Minutes
Mechanical Board of Appeals and Examiners
Building Services Conference Room
September 12, 2012, 12 noon

Members Present

Ryan Van Der Bill, Jack Zimmel, Greg Bertsch, Mark Lamb and Mark Weber

Guests Present

None

Approval of Minutes of Last Meeting

A motion was made by Mr. Zimmel and a second was made by Mr. Lamb to approve the minutes of August 15, 2012. Yeses, 4. Noes, 0.

Unfinished Business

1. Mr. Denny presented the board with the 2010 Canadian Standards Associations combustion air (air supply) code as outlined in B149.1-10. The document consisted of chapter eight and the definitions associated with the Canadian Standards for air supply to an enclosure or structure.

A motion was made by Mr. Lamb and a second by Mr. Van Der Bill to adopt all of chapter eight air supply of the CSA for appliance retrofit applications only. Yeses, 5. Noes, 0

The discussion continued, to allow the use of the CSA air supply as outlined in chapter eight for new construction. Mr. Denny had concerns on the additional calculations required for the use of the CSA on larger new projects where the appliances have a total BTUh input rating of over 400,000 BTUh. Mr. Denny representing staff and the mechanical board agreed to allow the use of the CSA air supply in chapter eight for new construction also.

New Business

1. The Mr. Denny presented the board with the proposed changes to the 2012 International Mechanical Code and the International Fuel Gas Code.

- **ENVIRONMENTAL AIR:** Air that is conveyed to or from occupied areas through ducts which are not part of the heating or air-conditioning system, such as ventilation for human usage, domestic kitchen range exhaust, bathroom exhaust, domestic clothes dryer exhaust and parking garage exhaust.

Mechanical board recommendation: Make no changes to this section.

- **SOURCE CAPTURE SYSTEM:** A mechanical exhaust system designed and constructed to capture air contaminants at their source and to exhaust such contaminants to the outdoor atmosphere**.**

Mechanical board recommendation: Make no changes to this section.

- **301.3 Identification.** Each length of pipe and tubing and each pipe fitting utilized in a mechanical system shall bear the identification of the manufacturer**.**

Mechanical board recommendation: Delete this section from the code.

- **301.4 Plastic pipe, fittings and components.** Plastic pipe, fittings and components shall be third-party certified as conforming to NSF 14.

Mechanical board recommendation: Delete this section from the code.

- **301.5 Third-party testing and certification.** Piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this code and shall be identified in accordance with Section 301.3. Piping, tubing and fittings shall either be tested by an approved third-party testing agency or certified by an approved third party certification agency.

Mechanical board recommendation: Delete this section from the code.

- ***301.9 Label information***

  4. Electric comfort heating appliances: electric rating in volts, amperes and phase; Btu/h (W) output rating; individual marking for each electrical component in amperes or watts, volts and phase; and required clearances from combustibles.

Mechanical board recommendation: Delete this section from the code.

- **306.1 Access for maintenance and replacement.** Appliances shall be accessible for inspection, service, repair and replacement without disabling the function of a fire-resistance- rated assembly or removing permanent construction, other appliances, venting systems or any other piping or ducts not connected to the appliance being inspected, serviced, repaired or replaced. A level working space at least 30 inches deep and 30 inches wide (762 mm by 762 mm) shall be provided in front of the control side to service an appliance.

  306.2 Appliances in rooms. Rooms containing appliances shall be provided with a door and an unobstructed passageway measuring not less than 36 inches (914 mm) wide and 80 inches (2032 mm) high.

Mechanical board recommendation: Table until the September meeting.

- **306.5 Equipment and appliances on roofs or elevated structures.** Where equipment requiring access **or** appliances are located on an elevated structure **or the roof of a building** such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access such equipment or appliances, **an interior or exterior** means of access shall be provided. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.
  2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center. **The uppermost rung shall be a maximum of 24 inches (610 mm) below the upper edge of the roof hatch, roof or parapet, as applicable.**
  7. Climbing clearance. The distance from the centerline of the rungs to the nearest permanent object on the climbing side of the ladder shall be a minimum of 30 inches (762 mm) measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15-inches (381 mm) shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs except where cages or wells are installed.
  8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches (762 mm) by 30 inches (762 mm) centered in front of the ladder.
  10. Access to ladders shall be provided at all times.

Mechanical board recommendation: Make one addition to this section, as outlined below.

11. When a new roof hatch is being used to access equipment or appliances on a roof or elevated structure the handle or release must be on the same side of the roof hatch as the ladder or within 18" of the ladder.

- **SECTION 308 CLEARANCE REDUCTIONS. 308.5 Labeled assemblies**. The allowable clearance reduction shall be based on an approved reduced clearance protective assembly that is listed and labeled in accordance with UL 1618.

Mechanical board recommendation: Make no changes to this section.

- **401.2 Ventilation required**. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when

tested with a blower door at a pressure of 0.2-inch water column (50 Pa) in accordance with Section 402.4.1.2 of the International Energy Conservation Code, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403.

Mechanical board recommendation: Make no changes to this section.

- ***401.4 Intake opening location.*** Air intake openings shall comply with all of the following:
  1. Intake openings shall be located a minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot.
  2. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) horizontally from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks, except as specified in Item 3 or Section 501.2.1. Outdoor air intake openings shall be permitted to be located less than 10 feet (3048 mm) horizontally from streets, alleys, parking lots and loading docks provided that the openings are located not less than 25 feet (7620 mm) vertically above such locations. Where openings front on a street or public way, the distance shall be measured from the closest edge of the street or public way.

Mechanical board recommendation: Delete the changes to the section and continue enforcing the 2009 IMC.

- **403.3Minimum ventilation rates for nail salons. Table 403.3**
  h. For nail salons, each nail station shall be provided with a *source capture system* capable of exhausting not less than 50 cfm per station.
  Commentary: Footnote "h" to table 403.3 has been modified to require nail salons to have ***source capture system*** at each nail station. Based on the definition of source capture system, the exhaust from a station in a nail salon is required to capture the air contaminates at their source and terminate them to the outdoor atmosphere.

Mechanical board recommendation: Make no changes to this section.

- **SECTION 404 ENCLOSED PARKING GARAGES 404.1 Enclosed parking garages.** Mechanical ventilation systems for enclosed parking garages shall be permitted to operate intermittently in accordance with Item 1, Item 2 or both.
- 1. The system shall be arranged to operate automatically upon detection of vehicle operation or the presence of occupants by approved automatic detection devices.
  2. The system shall be arranged to operate automatically by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Such detectors shall be installed in accordance with their manufacturers' recommendations.

Mechanical board recommendation: Make no changes to this section.

- **501.2 Independent system required.** Single or combined mechanical exhaust systems for environmental air shall be independent of all other exhaust systems. Dryer exhaust shall be independent of all other systems. Type I exhaust systems shall be independent of all other exhaust systems except as provided in Section 506.3.5. Single or combined Type II exhaust systems for food-processing operations shall be independent of all other exhaust systems. Kitchen exhaust systems shall be constructed in accordance with Section 505 for domestic equipment and Sections 506 through 509 for commercial equipment.

Mechanical board recommendation: Make no changes to this section.

- **[F] 502.10.2 Penetrations.** Exhaust ducts penetrating fire barriers constructed in accordance with Section 707 of the International Building Code or horizontal assemblies constructed in accordance with Section 711 of the International Building Code shall be contained in a shaft of equivalent fire-resistance-rated construction. Exhaust ducts shall not penetrate fire walls. Fire dampers shall not be installed in exhaust ducts.

Mechanical board recommendation: Make no changes to this section.

- **SECTION 505 DOMESTIC KITCHEN EXHAUST EQUIPMENT 505.1 Domestic systems.** Where domestic range hoods and domestic appliances equipped with downdraft exhaust are located within dwelling units, such hoods and appliances shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. *Such ducts shall have smooth inner walls, shall be air tight, shall be equipped with a backdraft damper,* ***and shall be independent of all other exhaust systems.***

Mechanical board recommendation: Make no changes to this section.

- **506.3.2.3 Duct-to-exhaust fan connections**. Duct-to exhaust fan connections shall be flanged and gasketed at the base of the fan for vertical discharge fans; shall be flanged, gasketed and bolted to the inlet of the fan for side-inlet utility fans; and shall be flanged, gasketed and bolted to the inlet and outlet of the fan for in-line fans. ***Gasket and sealing materials shall be rated for continuous duty at a temperature of not less than 1500ºF (816ºC).***

Mechanical board recommendation: Make no changes to this section.

- **506.3.7.1 Grease reservoirs.** Grease reservoirs shall:

1. Be constructed as required for the grease duct they serve.
2. Be located on the bottom of the horizontal duct or the bottommost section of the duct riser.
3. Have a length and width of not less than 12 inches (305 mm). Where the grease duct is less than 12 inches (305 mm) in a dimension, the reservoir shall be not more than 2 inches (51 mm) smaller than the duct in that dimension.
4. Have a depth of not less than 1 inch (25.4 mm).
5. Have a bottom that is sloped to a point for drainage.
6. Be provided with a cleanout opening constructed in accordance with Section 506.3.8 and installed to provide direct access to the reservoir. The cleanout opening shall be located on a side or on top of the duct so as to permit cleaning of the reservoir.
7. Be installed in accordance with the manufacturer's instructions where manufactured devices are utilized.

Mechanical board recommendation: Make no changes to this section.

- **506.3.8 Grease duct cleanouts and openings.** Grease duct cleanouts and openings shall comply with all of the following:
  1. Grease ducts shall not have openings except where required for the operation and maintenance of the system.

  2. Sections of grease ducts that are inaccessible from the hood or discharge openings shall be provided with cleanout openings.

  ~~3. Cleanouts and openings shall be equipped with tight-fitting doors constructed of steel having a thickness not less than that required for the duct.~~

  3. Cleanout doors shall be classified in accordance with NFPA 96 or UL 1978.

  4. Cleanout doors shall be installed liquid tight.

  5. Door assemblies including any frames and gaskets shall be approved for the application and shall not have fasteners that penetrate the duct.

  6. Gasket and sealing materials shall be rated for not less than 1500ºF (816ºC).

  7. Listed door assemblies shall be installed in accordance with the manufacturer's instructions.

Mechanical board recommendation: Only allow the use of listed grease access cleanout doors.

- **506.3.9 Grease duct horizontal cleanouts.** Cleanouts serving horizontal sections of grease ducts shall:
  1. Be spaced not more than 20 feet (6096 mm) apart.
  2. Be located not more than 10 feet (3048 mm) from changes in direction that are greater than 45 degrees (.79 rad).
  3. Be located on the bottom only where other locations are not available and shall be provided with internal damming of the opening such that grease will flow past the opening without pooling. Bottom cleanouts and openings shall be approved for the application and installed liquid-tight.
  4. Not be closer than 1 inch (25.4 mm) from the edges of the duct.
  5. Have opening dimensions of not less than 12 inches by 12 inches (305 mm by 305 mm). Where such dimensions preclude installation, the opening shall be not less than 12 inches (305 mm) on one side and shall be large enough to provide access for cleaning and maintenance.
  6. Shall be located at grease reservoirs.

Mechanical board recommendation: Make no changes to this section.

- **506.3.11 Grease duct enclosures.** A grease duct serving a Type I hood that penetrates a ceiling, wall, floor or any concealed spaces shall be enclosed from the point of penetration to the outlet terminal. A duct shall penetrate exterior walls only at locations where unprotected openings are permitted by the *International Building Code*. The duct enclosure shall serve a single grease duct and shall not contain other ducts, piping or wiring systems. Duct enclosures shall be either field-applied or factory-built. **Duct enclosures shall have a fire-resistance rating of not less than that of the assembly penetrated and not less than 1 hour.** Duct enclosures shall be as prescribed by Section 506.3.10.1, 506.3.10.2 or 506.3.10.3.

Mechanical board recommendation: Make no changes to this section.

- **506.3.11.2 Field-applied grease duct enclosure.** Commercial kitchen grease ducts constructed in accordance with Section 506.3.1 shall be enclosed by field applied grease duct enclosure that is a listed and labeled material, system, product, or method of construction specifically evaluated for such purpose in accordance with ASTM E 2336. The surface of the duct shall be continuously covered on all sides from the point at which the duct originates to the outlet terminal. Duct penetrations shall be protected with a through-penetration fire-stop system classified in accordance with ASTM E 814 or UL 1497 and having a “F” and “T” rating equal to the fire-resistance rating of the assembly being penetrated. Such systems shall be installed in accordance with the listing and the manufacturer’s installation instructions. **Partial application of a field-applied grease duct**

enclosure system shall not be installed for the sole purpose of reducing clearances to combustibles at isolated sections of grease duct. Exposed duct-wrap systems shall be protected where subject to physical damage.

Mechanical board recommendation: Make no changes to this section.

- **SECTION 507 COMMERCIAL KITCHEN HOODS 507.1 General.**
  Exceptions: 1. Factory-built commercial exhaust hoods that are listed and labeled in accordance with UL 710, and installed in accordance with Section 304.1 shall not be required to comply with Sections 507.4, **507.5**, 507.7, 507.11, 507.12, 507.13, 507.14, and 507.15.

Mechanical board recommendation: Make no changes to this section.

- **507.2.1 Type I hoods.**
  Exception: A Type I hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg/m3 or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 m3/s) in accordance with Section 17 of UL 710B.

Mechanical board recommendation: Make no changes to this section.

- **507.2 Where required.** A Type I or Type II hood shall be installed at or above all *commercial cooking appliances* in accordance with Sections 507.2.1 and 507.2.2. Where any cooking *appliance* under a single hood requires a Type I hood, a Type I hood shall be installed. Where a Type II hood is required, a Type I or Type II hood shall be installed. ***Exception: Where cooking appliances are equipped with integral down-draft exhaust systems and such appliances and exhaust systems are listed and labeled for the application in accordance with NFPA 96, a hood shall not be required at or above them.***

Mechanical board recommendation: Make no changes to this section.

- **507.2.1.1 Operation.** Type I hood systems shall be designed and installed to automatically activate the exhaust fan whenever cooking operations occur. The activation of the exhaust fan shall occur through an interlock with the cooking appliances, by means of heat sensors or by means of other *approved* methods. A method of interlock between an exhaust hood system and appliances equipped with standing pilot burners shall not cause the pilot burners to be extinguished. A method of interlock between an exhaust hood system and cooking appliances shall not involve or depend upon any component of a fire extinguishing system.

Mechanical board recommendation: Make no changes to this section.

- **507.2.1.2 Exhaust flow rate label.** Type I hoods shall bear a label indicating the minimum exhaust flow rate in cfm per linear foot (1.55 L/s per linear meter) of hood that provides for capture and containment of the exhaust effluent for the cooking appliances served by the hood, based on the cooking appliance duty classifications defined in this code.

Mechanical board recommendation: Make no changes to this section.

- **507.2.2 Type II hoods.** Type II hoods shall be installed above dishwashers and appliances that produce heat or moisture and do not produce grease or smoke as a result of the cooking process, except where the heat and moisture loads from such appliances are incorporated into the HVAC system design or into the design of a separate removal system. Type II hoods shall be installed above all appliances that produce products of *combustion* and do not produce grease or smoke as a result of the cooking process. Spaces containing cooking appliances that do not require Type II hoods shall be provided with exhaust at a rate of 0.70 cfm per square foot (0.00033 m3/s). For the purpose of determining the floor area required to be exhausted, each individual *appliance* that is not required to be installed under a Type II hood shall be considered as occupying not less than 100 square feet (9.3 m2). Such additional square footage shall be provided with exhaust at a rate of 0.70 cfm per square foot [.00356 m3/(s · m2)].

Mechanical board recommendation: **Remove above counter high temperature dishwashers from the exemption.**

- **507.10 Hoods penetrating a ceiling.** Type I hoods or portions thereof penetrating a ceiling, wall or furred space shall comply with Section 506.3.11. Field-applied grease duct enclosure systems, as addressed in Section 506.3.11.2, shall not be utilized to satisfy the requirements of this section.

Mechanical board recommendation: Make no changes to this section.

- **507.11 Grease filters.** Type I hoods shall be equipped with grease filters listed and labeled in accordance with UL 1046 and designed for the specific purpose. Grease-collecting *equipment* shall be provided with access for cleaning. The lowest edge of a grease filter located above the cooking surface shall be not less than the height specified in Table 507.11.

Mechanical board recommendation: Make no changes to this section.

SECTION 514 ENERGY RECOVERY VENTILATION SYSTEMS

- **514.1 General**. Energy recovery ventilation systems shall be installed in accordance with this section. Where required for purposes of energy conservation, energy recovery ventilation systems shall also comply with the *International Energy Conservation Code*. **Ducted heat recovery ventilators shall be listed and labeled in accordance with UL 1812. Non-ducted heat recovery ventilators shall be listed and labeled in accordance with UL 1815.**

Mechanical board recommendation: Make no changes to this section.

- **514.4 Recirculated air.** Air conveyed within energy recovery systems shall not be considered as recirculated air where the energy recovery ventilation system is constructed to limit cross-leakage between air streams to less than 10 percent of the total airflow design capacity.

Mechanical board recommendation: Make no changes to this section.

CHAPTER 6 DUCT SYSTEMS

- **601.4 Contamination prevention.** Exhaust ducts under positive pressure, chimneys and vents shall not extend into or pass through ducts or plenums.
  Exceptions: 2.This section shall not apply to chimneys and vents that pass through plenums where such venting systems comply with one of the following requirements:

  2.1. The venting system shall be listed for positive pressure applications and shall be sealed in accordance with the vent manufacturer's instructions.

  2.2. The venting system shall be installed such that fittings and joints between sections are not installed in the above ceiling space.

2.3. The venting system shall be installed in a conduit or enclosure with sealed joints separating the interior of the conduit or enclosure from the ceiling space.

Mechanical board recommendation: Make no changes to this section.

SECTION 602 PLENUMS

- **602.2.1 Materials within plenums.** Except as required by Sections 602.2.1.1 through 602.2.1.5, materials within plenums shall be noncombustible or shall be listed and labeled as having a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E 84 or UL 723.
  Exceptions: 5. Combustible materials fully enclosed within one of the following:

  5.1. Continuous noncombustible raceways or enclosures.

  5.2. Approved gypsum board assemblies.

  5.3. Materials listed and labeled for installation within a plenum.

  6. Materials in Group H, Division 5 fabrication areas and the areas above and below the fabrication area that share a common air recirculation path with the fabrication area.

Mechanical board recommendation: Make no changes to this section.

- **602.2.1.1 Wiring.** Combustible electrical wires and cables and optical fiber cables exposed within a plenum shall be listed as having a maximum peak optical density of 0.50 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 5 feet (1524 mm) or less when tested in accordance with NFPA 262 or shall be installed in metal raceways or metal sheathed cable. Combustible optical fiber and communication raceways exposed within a plenum shall be listed as having a maximum peak optical density of 0.5 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 5 feet (1524 mm) or less when tested in accordance with ANSI/UL 2024. Only plenum-rated wires and cables shall be installed in plenum-rated raceways. Electrical wires and cables, optical fiber cables and raceways addressed in this section shall be listed and labeled and shall be installed in accordance with NFPA 70.

Mechanical board recommendation: Add the lesser requirement from the N.E.C. for Information Technology rooms as outlined below.

- **N.E.C. 645.4 Special Requirements for Information Technology Equipment Room.** This article shall be permitted to provide alternate wiring methods to the provisions of Chapters 1 through 4 for power wiring, 725.154 for signaling wiring, and 770.113(C) and Table 770.154(a) for optical fiber cabling when all of the following conditions are met:

(1) Disconnecting means complying with 645.10 are provided.

(2) A separate heating/ventilating/air-conditioning (HVAC) system is provided that is dedicated for information technology equipment use and is separated from other areas of occupancy. Any HVAC system that serves other occupancies shall be permitted to also serve the information technology equipment room if fire/smoke dampers are provided at the point of penetration of the room boundary. Such dampers shall operate on activation of smoke detectors and by operation of the disconnecting means required by 645.10. Informational Note: For further information, see NFPA 75- 2009, *Standard for the Protection of Information Technology Equipment*, Chapter 10, 10.1, 10.1.1, 10.1.2, and 10.1.3.

(3) All information technology and communications equipment installed in the room is listed.

(4) The room is occupied by, and accessible to, only those personnel needed for the maintenance and functional operation of the installed information technology equipment.

(5) The room is separated from other occupancies by fireresistant-rated walls, floors, and ceilings with protected openings. Informational Note: For further information on room construction requirements, see NFPA 75-2009, *Standard for the Protection of Information Technology Equipment*, Chapter 5.

(6) Only electrical equipment and wiring associated with the operation of the information technology room is installed in the room.

Informational Note: HVAC systems, communications systems, and monitoring systems such as telephone, fire alarm systems, security systems, water detection systems, and other related protective equipment are examples of equipment associated with the operation of the information technology room.

SECTION 603 DUCT CONSTRUCTION AND INSTALLATION

- **603.10 Supports.** Ducts shall be supported at intervals not to exceed ***12 feet (3658 mm)*** and shall be in accordance with SMACNA *HVAC Duct Construction Standards—Metal and Flexible*. Flexible and other factory-made ducts shall be supported in accordance with the manufacturer's instructions.

Mechanical board recommendation: Make no changes to this section.

- **603.17 Air dispersion systems. Air dispersion systems shall:**
  1. Be installed entirely in exposed locations.

  2. Be utilized in systems under positive pressure.

  3. Not pass through or penetrate fire-resistant-rated construction.

  4. Be listed and labeled in compliance with UL 2518.

Mechanical board recommendation: Make no changes to this section.

- **607.3.2.2 Smoke damper ratings.** Smoke damper leakage ratings shall be **Class I** or II. Elevated temperature ratings shall not be less than 250°F (121°C).

Mechanical board recommendation: Make no changes to this section.

- **607.5.3 Fire partitions.**
  Exception: 4. Such walls are penetrated by ducted HVAC systems, have a required fire-resistance rating of 1 hour or less, and are in areas of other than Group H and are in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building Code*. For the purposes of this exception, a ducted HVAC system shall be a duct system for conveying supply, return or exhaust air as part of the structure's HVAC system. Such a duct system shall be constructed of sheet steel not less than 26 gage in thickness and shall be continuous from the air-handling appliance or equipment to the air outlet and inlet terminals.

Mechanical board recommendation: Make no changes to this section.

SECTION 908
COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS

- **908.1 General.** A cooling tower used in conjunction with an air-conditioning *appliance* shall be installed in accordance with the manufacturer's installation instructions***. Factory-built cooling towers shall be listed in accordance with UL 1995.***

Mechanical board recommendation: Make no changes to this section.

SECTION 928 EVAPORATIVE COOLING EQUIPMENT

- **928.1 General.** ***Evaporative cooling equipment shall:***
  1. Be installed in accordance with the manufacturer's instructions.

  2. Be installed on level platforms in accordance with Section 304.10.

  3. Have openings in exterior walls or roofs flashed in accordance with the International Building Code.

  4. Be provided with potable water backflow protection in accordance with Section 608 of the International Plumbing Code.

  5. Have air intake opening locations in accordance with Section 401.4.

Mechanical board recommendation: Make no changes to this section.

SECTION 1004 BOILERS

- ***1004.3.1 Top clearance. Clearances from the tops of boilers to the ceiling or other overhead obstruction shall be in accordance with Table 1004.3.1.***

Mechanical board recommendation: Make no changes to this section.

CHAPTER 11 REFRIGERATION

- **1101.10 Locking access port caps.** Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper- resistant caps or shall be otherwise secured to prevent unauthorized access***.***

Mechanical board recommendation: Make no changes to this section.

- **1105.6.3 Ventilation rate.** For other than ammonia systems, the mechanical ventilation systems shall be capable of exhausting the minimum quantity of air both at normal operating and emergency conditions, as required by Sections 1105.6.3.1 and 1105.6.3.2. ***The minimum required ventilation rate for ammonia shall be 30 air changes per hour in accordance with IIAR2***. Multiple fans or multispeed fans shall be allowed to produce the emergency ventilation rate and to obtain a reduced airflow for normal ventilation.

Mechanical board recommendation: Make no changes to this section.

- **[F] 1106.5 Remote controls.** Remote control of the mechanical equipment and appliances located in the machinery room shall comply with Sections 1106.5.1 and 1106.5.2.

Mechanical board recommendation: Make no changes to this section.

- **[F] 1106.5.1 Refrigeration system emergency shutoff.** A clearly identified switch of the break-glass type or with an approved tamper-resistant cover shall provide off-only control of refrigerant compressors, refrigerant pumps, and normally closed, automatic refrigerant valves located in the machinery room. Additionally, this equipment shall be automatically shut off whenever the refrigerant vapor concentration in the machinery room exceeds the vapor detector's upper detection limit or 25 percent of the LEL, whichever is lower.

Mechanical board recommendation: Make no changes to this section.

2012 IFGC

SECTION 310 (IFGS) ELECTRICAL BONDING

- **310.1.1 CSST.** Corrugated stainless steel tubing (CSST) gas *piping* systems shall be bonded to the electrical service grounding electrode system. The bonding jumper shall connect to a metallic pipe or fitting between the *point of delivery* and the first downstream CSST fitting. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent. Gas piping systems that contain one or more segments of CSST shall be bonded in accordance with this section.
-

Mechanical board recommendation: Make changes to match the IRC changes.

CHAPTER 4
GAS PIPING INSTALLATIONS

- **401.9 Identification.** Each length of pipe and tubing and each pipe fitting, utilized in a fuel gas system, shall bear the identification of the manufacturer.

Mechanical board recommendation: Make no changes to this section.

- **401.10 Third-party testing and certification.** All piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this

code and shall be identified in accordance with Section 401.9. Piping, tubing and fittings shall either be tested by an approved third-party testing agency or certified by an approved *third-party certification agency*.

Mechanical board recommendation: Make no changes to this section.

CHAPTER 5

CHIMNEYS AND VENTS

- **504.2.9 Chimney and vent locations.** Tables 504.2(1), 504.2(2), 504.2(3), 504.2(4) and 504.2(5) shall be used only for chimneys and vents not exposed to the outdoors below the roof line. A Type B vent or listed chimney lining system passing through an unused masonry chimney flue shall not be considered to be exposed to the outdoors. ***Where vents extend outdoors above the roof more than 5 feet (1524 mm) higher than required by Figure 503.6.4, and where vents terminate in accordance with Section 503.6.4, Item 2, the outdoor portion of the vent shall be enclosed as required by this section for vents not considered to be exposed to the outdoors or such venting system shall be engineered.*** A Type B vent shall not be considered to be exposed to the outdoors where it passes through an unventilated enclosure or chase insulated to a value of not less than R8.

Mechanical board recommendation: Make no changes to this section.

SECTION 618 (IFGC) FORCED-AIR WARM-AIR FURNACES

- **618.4 Prohibited sources.** Outdoor or return air for forced air heating and cooling systems shall not be taken from the following locations**:**
  2.3. Return-air inlets shall not be located within 10 feet (3048 mm) of a draft hood in the same room or space or the combustion chamber of any atmospheric burner *appliance* in the same room or space.

  6. A closet, bathroom, toilet room, kitchen, garage, boiler room, furnace room or unconditioned attic. **(Removed mechanical room)**

Mechanical board recommendation: Make no changes to this section.

Adjournment

A motion was made by Mr. Van Der Bill and a second was made by Mr. Weber to adjourn the meeting at 2:00 p.m. Yeses, 5. Noes, 0.

***An audio tape of the meeting will be available at the City of Sioux Falls.**

Mike Denny
Secretary