision of the decorative fireplace/gas log contractor under the provisions of this code.
7 Such insurance shall be in the form of a commercial or comprehensive general liability policy, or
8 an acceptable substitute policy form as permitted by the City Attorney, with a minimum combined
9 single limit of \$500,000.00 aggregate for any one occurrence on any job for which a permit is
10 required under this code, provided the City of Lincoln shall be named an additional insured
11 thereunder. The coverages required herein shall be subject to review and approval by the City
12 Attorney for conformance with the provisions of this section.

13 (b) At all times keep on file with the Building Official a current certificate of insurance
14 signed by a qualified agent of an insurance company licensed to do business in the State of Nebraska
15 and approved by the City Attorney for conformance with the provisions of this section evidencing
16 the existence of valid and effective policies of insurance naming the city as an additional insured for
17 the coverage required by subsection (a) of this section, the limits of each policy, the policy number,
18 the name of the insurer, the effective date and expiration date of each policy, the deductibles or self-
19 insurance retainers of each policy, and a copy of an endorsement placed on each policy requiring
20 thirty days notice by mail to the Building Official before the insurer may cancel the policy for any
21 reason, and upon request of the Building Official or the City Attorney, a copy of any endorsements
22 placed on such policies or the declarations page of such policies. Any termination, reduction, or
23 lapse of such insurance shall automatically terminate the privilege of the decorative fireplace/gas

1 log contractor to be issued permits under the provisions of this code, unless other insurance meeting
2 the requirements of this section is provided and in full force and effect at the time of such
3 termination or cancellation.

4 Section 39. That Chapter 25.04 of the Lincoln Municipal Code be amended by
5 adding a new section numbered 25.04.680 to read as follows:

6 **25.04.680 Section 1608 Added; Suspension or Revocation of Registration.**

7 Section 1608 is added to the International Mechanical Code to read as follows:

8 **1608. Suspension or Revocation of Registration.** The Board of Examiners, upon the
9 recommendation of the Building Official and after conducting a hearing as herein provided, shall
10 have the power to suspend or revoke any registration of a decorative fireplace/gas log contractor
11 hereunder if the same was obtained by error or fraud, or if the holder thereof is shown to be no
12 longer qualified, or if such holder fails to comply with the provisions of this code.

13 Where the Building Official has recommended suspension or revocation of a registered
14 decorative fireplace/gas log contractor's certificate of registration, the Building Official shall cause
15 written notice to be served upon the registered decorative fireplace/gas log contractor whose
16 registration has been recommended for suspension or revocation, setting forth the time and place
17 for a public hearing thereon. Such written notice shall be served by certified mail or registered mail
18 to the registrant's last known business address. At such hearing, the Board of Examiners shall hear
19 all parties concerned and afford them the following rights, among others:

20 (a) To call and examine witnesses on any matter relevant to the issues of the hearing;

21 (b) To introduce documentary and physical evidence;

22 (c) To cross-examine opposing witnesses on any matter relevant to the issues of the
23 hearing; and

1 (d) To rebut the evidence against him or her.

2 The Board of Examiners shall then within a reasonable time after the hearing render a written
3 decision, setting forth its findings and conclusions. If a certificate is revoked, the holder of the same
4 shall not apply for a new registration until one year after the date of such revocation. Decisions of
5 the Board of Examiners are final unless appealed as provided by law.

6 Section 40. That Chapter 25.04 of the Lincoln Municipal Code be amended by
7 adding a new section numbered 25.04.690 to read as follows:

8 **25.04.690 Chapters 10, 13, and 14, and Appendix A; Adopted as Reference Guide Only.**

9 Chapter 10 (Boilers, Water Heaters and Pressure Vessels), Chapter 13 (Fuel Oil Piping and
10 Storage), and Chapter 14 (Solar Systems), and Appendix A (Combustion Air Openings and Chimney
11 Connector Pass-Throughs) of the International Mechanical Code are adopted as a Reference Guide
12 only.

13 Section 41. That Chapter 25.04 of the Lincoln Municipal Code be amended by
14 adding a new section numbered 25.04.700 to read as follows:

15 **25.04.700 International Residential Code Mechanical Sections Amended.**

16 Except as hereinafter provided by specific amendments as set forth in Lincoln Municipal
17 Code Sections 25.04.710 through 25.04.870, Chapter 14 of the 2009 edition of the International
18 Residential Code Mechanical Code is hereby adopted and incorporated into the Lincoln Mechanical
19 Code.

20 Section 42. That Chapter 25.04 of the Lincoln Municipal Code be amended by
21 adding a new section numbered 25.04.710 to read as follows:

22 **25.04.710 IRC Section M1305.1.1 Amended; Central Furnaces.**

23 Section M1305.1.1 of the International Residential Code is amended to read as follows:

1 **M1305.1.1 Central furnaces.** Central furnaces within compartments or alcoves shall have
2 a minimum working space clearance of 3 inches along the sides, back and top. Furnaces having a
3 firebox open to the atmosphere shall have at least a 6-inch working space along the front combustion
4 chamber side. Combustion air openings at the rear or side of the compartment shall comply with the
5 requirements of Chapter 17.

6 **Exception:** This section shall not apply to replacement appliances installed in
7 existing compartments and alcoves where the working space clearances are in accordance with the
8 equipment or appliance manufacturer’s installation instructions.

9 Section 43. That Chapter 25.04 of the Lincoln Municipal Code be amended by
10 adding a new section numbered 25.04.720 to read as follows:

11 **25.04.720 IRC Section M1305.1.4.1 Amended; Clearances From Grade.**

12 Section M1305.1.4.1 of the International Residential Code is amended to read as follows:

13 **M1305.1.4.1 Clearances from grade.** Equipment and appliances installed at grade level
14 shall be supported on a level concrete slab or other approved material extending above adjoining
15 grade or shall be suspended a minimum of two inches above adjoining grade or according to the
16 manufacturer’s instructions.

17 Section 44. That Chapter 25.04 of the Lincoln Municipal Code be amended by
18 adding a new section numbered 25.04.730 to read as follows:

19 **25.04.730 IRC Section M1307.3 Amended; Elevation of Ignition Source.**

20 Section M1307.3 of the International Residential Code is amended to read as follows:

21 **M1307.3 Elevation of ignition source.** Appliances having a burner or ignition source,
22 excluding the blower motor, shall be elevated such that the source of ignition is not less than 18
23 inches (457 mm) above the floor in garages. For the purpose of this section, rooms or spaces that
24 are not part of the living space of a dwelling unit and that communicate with a private garage
25 through openings shall be considered to be part of the garage.

1 **M1307.3.1 Protection from impact.** Appliances located in a garage or carport shall
2 be protected from impact by automobiles.

3 Section 45. That Chapter 25.04 of the Lincoln Municipal Code be amended by
4 adding a new section numbered 25.04.740 to read as follows:

5 **25.04.740 IRC Section M1307.6 Amended; Plumbing Connections.**

6 Section M1307.6 of the International Residential Code is amended to read as follows:

7 **M1307.6 Plumbing connections.** Potable water and drainage system connections to
8 equipment and appliances regulated by this code shall be in accordance with the Lincoln Plumbing
9 Code.

10 Section 46. That Chapter 25.04 of the Lincoln Municipal Code be amended by
11 adding a new section numbered 25.04.750 to read as follows:

12 **25.04.750 IRC Section M1411.3.2 Amended; Drain Pipe Materials and Sizes.**

13 Section M1411.3.2 of the International Residential Code is amended to read as follows:

14 **M1411.3.2 Drain pipe materials and sizes.** Components of the condensate disposal system
15 shall be cast iron, galvanized steel, copper, cross-lined polyethylene, polybutylene, polyethylene,
16 ABS, CPVC, or PVC pipe or tubing. All components shall be selected for the pressure and
17 temperature rating of the installation. Joints and connections shall be made in accordance with the
18 applicable provisions of the Lincoln Plumbing Code relative to the material type. Condensate waste
19 and drain pipe shall not be less than 3/4 inch internal diameter and shall not decrease in size until
20 the condensate is flowing vertically towards the place of condensate disposal. Where the drain pipes
21 from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall
22 be sized in accordance with Table 307.2.2.

23 Section 47. That Chapter 25.04 of the Lincoln Municipal Code be amended by
24 adding a new section numbered 25.04.760 to read as follows:

1 **25.04.760 IRC Section M1411.5 Amended; Insulation of Refrigerant Piping.**

2 Section M1411.5 of the International Residential Code is amended to read as follows:

3 **M1411.5 Insulation of refrigerant piping.** Piping and fittings for refrigerant vapor
4 (suction) lines shall be insulated with insulation having a thermal resistivity of at least R-2.

5 Section 48. That Chapter 25.04 of the Lincoln Municipal Code be amended by
6 adding a new section numbered 25.04.770 to read as follows:

7 **25.04.770 IRC Section M1411.6 Deleted; Locking Access Port Caps.**

8 Section M1411.6 of the International Residential Code is hereby deleted.

9 Section 49. That Chapter 25.04 of the Lincoln Municipal Code be amended by
10 adding a new section numbered 25.04.780 to read as follows:

11 **25.04.780 IRC Section M1502.6 Amended; Duct Length.**

12 Section M1502.6 of the International Residential Code is amended to read as follows:

13 **M1502.6 Duct length.** The maximum length of a clothes dryer exhaust duct shall not exceed
14 25 feet, including two 90-degree ells, from the dryer location to the wall or roof termination. The
15 maximum length shall be reduced 2.5 feet for each 45-degree ell and 5 feet for each 90-degree ell
16 beyond the allowed two 90-degree ells. The maximum length of the exhaust duct does not include
17 the transition duct.

18 **Exceptions:**

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

23 2. Where large-radius 45-degree and 90-degree bends are installed, determination
24 of the equivalent length of clothes dryer exhaust duct for each bend by engineering calculation in
25 accordance with the ASHRAE Fundamentals Handbook shall be permitted.

1 Section 50. That Chapter 25.04 of the Lincoln Municipal Code be amended by
2 adding a new section numbered 25.04.790 to read as follows:

3 **25.04.790 IRC Section M1503.3 Amended; Kitchen Exhaust Rates.**

4 Section M1503.3 of the International Residential Code is amended to read as follows:

5 **M1503.3 Kitchen exhaust rates.** Where domestic kitchen cooking appliances are equipped
6 with ducted range hoods or down-draft exhaust systems, the fans shall be sized in accordance with
7 Section M1507.3. Residential kitchen exhaust fans shall not be sized with air flow exceeding 400
8 cfm.

9 Section 51. That Chapter 25.04 of the Lincoln Municipal Code be amended by
10 adding a new section numbered 25.04.800 to read as follows:

11 **25.04.800 IRC Section M1503.4 Amended; Makeup Air Required.**

12 Section M1503.4 of the International Residential Code is amended to read as follows:

13 **M1503.4 Makeup air required.** Residential kitchen exhaust may exceed 400 cfm provided
14 makeup air is provided into the structure. The makeup air shall be controlled by a motorized damper
15 that is electrically interlocked to open with operation of the kitchen exhaust fan. The makeup air
16 shall be conditioned to within 10 degrees F. of the space designed temperature during the winter
17 heating mode. The makeup air may be conditioned by circulation with a forced air furnace system
18 or by other means approved by the Building Official.

19 Section 52. That Chapter 25.04 of the Lincoln Municipal Code be amended by
20 adding a new section numbered 25.04.810 to read as follows:

21 **25.04.810 IRC Section M1507.3 Amended; Ventilation Rate.**

22 Section M1507.3 of the International Residential Code is amended to read as follows:

23 **M1507.3 Ventilation rate.** Ventilation systems shall be designed to have the capacity to
24 exhaust all the air from the restroom, toilet room, and bath room a minimum of five times per hour.

1 If such rooms calculate a CFM of less than 50 CFM, their exhaust rate shall be a minimum of 50
2 CFM.

3 Section 53. That Chapter 25.04 of the Lincoln Municipal Code be amended by
4 adding a new section numbered 25.04.820 to read as follows:

5 **25.04.820 IRC Table M1507.3 Deleted; Minimum Required Exhaust Rates.**

6 Table M1507.3 of the International Residential Code is hereby deleted.

7 Section 54. That Chapter 25.04 of the Lincoln Municipal Code be amended by
8 adding a new section numbered 25.04.830 to read as follows:

9 **25.04.830 IRC Section M1601.1.1 Amended; Above-ground Duct Systems.**

10 Section M1601.1.1 of the International Residential Code is amended to read as follows:

11 **M1601.1.1 Above-ground duct systems.** Above-ground duct systems shall conform to the
12 following:

13 1. Equipment connected to duct systems shall be designed to limit discharge air
14 temperature to a maximum of 250°F.

15 2. Factory-made air ducts shall be constructed of Class 0 or Class 1 materials as designated
16 in Table M1601.1.1(1).

17 3. Fibrous duct construction shall conform to the SMACNA Fibrous Glass Duct
18 Construction Standards or NAIMA Fibrous Glass Duct Construction Standards.

19 4. Minimum thickness of metal duct material shall be as listed in Table M1601.1.1(2).
20 Galvanized steel shall conform to ASTM A 653.

21 5. Use of gypsum products to construct return air ducts or plenums is permitted, provided
22 that the air temperature does not exceed 125°F (52°C) and exposed surfaces are not subject to
23 condensation.

24 6. Duct systems shall be constructed of materials having a flame spread index not greater
25 than 200.

1 7. Stud wall cavities and the spaces between solid floor joists to be used as air plenums
2 shall comply with the following conditions:

3 7.1. These cavities or spaces shall not be used as a plenum for supply air.

4 7.2. These cavities or spaces shall not be part of a required fire-resistance-rated
5 assembly.

6 7.3. Stud wall cavities and joist-space plenums shall be isolated from adjacent
7 concealed spaces by tight-fitting fire blocking in accordance with Section R602.8.

8 Section 55. That Chapter 25.04 of the Lincoln Municipal Code be amended by adding
9 a new section numbered 25.04.840 to read as follows:

10 **25.04.840 IRC Section M1601.3.1 Amended; Joints and Seams.**

11 Section M1601.3.1 of the International Residential Code is amended to read as follows:

12 **M1601.3.1 Joints and seams.** Joints of duct systems shall be made substantially airtight by
13 means of tapes, mastics, gasketing or other approved closure systems. Replacement duct and duct
14 connections to replacement equipment shall be sealed where accessible. Closure systems used with
15 rigid fibrous glass ducts shall comply with UL 181A and shall be marked “181A-P” for
16 pressure-sensitive tape, “181 A-M” for mastic or “181 A-H” for heat-sensitive tape. Closure systems
17 used with flexible air ducts and flexible air connectors shall comply with UL 181B and shall be
18 marked “181B-FX” for pressure-sensitive tape or “181B-M” for mastic. Duct connections to flanges
19 of air distribution system equipment or sheet metal fittings shall be mechanically fastened.
20 Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and
21 shall be marked 181B-C. Crimp joints for round metal ducts shall have a contact lap of at least 1½
22 inches and shall be mechanically fastened by means of at least three sheet-metal screws or rivets
23 equally spaced around the joint.

24 Section 56. That Chapter 25.04 of the Lincoln Municipal Code be amended by adding
25 a new section numbered 25.04.850 to read as follows:

1 **25.04.850 IRC Section M1601.4.3 Amended; Duct Installation; Support.**

2 Section M1601.4.3 of the International Residential Code is amended to read as follows:

3 **M1601.4.3 Support.** Metal ducts shall be supported by 1/2-inch wide 26-gage metal straps
4 or 12-gage galvanized wire at intervals not exceeding 10 feet or other approved means. Nonmetallic
5 ducts shall be supported in accordance with the manufacturer’s installation instructions.

6 Section 57. That Chapter 25.04 of the Lincoln Municipal Code be amended by adding
7 a new section numbered 25.04.860 to read as follows:

8 **25.04.860 IRC Section M1602.2 #4 Amended; Return Air; Prohibited Sources.**

9 Section M1602.2, #4 of the International Residential Code is amended to read as follows:

10 **M1602.2, Prohibited sources.**

11 4. A closet, bathroom, toilet room, kitchen, garage, mechanical room, boiler room,
12 furnace room, unconditioned attic or other dwelling unit.

13 **Exception:** A closet large in comparison may have a return air inlet.

14 Section 58. That Chapter 25.04 of the Lincoln Municipal Code be amended by adding
15 a new section numbered 25.04.870 to read as follows:

16 **25.04.870 IRC Section M1701.1 Amended; Combustion Air.**

17 Section M1701.1 of the International Residential Code is amended to read as follows:

18 **M1701.1 Combustion air.** Combustion air shall be provided to all fuel burning appliances
19 according to Section 304 of the 2009 International Fuel Gas Code.

20 **Exception: Existing Building:** When fuel-burning appliances are installed in an
21 existing building containing other fuel-burning appliances, the room or space shall be provided
22 combustion air as required by this chapter for all fuel-burning appliances contained therein.
23 Additional floor area can be used for combustion air requirements of a replacement furnace when
24 all of the following conditions are met:

- 25 (1) The structure is a single-family dwelling.

1 (2) The communicating high-low combustion grills between the mechanical space
2 and adjoining areas must constitute at least 50% of the required cubic feet for combustion area for
3 the total BTU's in the space.

4 (3) A blower type furnace is being installed.

5 (4) A grill equivalent to one square inch free air per 4000 BTU input rating of all
6 appliances shall be installed on the supply duct or plenum.

7 (5) The grill shall not have shutters and shall be labeled with at least 1/2-inch letters
8 of metal, plastic, or other approved materials and read: "Combustion Air Grill--Do Not Cover. If
9 covered, may cause illness or death."

10 (6) The combustion grill cannot be on the plenum or supply duct, within the furnace
11 room, if the furnace room area is less than 25% of the required cubic feet.

12 Section 59. That Sections 25.04.010, 25.04.090, 25.04.180, 25.04.310, 25.04.320,
13 25.04.330, and 25.04.390 of the Lincoln Municipal Code as hitherto existing be and the same is
14 hereby repealed.

15 Section 60. That this ordinance shall take effect and be in force from and after passage
16 and publication in one issue of a daily or weekly newspaper of general circulation in the City,
17 according to law.

Introduced by:

Approved as to Form & Legality:

City Attorney

Approved this ___ day of _____, 2011:

Mayor