

# 2022 California Mechanical Code (CMC) Changes

## SUMMARY

Some of the significant changes are:

- Edge of roof clearance for roof top units.
- Ventilation air requirements (transient/non-transient)
- Kitchen exhaust/bathroom exhaust requirements
- Environmental air discharge requirements
- Cooking equipment maintenance
- Grease ducts
- Commercial kitchen exhaust fan termination revisions
- Commercial cooking/fire suppression systems revisions
- Duct system revisions
- Hydronics (tubes & fasteners) revisions
- Fuel Gas Piping revisions.
- Grounding / Bonding Arc resistant CSST

## SIGNIFICANT CHANGES

NEW - CHANGE	CMC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
<input type="checkbox"/> <input checked="" type="checkbox"/>	303.8.4.1	Edge of Roof Clearance: Section has been added for clarity of where guards shall be required, clearances between roof edge or open end of an equipment platform less than 6 feet, or when the open end of the equipment platform is located more than 30 inches above the roof, floor, or grade below. Maximum 21 inch diameter ball to pass between rails, shall resist imposed loading conditions, and shall extend not less than 30 inches beyond each side of the equipment or appliance. Exception: Where a 'Permanent' fall arrest connector system is provided.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	Section 401.1	(Ventilation Air) Section 401.1: Spaces within buildings, except those within a dwelling unit in residential occupancies where occupants are nontransient, shall comply with Sections 402.0. Ventilation air rate for dwelling units in residential occupancies, where the occupants are nontransient, shall be in accordance with Section 405.0	<input type="checkbox"/> <input checked="" type="checkbox"/>

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CMC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
<input checked="" type="checkbox"/> <input type="checkbox"/>	405.0-405.4	<p><b>Indoor Air Quality for Residential Occupancies:</b>  <b>405.2:</b> Provides method to calculate minimum required ventilation air.  <b>405.3</b> Specifies 'Bathroom Exhaust' shall exhaust directly to outdoors, shall be provided in a room containing a bathtub, shower, or tub/shower combination. Fan shall run intermittently (on demand) or continuously, with accessible manual control designed to be operated as needed or an automatic control shall be provided for intermittent operations. Refer to CGBSC Sec. 4.5 for dwelling requirements.  <b>405.3.1 Bathroom Exhaust Rate:</b> Minimum 50 cfm for intermittent operation and 20 cfm for continuous operation.  <b>405.4 Kitchen Exhaust:</b> A mechanical exhaust directly to the outdoors shall be provided in each kitchen. Fan shall run intermittently (on demand) or continuously. Readily accessible manual control designed to be operated as needed or an automatic control shall be provided for intermittent operation.  <b>405.5 Kitchen Exhaust Rate:</b> Intermittent = 100 cfm for range hoods. OR                      300 cfm for mechanical exhaust fans including downdraft appliances.                      For continuous exhaust ventilation: minimum 5 air changes per hour based on kitchen volume for enclosed kitchens.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	405.5	<p><b>Ventilation Openings:</b> Occupiable spaces shall be provided with a readily accessible ventilation opening openable to the outdoors, not less than 5 square feet or 4% of occupied floor area. Area based on free, unobstructed area through the opening.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	407.5.1.3	<p><b>Variable Air Volume:</b> Amendment clarifies that spaces with pressure requirements per Table 4-A shall utilize an automatic modulating damper in the return or exhaust air for each space and that the damper will modulate from full open to minimum position in conjunction with the supply air VAV terminal equipment.</p>	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	407.6	<p><b>Economizers:</b> New code section requires that systems with economizers shall include modulating relief and/or return fans to ensure compliance with the pressure requirements of spaces listed in Table 4-A.</p>	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	502.2.1	<p><b>Environmental Air Ducts:</b> Modification to include '10 feet above public walkway.'</p>	<input type="checkbox"/> <input checked="" type="checkbox"/>

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CMC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
<input type="checkbox"/> <input checked="" type="checkbox"/>	507.2.2	<b>Cooking Equipment Maintenance &amp; 'Responsibility':</b> The responsibility for inspection, testing, maintenance, and cleanliness of the ventilation control and fire protection of the commercial cooking operations, including cooking appliances, shall ultimately be that of the owner of the system, provided that this responsibility has not been transferred in written form to a management company, tenant, or other party.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/>	507.4.4.2	<b>Single Wall Grease Ducts:</b> Listed single wall factory built grease ducts shall be permitted to be enclosed with field-applied grease duct enclosure material where the material and the assembly of duct and material are listed for that application and installed in accordance with the grease duct manufacturer's listing and their installation instructions.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	510.9.1 & 510.9.2	<b>Rooftop termination and wall terminations of Type 1 Exhaust Hood;</b> These sections have multiple modifications and clarifications regarding termination and distances from adjacent surfaces.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	512.3.3, 512.3.3.1, & 512.3.3.2	<b>Fire-Extinguishing System, Protection, and Filter Media:</b> Former Section 512.3.1 has been broken into parts for clarification of the specific requirements of the system.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	512.3.6	<b>Carbon Monoxide Detector:</b> If the heat source is non-electric and open flames are used, a carbon monoxide detector shall be installed in both the kitchen and dining area.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	513.1.1	<b>Devices in Exhaust Ducts:</b> Fume incinerators, thermal recovery units, air pollution control devices or other devices installed in the exhaust duct, shall be protected by an automatic fire –extinguishing system.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	513.2.5.1	<b>Listed for the Purpose:</b> areas noted under CMC section 513.2.5, not provided with a listed water-wash fire-extinguishing system shall be provided with a fire-extinguishing system listed for the purpose.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	513.3.1.1, 513.3.2, & 513.3.3	<b>Common ductwork, Independent Systems, &amp; Exempt Equipment:</b> These sections are added to clarify design parameters when hoods are end to end, back to back, duct sharing.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input type="checkbox"/> <input checked="" type="checkbox"/>	515.1.1.5	<b>Minimum Height:</b> <i>At cooking appliances...</i> Where the fryer and the surface flames are at different horizontal plans, a height of not less than 8 inches shall be measured from the higher of the two.	<input type="checkbox"/> <input checked="" type="checkbox"/>

SIGNIFICANT CHANGES (cont'd)

NEW - CHANGE	CMC SECTION/TABLE NUMBER	COMMENTARY	MASTER PLAN IMPACT YES - NO
<input checked="" type="checkbox"/> <input type="checkbox"/>	603.0-603.1.5	<b>Installation of Ducts:</b> Section 603.1 has been expanded to provide clarification regarding Pressure Classification, Air Temperature, Protection, Vertical Risers, and Penetrations. Ducts listed and labeled UL 181 shall (603.1.4) NOT be used for vertical risers in air duct systems servicing more than two stories and shall (603.1.5) NOT penetrate a fire-resistance rated assembly or construction.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	602.2	<b>Combustibles Within Ducts or Plenums:</b> The following was added to 602.2... Plastic piping installed in plenums shall be tested in accordance with all requirements of ASTM E84 or UL 723. Mounting methods, supports and sample sizes of materials for testing that are not specified in ASTM E84 or UL 723 shall be prohibited.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	1201.1 1217.5.3 1217.4	<b>1217.5.3:</b> states that fasteners embedded in concrete shall be fastened according to the manufacturer's instructions. A list of 6 tube fasteners are included. <b>1217.5.4:</b> states the maximum spacing between tube fasteners within concrete shall be per manufacturer's instruction, but no less than 2.5 feet.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	1308.10 Through 1308.10.5	<b>Fuel Gas Piping: 1308.10 Overpressure Protection Devices:</b> shall be one of the following. 1. Pressure relief valve 2. Monitor regulator 3. Series regulator (includes specifics of location) 4. Automatic shutoff (includes specifics of location) <b>1308.10.1 Separate Devices:</b> devices in 1308.10 shall be installed either as an integral part of the service or line pressure regulator or as separate units. Separate overpressure protection devices shall comply with 1308.10.2 through 1308.10.7. <b>1308.10.2, 3, 4, &amp; 5 Construction and Installation, External Control Piping, Setting, &amp; Unauthorized Operation.</b> These sections provide specifics required for the protection of the Overprotection from elements, from failure, and causing further failure within the system.	<input type="checkbox"/> <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> <input type="checkbox"/>	1311.3	<b>Arc-Resistant Jacketed CSST:</b> CSST listed with an arc-resistant jacket or coating system in accordance with CSA LC 1 shall be electrically continuous and bonded to an effective ground fault current path (is considered bonded when it is connected to appliances that are connected to the appliance grounding conductor to the circuit supplying that appliance).	<input type="checkbox"/> <input checked="" type="checkbox"/>