2019 California Mechanical Code (CMC) Changes

SUMMARY

Below show all the significant changes that were made to the 2019 California Mechanical Code. A few requirements have been added.

Additionally, several code sections have been reorganized, meaning the previous requirements have been included in other or new sections. A 'Section Relocation' Table has been provided on pages xviii-xxi.

SIGNIFICANT CHANGES

NEW - CHANGE		CMC SECTION/TABLE NUMBER	COMMENTARY	ADDITIONAL COMMENTS
☐	☒	303.10	Appliances and their vent connectors shall be installed with clearances from combustible material, so their operation does not create a hazard.	
☐	☒	303.10.1	**Clearance Reduction** added the following sections; Type I Hood Exhaust System, Product, Conveying Ducts, Solid Fuel Burning Appliances.	
☒	☐	303.13	**Pit Location**. Where excavation is necessary to install an appliance, it shall extend to 6 inches below and 12 inches on all sides of appliance.	
☐	☒	404.3.2	**Secondary-Recirculation System:** For Secondary-recirculation systems where the supply air or portion to each vent zone is recirculated air (air that has not been directly mixed with outdoor air).	
☒	☐	504.4.2.3	**Exhaust Duct Power Ventilators.** Dryer exhaust duct power ventilators for single residential dryers shall comply with UL 705.	
☒	☐	505.3.2 & 505.3.3	**Ovens, Furnaces & Deflagration** Higher concentrations shall be permitted for ovens and furnaces designed and protected in accordance with NFPA 68.	
☒	☐	505.4	**Air-Moving Devices** shall be sized to establish the velocity required to capture, control, and convey materials through the exhaust system.	
☐	☒	505.5	**Generating Flames, Sparks, or Hot Materials.** Shall not be manifolded into an exhaust system that air conveys flammable or combustible.	
☐	☒	505.6	**Fire dampers.** Shall be permitted to be installed in exhaust system in accordance with this section.	

NEW - CHANGE	CMC SECTION/TABLE NUMBER	COMMENTARY	ADDITIONAL COMMENTS
☒ ☐	505.7 505.7.1 505.7.2	**Fire Detection and Alarm System.** Fire detection and alarm systems shall not be interlocked to shut down air-moving devices. **Automatic Extinguishing System.** Where shutdown is necessary for the effective operation of extinguishing system, it shall interlock systems to shut down air-moving devices. **Shut Down Permitted.** Where an acceptable risk analysis shows the risk of damage from the fire would be higher with air-moving, it shall be permitted to interlock fire detection and alarm systems.	
☐ ☒	506.10	Duct clearances has been updated. Sections 506.10 now has sub sections of 506.10.1-506.10.5 for clarifications.	
☒ ☐	519.6	**Makeup air** shall be provided in accordance with Section 511.3.	
☐ ☒	601.2	**Sizing Requirements**. Ducts shall be in accordance with ACCA manual D listed in Table 1701.1.	
☒ ☐	603.13	**Air Dispersion System** shall be completely in exposed locations in duct systems under positive pressure, and not pass through or penetrate fire-resistant construction.	
☒ ☐	802.2.8	**Incinerators** commercial incinerators shall be vented in accordance with NFPA 82.	
☐ ☒	802.6	**Gas vents** the installation of gas vents shall meet the requirements listed in this section.	
☐ ☒	802.6.2.2	**Vent offsets.** Type B and L vents shall extend in a generally vertical direction with offsets not exceeding 45 degrees except that a vent system having not more than one *60-degree* offset shall be permitted. Any angle greater than 45 degrees from the vertical is considered horizontal.	
☒ ☐	803.2.6	**Elbows in Connectors** section shows the criteria for elbows in connectors.	
☒ ☐	902.7	**Use of Air or Oxygen Under Pressure.** Where air or oxygen under pressure is used in connection with gas supply, effective means such as back pressure regulator and relief valve shall be provided to prevent air or oxygen from passing back through piping.	
☒ ☐	902.15	**Gas appliance pressure regulators.** Where the gas supply pressure is higher than that at which the appliance is designed to operate or varies beyond the design pressure limits of the appliance, a gas appliance pressure regulator shall be installed.	
☐ ☒	918.5	**Combustible Material Adjacent to Cooking.** Listed and unlisted food service ranges shall be installed to provide clearance to combustible material of not less than 18 inches horizontally for a distance of up to 2 feet above the surface.	
☒ ☐	1002.5	**Dual Purpose Water Heater.** Water heaters utilized for combined space- and water heating applications shall be listed or labeled in accordance with the standards referenced in Table 1203.2.	

NEW - CHANGE		CMC SECTION/TABLE NUMBER	COMMENTARY	ADDITIONAL COMMENTS
☒	☐	1102.2	**Ammonia Refrigeration Systems.** Refrigeration systems using ammonia as refrigerant shall comply with IIAR 2, IIAR3, IIAR4, and IIAR5 and shall not be required to comply with chapter 11.	
☐	☒	1103.1	**Classification of Refrigerants.** Refrigerants shall be classified in accordance with Table 1102.3 or ASHRAE 34.	
☒	☐	1103.1.1	**Safety Group.** Table 1102.3 classifies refrigerants by toxicity and flammability and assigns safety groups using combinations of toxicity class and flammability class. Each refrigerant is assigned into not more than one group.	
☐	☒	1106.2-1106.2.5.2	**Refrigeration Machinery Room General Requirements.**	
☒	☐	1112.5	**Hydrostatic Expansion.** Pressure rise resulting from hydrostatic expansion due to temperature rise of liquid refrigerant trapped in or between closed valves.	
☐	☒	1202.3	**Compatibility.** Fluids used in hydronic systems shall be compatible with all components that will contact the fluid.	
☐	☒	1205.2	**Pressure Testing.** Exception has been added.	
☐	☒	1209.0	**Expansion Tanks.** This section has been broken down into general, installation, open-type expansion tanks, closed-type tanks, and sizing.	
☐	☒	Table 1210.1	**Materials for Hydronic System Piping, Tubing and Fittings.** This table has been updated with new materials.	
☒	☐	1211.3	**CPVC/AL/CPVC Plastic Pipe and Joints** shall be installed in accordance with one of the methods listed in this section.	
☐	☒	1214.6	**Air-Removal Device.** Exception has been added. Drainback type solar thermal systems shall not require an air-removal device.	
☐	☒	1214.7	**Air-Separation Device.** To assist with removal of entrained air, an air- separation device shall be installed in hydronic system.	
☐	☒	1217.2	**Radiant Under-Floor Heating.** 85ºF in general occupied applications. 90ºF in bathrooms, foyers and distribution areas. 88ºF in industrial spaces 93ºF in radiant panel perimeter areas.	
☒	☐	1217.3	**Radiant Cooling System.** This system shall be designed to minimize the potential for condensation. The water temperature shall not be less than 3ºF above the anticipated space dewpoint temperature.	
☐	☒	1217.5.3	**Joint systems and Subfloors**. An airspace of not less than 1 inch and not more than 2 shall be maintained between the top of the insulation and the underside of the floor unless a conductive plate is installed.	
☐	☒	1308.5.10	**Flange Specification.** The following sub sections have been added: steel flanges, non-ferrous flanges, ductile iron flanges, and dissimilar flange connections.	

NEW - CHANGE		CMC SECTION/TABLE NUMBER	COMMENTARY	ADDITIONAL COMMENTS
☐	☒	1308.5.11	**Flange Gaskets.** The following sub sections have been added: flange gasket materials, metallic flange gaskets, non-metallic flange gaskets, full-face flange gasket and separated flanges.	
☒	☐	1308.8	**Overpressure Protection.** The following sections have been added for over pressure protection: pressure limitation requirements, overpressure protection required, overpressure protection devices, detection of failure, and flow capacity	
☐	☒	1310.1.3	**Protection Against Corrosion.** This section has been updated with subsections zinc coating, underground piping criteria, cathodic protection system criteria, sacrificial anodes, system failing tests, documentation, dissimilar metals, and steel risers.	
☐	☒	1311.2	**Bonding of CSST Gas Piping.** The following sub sections have been added: bonding jumper connection, bonding jumper size, bonding jumper length, bonding connections, and devices used for bonding.	
☐	☒	1315.6	**Variable Gas Pressures.** The following has been added for clarification. Where the supply gas pressure exceeds 5 psi for natural gas and 10 psi for undiluted propane or is less than 6 inches of water column.	