45-DAY EXPRESS TERMS

FOR

PROPOSED BUILDING STANDARDS

OF THE

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT REGARDING THE ADOPTION OF THE 2019 CALIFORNIA MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4

(HCD 01/18)

The Department of Housing and Community Development (HCD) proposes to adopt the 2018 edition of the Uniform Mechanical Code (UMC) for codification and effectiveness into the 2019 edition of the California Mechanical Code (CMC) as presented on the following pages, including any necessary amendments.

LEGEND FOR EXPRESS TERMS:

- 1. Model Code language appears upright.
- 2. Existing California amendments appear in italics.
- 3. Amended model code or new California amendments appear <u>underlined and in</u> *italics*.
- 4. Repealed model code language appears upright and in strikeout.
- 5. Repealed California amendments appear in *italics and strikeout*.

SUMMARY OF REGULATORY ACTION

HCD PROPOSES TO:

- Repeal the 2015 edition of the Uniform Mechanical Code (UMC)
- ➤ Repeal the 2016 edition of the California Mechanical Code (CMC), including existing California amendments to the model code that are no longer necessary
- ➤ Adopt sections from the 2018 UMC into the 2019 CMC without amendments
- Adopt sections from the 2018 UMC into the 2019 CMC with existing amendments
- Bring forward existing California amendments from the 2016 CMC for adoption into the 2019 CMC without modifications
- ➤ Bring forward existing California amendments from the 2016 CMC for adoption into the 2019 CMC <u>with nonsubstantive editorial modifications</u>
- Adopt sections from the 2018 UMC into the 2019 CMC with new amendments that do not change the regulatory effect
- Bring forward existing California amendments from the 2016 CMC for adoption into the 2019 CMC with new modifications that do not change the regulatory effect
- > Adopt sections from the 2018 UMC into the 2019 CMC with new amendments
- ➤ Bring forward existing California amendments from the 2016 CMC for adoption into the 2019 CMC <u>with modifications</u>
- Adopt new amendments into the 2019 CMC
- Not adopt specified sections of the 2018 UMC

1. <u>HCD proposes to bring forward Chapter 1, Division 1, Sections 1.1 and 1.8, from the 2016 California Mechanical Code for adoption into the 2019 California Mechanical Code with modifications as follows:</u>

CHAPTER 1 ADMINISTRATION DIVISION I CALIFORNIA ADMINISTRATION

1.1.0 General

- **1.1.1 Title.** These regulations shall be known as the California Mechanical Code, may be cited as such and will be referred to herein as "this code." The California Mechanical Code is Part 4 of thirteen parts of the official compilation and publication of the adoption, amendment, and repeal of mechanical regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the 2015 2018 Uniform Mechanical Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.
- **1.1.2 Purpose.** (No change to existing California amendment)
- **1.1.3 Scope.** (No change to existing California amendment)
 - **1.1.3.1 Nonstate-Regulated Buildings, Structures, and Applications.** (No change to existing California amendment)
 - 1.1.3.2 State-Regulated Buildings, Structures, and Applications. The model code, state amendments to the model code, and/or state amendments where there are no relevant model code provisions shall apply to the following buildings, structures, and applications regulated by state agencies as specified in Sections 1.2.0 through 1.14.0, except where modified by local ordinance pursuant to Section 1.1.8. When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by the state legislature.

Note: See Preface to distinguish the model code provisions from the California provisions.

- (1) through (9) (No change to existing California amendment)
- (10) Reserved for the Division of the State Architect Access Compliance.

Accommodations for persons with disabilities regulated by the Division of the State Architect. See Section 1.9.1 for additional scope provisions.

(11) through (18) (No change to existing California amendment)

- **1.1.4 Appendices.** (No change to existing California amendment)
- **1.1.5 Referenced Codes.** (No change to existing California amendment)
- **1.1.6 Non-Building Standards, Orders and Regulations.** (No change to existing California amendment)
- 1.1.7 Order of Precedence and Use.
 - **1.1.7.1 Differences.** (No change to existing California amendment)
 - **1.1.7.2 Specific Provisions.** (No change to existing California amendment)
 - **1.1.7.3 Conflicts.** (No change to existing California amendment)

Exception: 1.1.7.3.1 Detached one- and two-family dwellings. Detached one-and two-family dwellings, efficiency dwelling units, lodging houses, live/work units, townhouses not more than three stories above grade plane in height with a separate means of egress, and their accessory structures, shall not be required to comply with the California Residential Code if constructed in accordance with the California Building Code.

1.1.8 City, County, or City and County Amendments, Additions or Deletions. (No change to existing California amendment)

1.1.8.1 Findings and Filings:

- (1) and (2) (No change to existing California amendment)
- (3) Findings prepared by fire protection districts shall be ratified by the local city, county, or city and county and filed with the California Department of Housing and Community Development, Division of Codes and Standards, P.O. Box 1407, Sacramento, CA 95812-1407 or 2020 W. El Camino Avenue, Suite 250-200, Sacramento, CA 95833-1829.
- **1.1.8.2 Locally Adopted Energy Standards California Energy Code, Part 6.** In addition to the provisions of Section 89.101.8.1 1.1.8.1 of this Ppart, the provisions of this section applies to cities, counties, and city and county amending adopted energy standards affecting buildings and structures subject to the California Energy Code, Part 6.

Applicable provisions of Public Resources Code Section 25402.1 and applicable provisions of Chapter 10 of the California Administrative Code, Part 1 apply to local amendment of energy standards adopted by the California Energy Commission.

1.1.9 Effective Date of this Code. Only those standards approved by the California Building Standards Commission that are effective at the time an application for building permit is submitted shall apply to the plans and specifications for, and to the construction performed under, that permit. For the effective dates of the provisions contained in this code, see the History Note page of this code.

Exception: Plans approved by the Department of Housing and Community
Development or a Department-approved design approval agency for factory built
housing as defined by Health and Safety Code Section 19971. Approved plans,
pursuant to the California Code of Regulations, Title 25, Division 1, Chapter 3,
Subchapter 1, Article 3, Section 3048 remain valid for a period of 36 months from the
date of plan approval.

- **1.1.10 Availability of Codes.** (No change to existing California amendment)
- **1.1.11 Format.** (No change to existing California amendment)
- **1.1.12 Validity.** (No change to existing California amendment)
- 1.8.0 Department of Housing and Community Development (HCD).
- **1.8.1 Purpose.** (No change to existing California amendment)
- 1.8.2 Authority and Abbreviations.
 - **1.8.2.1 General.** (No change to existing California amendment)
 - 1.8.2.1.1 Housing Construction.

Application - (No change to existing California amendment)

Enforcing Agency - (No change to existing California amendment)

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

1.8.2.1.2 Housing Accessibility.

Application - ... "HCD 1-AC" applications include, but are not limited to, the following:

- (1) through (3) (No change to existing California amendment)
- (4) New Ccommon use areas serving new covered multifamily dwellings.
- (5) Where any portion of a building's exterior is preserved, but the interior of the building is removed, including all structural portions of floors and ceilings, the building is considered a new building for determining the application of California Building Code, Chapter 11A.

"HCD 1-AC" building standards generally do not apply to public use areas or public accommodations such as hotels, and motels, and public housing. Public use areas, public accommodations, and public housing, as defined in Chapter 2 of the California Building Code, are subject to the Division of the State Architect (DSA-AC) in Chapter 11B, and are referenced in Section 1.9.1.

Newly constructed covered multifamily dwellings, which can also be defined as public housing, shall be subject to the requirements of Chapter 11A and Chapter 11B.

Enforcing Agency - Local building department or the Department of Housing and Community Development.

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

References: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; <u>Civil Code Sections 1101.4, 1101.5 and 1954.201</u>; and Government Code Sections 12955.1 and 12955.1.1.

1.8.2.1.3 Permanent Buildings in Mobilehome Parks and Special Occupancy Parks.

Application - (No change to existing California amendment)

Enforcing Agency: Local building department or other local agency responsible for the enforcement of Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 for mobilehome parks and Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860, for special occupancy parks; or the Department of Housing and Community Development.

Enforcing Agency – The Department of Housing and Community Development, local building department or other local agency that has assumed responsibility for the enforcement of Health and Safety Code, Division 13, Part 2.1, commencing with Section 18200 for mobilehome parks and Health and Safety Code, Division 13, Part 2.3, commencing with Section 18860 for special occupancy parks.

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.3, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.3, 18873.4, through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

- 1.8.3 Local Enforcing Agency.
 - **1.8.3.1 Duties and Powers.** (No change to existing California amendment)
 - **1.8.3.2 Laws, Rules, and Regulations.** (No change to existing California amendment)
 - **1.8.3.2.1 State Housing Law.** (No change to existing California amendment)
 - 1.8.3.2.2 Mobilehome Parks Act. (No change to existing California amendment)
 - **1.8.3.2.3 Special Occupancy Parks Act.** (No change to existing California amendment)
 - **1.8.3.2.4 Employee Housing Act.** (No change to existing California amendment)
 - **1.8.3.2.5 Factory-Built Housing Law.** (No change to existing California amendment)

- 1.8.4 Permits, Fees, Applications, and Inspections.
 - **1.8.4.1 Permits.** (No change to existing California amendment)
 - **1.8.4.2 Fees.** (No change to existing California amendment)
 - **1.8.4.3 Plan Review and Time Limitations.** (No change to existing California amendment)
 - **1.8.4.3.1 Retention of Plans.** (No change to existing California amendment)
 - **1.8.4.4 Inspections.** (No change to existing California amendment)
- 1.8.5 Right of Entry for Enforcement.
 - **1.8.5.1 General.** Subject to other provisions of law, officers, and agents of the enforcing agency may enter and inspect public and private properties to secure compliance with the rules and regulations promulgated by the Department of Housing and Community Development. For limitations and additional information regarding enforcement, see the following:
 - (1) through (3) (No change to existing California amendment)
 - (4) For applications subject to the Employee Housing Act as referenced in Section 1.8.3.2.4 of this code, refer to Health and Safety Code, Division 13, Part 1, commencing with Section 17000, and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 3, commencing with Section 600.
 - (5) For applications subject to the Factory-Built Housing Law as referenced in Section 1.8.3.2.5 of this code, refer to Health and Safety Code, Division 13, Part 6, commencing with Section 19960, and California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, commencing with Section 3000.
- 1.8.6 Local Modification by Ordinance or Regulation.
 - **1.8.6.1 General.** (No change to existing California amendment)
 - **1.8.6.2 Findings, Filings, and Rejections of Local Modifications.** (No change to existing California amendment)
- 1.8.7. Alternate Materials, Designs, Tests, and Methods of Construction.
 - **1.8.7.1 General.** The provisions of this code, as adopted by the Department of Housing and Community Development, are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, design, or method of construction not specifically prescribed by this code. Consideration and approval of alternates shall

comply with Section 1.8.7.2 for local building departments and Section 1.8.7.3 for the Department of Housing and Community Development.

- **1.8.7.2 Local Building Departments.** (No change to existing California amendment)
 - **1.8.7.2.1 Approval of Alternates.** (No change to existing California amendment)
- **1.8.7.3 Department of Housing and Community Development.** The Department of Housing and Community Development may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, or demolition of apartments, condominiums, hotels, motels, lodging houses, dwellings, or accessory structures thereto, and permanent buildings in mobilehome parks and special occupancy parks. The consideration and approval of alternates shall comply with the following:
- (1) and (2) (No change to existing California amendment)

1.8.8 Appeals Board.

- **1.8.8.1 General.** (No change to existing California amendment)
- **1.8.8.2 Definitions.** (No change to existing California amendment)
- **1.8.8.3 Appeals.** (No change to existing California amendment)

1.8.9 Unsafe Buildings or Structures.

- **1.8.9.1 Authority to Enforce.** Subject to other provisions of law, the administration, enforcement, actions, proceedings, abatement, violations, and penalties for unsafe buildings and structures are contained in the following statutes and regulations:
- (1) For applications subject to the State Housing Law as referenced in Section 1.8.3.2.1 of this code, refer to Health and Safety Code, Division 13, Part 1.5, commencing with Section 17910 and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1, commencing with Section 1.
- (2) through (5) (No change to existing California amendment)
- **1.8.9.2 Actions and Proceedings.** (No change to existing California amendment)
- 1.8.10 Other Building Regulations.
 - **1.8.10.1 Existing Structures.** (No change to existing California amendment)
 - **1.8.10.2 Moved Structures.** (No change to existing California amendment)

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

2. HCD proposes to adopt Chapter 1, Division II, Section 104.2 (Items 1-5) only, from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code without amendments:

DIVISION II ADMINISTRATION

104.2 Exempt Work.

Items (1) through (5)...(No change to existing California amendment)

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

3. HCD proposes to adopt Chapter 2 from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code with new and existing amendments as follows:

CHAPTER 2 DEFINITIONS

203.0 -A-

Approved. (No change to existing California amendment)

Approved Testing Agency. (HCD 1 & HCD 2) (No change to existing California amendment)

Assembly Building. (HCD 1 & HCD 2) (No change to existing California amendment)

Authority Having Jurisdiction. (HCD 1 & HCD 2) (No change to existing California amendment)

204.0 -B-

Building. (HCD 1 & HCD 2) (No change to existing California amendment)

Building Code. (HCD 1 & HCD 2) (No change to existing California amendment)

206.0 -D-

Department. (HCD 1 & HCD 2) (No change to existing California amendment)

207.0 -E-

Electrical Code. (HCD 1 & HCD 2) (No change to existing California amendment)

Enforcing Agency. (HCD 1 & HCD 2) (No change to existing California amendment)

208.0 -F-

Family. (HCD 1) (No change to existing California amendment)

214.0 -L-

Labeled (HCD 1 & HCD 2) (No change to existing California amendment)

Listed (Third Party Certified). (HCD 1 & HCD 2) (No change to existing California amendment)

Listing Agency. (HCD 1 & HCD 2) (No change to existing California amendment)

216.0 -N-

Nuisance. (**HCD 1 & HCD 2**) "Nuisance" shall mean any nuisance as defined in Health and Safety Code Section 17920(k) (I).

Notes:

(1) and (2) (No change to existing California amendment)

217.0 -O-

Occupancy Classification. (HCD 1 & HCD 2) (No change to existing California amendment)

218.0 -P-

Plumbing Code. (HCD 1 & HCD 2) (No change to existing California amendment)

222.0 -T-

Testing Agency. (HCD 1 & HCD 2) See "Approved Testing Agency".

223.0 -U-

UMC. (HCD 1 & HCD 2) (No change to existing California amendment)

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

4. <u>HCD proposes to adopt Chapter 3 from the 2018 Uniform Mechanical Code</u> into the 2019 California Mechanical Code, with new and existing amendments as follows:

CHAPTER 3 GENERAL REGULATIONS

303.0 Installation.

303.7 Liquefied Petroleum Gas Facilities. (No change to existing California amendment)

303.7.1 Liquefied Petroleum Gas (LP-Gas) Appliances. (HCD 1 & HCD 2) Liquefied petroleum gas-burning appliances shall not be installed in a pit, basement, or similar location where heavier-than-air gas might collect. Appliances so fueled shall not be installed in an above-grade under-floor space or basement unless such location is provided with an approved means for removal of unburned gas.

303.13 Pit Location Where excavation is necessary to install an appliance, it shall extend to a depth of 6 inches (152 mm) below and 12 inches (305 mm) on all sides of the appliance, except on the service side, which shall have 30 inches (762 mm). Where the depth of the excavation for either the appliance or passageway exceeds 12 inches (305 mm), walls shall be lined with concrete or masonry 4 inches (102 mm) above the adjoining ground level.

Exception: (HCD 1 & HCD 2) Liquefied petroleum gas (LP-Gas) appliances as described in Section 303.7.1.

311.0 Heating or Cooling Air System.

311.2 Air Filters. Air filters shall be installed in a heating, cooling, or makeup air system. Media-type air filters shall comply with UL 900. Electrostatic and high efficiency particulate filters shall comply with Section 936.0.

Exceptions:

- (1) Systems serving single guest rooms or dwelling units shall not require a listed filter.
- (2) Air filters used in listed appliances and in accordance with the manufacturer's instructions.

(HCD 1 & HCD 2) In mechanically ventilated residential buildings, air filters shall be provided to clean outdoor and return air prior to its delivery to occupied spaces. The air filters shall comply with the California Energy Code requirements for labeling, ventilation system design and installation, air filter efficiency, and air filter pressure drop, as applicable.

<u>See California Energy Code Subchapters 3, 6, 7, and 9 for requirements related to air filtration for residential occupancies.</u>

- 312.0 Plumbing Connections.
- **312.1 General.** (No change to existing California amendment)
- 316.0 Protection of Piping, Tubing, Materials, and Structures.
- **316.2 Installation.** Piping or tubing shall be installed so that the piping, tubing, or connections will not be subject to undue strains or stresses, and provisions shall be made for expansion, contraction, and structural settlement. No piping or tubing, unless designed and listed for such use, shall be directly embedded in concrete or masonry. No structural member shall be seriously weakened or impaired by cutting, notching, or otherwise as defined in the <u>building code</u> <u>California Building Code or California</u> Residential Code.
- **316.5 Fire-Resistant Construction.** Piping, tubing, and duct system penetrations of fire-resistance-rated walls, partitions, floors, floor/ceiling assemblies, roof/ceiling assemblies, or shaft enclosures shall be protected in accordance with the requirements of the building code California Building Code or California Residential Code.
- **316.9 Structural Members.** A structural member weakened or impaired by cutting, notching, or otherwise shall be reinforced, repaired, or replaced so as to be left in a safe structural condition in accordance with the requirements of the <u>building code</u> <u>California</u> <u>Building Code</u> or <u>California Residential Code</u>.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

5. <u>HCD proposes to adopt Chapter 4 from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code with new and existing amendments as follows:</u>

CHAPTER 4 VENTILATION AIR

402.0 Ventilation Air.

402.3 Mechanical Ventilation. Where natural ventilation is not permitted by this section or the building code <u>California Building Standards Code</u>, mechanical ventilation systems shall be designed, constructed, and installed to provide a method of supply air and exhaust air. Mechanical ventilation systems shall include controls, manual or automatic, that enable the fan system to operate wherever the spaces served are occupied. The system shall be designed to maintain minimum outdoor airflow as required by Section 403.0 under any load conditions.

402.5 Bathroom Exhaust Fans. (HCD 1 & HCD 2) (No change to existing California amendment)

403.0 Ventilation Rates.

403.7 Exhaust Ventilation. (No change to model code text)

403.7.2 Enclosed Parking Garages. (No change to model code text)

403.7.2.1 Alternative Exhaust Ventilation for Enclosed Parking Garages.

403.7.2.2 Minimum Exhaust Rate. (HCD 1 & HCD 2) (No change to existing California amendment)

403.7.2.3 Exhaust Inlet Distribution. (HCD 1 & HCD 2) (No change to existing California amendment)

403.7.2.4 Exhaust System Operation. (HCD 1 & HCD 2) Exhaust systems shall operate continuously unless one of the exceptions to continuous operation of Section 403.7.2 is utilized.

TABLE 403.7 MINIMUM EXHAUST RATES (ASHRAE 62.1: TABLE 6.5)

OCCUPANCY CATEGORY ⁸	EXHAUST RATE cfm/unit	EXHAUST RATE cfm/ft ²	AIR CLASS
Bathroom	20/50	-	2

Notes:

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

6. <u>HCD proposes to adopt Chapter 5 from the 2018 Uniform Mechanical Code</u> into the 2019 California Mechanical Code without amendments:

CHAPTER 5 EXHAUST SYSTEMS

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

⁴⁰¹¹(HCD 1 & HCD 2) A bathroom is any room containing a bathtub a shower, a spa, or a similar source of moisture.

⁴⁴12(HCD 1 & HCD 2) ANSI/ASHRAE 62.2: Tables 5.1 & 5.2.

7. HCD proposes to adopt Chapter 6, except Section 603.10.1, from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code with existing and new amendments as follows:

CHAPTER 6 DUCT SYSTEMS

- 601.0 General.
- **601.2 Sizing Requirements.** (No change to existing California amendment)
- 602.0 Material.
- **602.2 Combustibles Within Ducts or Plenums.** (No change to model code text)
 - **602.2.1 Electrical.** Electrical wiring in plenums shall comply with NFPA 70 <u>the California Electrical Code</u>. Electrical wires and cables and optical fiber cables shall be listed and labeled for use in plenums and shall have a flame spread distance not exceeding 5 feet (1524 mm), an average optical density not exceeding 0.15, and a peak optical density not exceeding 0.5, where tested in accordance with NFPA 262.
- 603.0 Installation of Ducts.
- **603.3 Metal Ducts.** (No change to model code text)
 - **603.3.3 Earthquake Loads.** Ducts located in structures that are installed in areas classified as seismic design category C, D, E, or F shall be in accordance with the building code <u>California Building Code or California Residential Code</u>.
- **603.10 Joints and Seams of Ducts.** (No change to model code text)
 - 603.10.1 Duct Leakage Tests. (Not adopted by HCD)
 - 603.10.1.1 Duct Leakage Tests for Residential Buildings. (HCD 1 & HCD 2) See California Energy Code Section 150.0(m)(11) for low-rise residential; and Section 140.4(I) for duct leakage tests for other residential buildings.
- 605.0 Smoke Dampers, Fire Dampers, and Ceiling Dampers.
- **605.1 Smoke Dampers.** Smoke dampers shall comply with UL 555S, and shall be installed in accordance with the manufacturer's installation instructions where required by the <u>building code</u> <u>California Building Code or California Residential Code</u>.

606.0 Ventilating Ceilings.

606.1 General. Perforated ceilings shall be permitted to be used for air supply within the limitations of this section. Exit corridors, where required to be of fire-resistive construction by the building code <u>California Building Code</u>, shall not have ventilating ceilings.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

8. <u>HCD proposes to adopt Chapter 7 from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code without amendments:</u>

CHAPTER 7 COMBUSTION AIR

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

9. <u>HCD proposes to adopt Chapter 8 from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code without amendments</u>:

CHAPTER 8 CHIMNEYS AND VENTS

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

10. HCD proposes to adopt Chapter 9, except Sections 911.2.2, 912.1, 930.0, and 930.1, from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code with new and existing amendments as follows:

CHAPTER 9 INSTALLATION OF SPECIFIC APPLIANCES

- 911.0 Decorative Appliances for Installation in Vented Fireplaces.
- **911.2 Installation.** (No change to model code text)
 - 911.2.2 In Manufactured Homes. A decorative appliance for installation in a vented fireplace, where installed in a manufactured home, shall be listed for installation in manufactured homes. [NFPA 54:10.6.2.2] **Reserved.**
- 912.0 Gas Fireplaces, Vented.
- 912.1 Prohibited Installations. Reserved
- **912.2 Installation.** (HCD 1 & HCD 2) (No change to existing California amendment)
- 916.0 Room Heaters.
- **916.2 Gas-Fired Room Heaters.** (No change to model code text)

916.2.1 Prohibited Installations. *(HCD 1 & HCD 2)* (No change to existing California amendment)

916.2.1.1 Unvented Room Heaters. (No change to existing California amendment)

930.0 Appliances for Installation in Manufactured Housing. (Not adopted by HCD)

930.1 General. (Not adopted by HCD)

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

11. <u>HCD proposes to adopt Chapter 10 from the 2018 Uniform Mechanical Code</u> into the 2019 California Mechanical Code with new amendment as follows:

CHAPTER 10 BOILERS AND PRESSURE VESSELS

1001.0 General.

1001.2 Boiler Rooms and Enclosures. Boiler rooms and enclosures shall comply with the building code California Building Code.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

12. HCD proposes to adopt Chapter 11 from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code without amendments:

CHAPTER 11 REFRIGERATION

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

13. <u>HCD proposes to adopt Chapter 12 from the 2018 Uniform Mechanical Code</u> into the 2019 California Mechanical Code with new amendments as follows:

CHAPTER 12 HYDRONICS

1205.0 Installation, Testing, and Inspection.

1205.2 Pressure Testing. System piping and components shall be tested with a pressure of not less than one and one-half times and operating pressure but not less than 100 psi (689 kPa). Piping shall be tested with water or air except that plastic pipe shall not be tested with air. Text pressures shall be held for a period of not less than 30 minutes with no perceptible drop in pressure. These tests shall be made in the presence of the Authority Having Jurisdiction.

Exception: For PEX, PP-R, PP-RCT, PEX-AL-PEX, PE-RT, and PE-AL-PE piping systems, testing with air shall be permitted where authorized by the manufacturer's instructions for the PEX, PP-R, PP-RCT, PEX-AL-PEX, PE-RT, and PEAL-PE pipe and fittings products, and air testing is not prohibited by applicable codes, laws, or regulations outside this code.

Note: [HCD 1 & HCD 2] PEX-AL-PEX is not adopted in the California Plumbing Code for use in potable water supply and distribution systems.

1211.0 Joints and Connections.

1211.6 Cross-Linked Polyethylene/Aluminum/Cross-Linked Polyethylene (PEX-AL-PEX) Pipe. Joints between cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe or fittings shall be installed in accordance with one or

polyethylene (PEX-AL-PEX) pipe or fittings shall be installed in accordance with one of the following methods:

- (1) (No change to model code text)
- (2) (No change to model code text)

Note: [HCD 1 & HCD 2] PEX-AL-PEX is not adopted in the California Plumbing Code for use in potable water supply and distribution systems.

1217.0 Radiant Heating and Cooling.

1217.5 Poured Floor Structural Concrete Slab Systems (Thermal Mass)...

1217.5.2 Insulation. Where a poured concrete radiant floor system is installed in contact with the soil, insulation approved for such an application with a minimum R-value of 5 shall be placed between the soil and the concrete; extend to the outside edges of the concrete; and be placed on all slab edges.

(HCD 1 & HCD 2). See California Energy Code Section 110.8(g) for insulation requirements for heated slab floors.

1217.5.4 Wall and Ceiling Panels. Where piping is installed in the stud wall cavity or the ceiling joist cavity, the cavity shall be insulated with not less than R-12 material. The insulation shall be installed in such a manner as to prevent heating or cooling loss from the space intended to be controlled.

An air space of not less than 1 inch (25.4 mm) and not more than 3 inches (76 mm) shall be maintained between the insulation and the interior surface of the panel unless a conductive plate is installed.

(HCD 1 & HCD 2). See California Energy Code Sections 150.0(j)2 and 120.3(c) for pipe insulation requirements based on pipe diameter.

1220.0 Auxiliary Systems.

1220.2 Snow and Ice Melt Controls. (No change to model code text)

1220.2.5 Insulation. Where a poured concrete snow melt system is installed in contact with the soil, insulation that has a R-5 value shall be placed between the concrete and the compacted grade; extend as close as practical to the outside

edges of the concrete; and be placed on vertical slab edges that are in contact with plants or landscaping.

(HCD 1 & HCD 2). See California Energy Code Section 110.8(g) for insulation requirements for heated slab floors.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

14. <u>HCD proposes to adopt Chapter 13 from the 2018 Uniform Mechanical Code</u> into the 2019 California Mechanical Code without amendments:

CHAPTER 13 FUEL GAS PIPING

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

15. <u>HCD proposes to NOT adopt Chapter 14 from the 2018 Uniform Mechanical</u> Code.

CHAPTER 14 PROCESS PIPING

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

16. <u>HCD proposes to adopt Chapter 15 from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code with new and existing amendments as follows:</u>

CHAPTER 15 SOLAR ENERGY SYSTEMS

1502.0 General. (HCD 1 & HCD 2) For applications listed in Section 1.8.2 regulated by the Department of Housing and Community Development, see Health and Safety Code Section 17959.1, Civil Code <u>Sections</u> 714, <u>and</u> 801.5, and Government Code Section 65850.5.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

17. <u>HCD proposes to adopt Chapter 16 from the 2018 Uniform Mechanical Code</u> into the 2019 California Mechanical Code without amendments:

CHAPTER 16 STATIONARY POWER PLANTS

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

18. <u>HCD proposes to adopt Chapter 17 from the 2018 Uniform Mechanical Code into the 2019 California Mechanical Code without amendments:</u>

CHAPTER 17 REFERENCED STANDARDS

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

19. <u>HCD proposes to NOT adopt Appendix A from the 2018 Uniform Mechanical</u> Code.

APPENDIX A

RESIDENTIAL PLAN EXAMINER REVIEW FORM FOR HVAC SYSTEM DESIGN (Loads, Equipment, Ducts) [ACCA]

Appendix note: The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

20. <u>HCD proposes to NOT adopt Appendix B from the 2018 Uniform Mechanical</u> Code.

APPENDIX B

PROCEDURES TO BE FOLLOWED TO PLACE GAS EQUIPMENT IN OPERATION

Appendix note: The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

21. <u>HCD proposes to NOT adopt Appendix C from the 2018 Uniform Mechanical</u> Code.

APPENDIX C INSTALLATION AND TESTING OF OIL (LIQUID) FUEL-FIRED EQUIPMENT

Appendix note: The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

22. <u>HCD proposes to NOT adopt Appendix D from the 2018 Uniform Mechanical</u> Code:

APPENDIX D FUEL SUPPLY: MANUFACTURED/MOBILE HOME PARKS AND RECREATIONAL VEHICLE PARKS

Appendix note: The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

23. <u>HCD proposes to NOT adopt Appendix E from the 2018 Uniform Mechanical Code.</u>

APPENDIX E SUSTAINABLE PRACTICES

Appendix note: The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1.

24. <u>HCD proposes to NOT adopt Appendix F from the 2018 Uniform Mechanical</u> Code.

APPENDIX F SIZING OF VENTING SYSTEMS AND OUTDOOR COMBUSTION AND VENTILATION OPENING DESIGN

(The content of this Appendix is based on Annex F and Annex I of NFPA 54)

Appendix note: The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

25. <u>HCD proposes to NOT adopt Appendix G from the 2018 Uniform Mechanical</u> Code.

APPENDIX G EXAMPLE CALCULATION OF OUTDOOR AIR RATE

Appendix note: The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

NOTE:

Authority Cited: Health and Safety Code Sections 17040, 17050, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 18300, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.