# APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

# December 14, 2021

# FINAL EXPRESS TERMS FOR PROPOSED BUILDING STANDARDS OF THE CALIFORNIA BUILDING STANDARDS COMMISSION REGARDING THE 2022 CALIFORNIA MECHANICAL CODE, CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4

# (BSC 01/21)

The state agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italic and ellipsis.

## LEGEND for EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)

* Model Code language appears upright
* Existing California amendments appear in *italic*
* Amended model code or new California amendments appear *underlined & italic*
* Repealed model code language appears ~~upright and in strikeout~~
* Repealed California amendments appear in *~~italic and strikeout~~*
* Ellipsis ( …) indicate existing text remains unchanged

# FINAL EXPRESS TERMS

The Building Standards Commission (BSC) proposes to adopt the 2021 edition of the Uniform Mechanical Code (UMC) for codification and effectiveness into the 2022 edition of the California Mechanical Code (CMC) as presented on the following pages, including any necessary amendments. BSC further proposes to:

Repeal the 2018 edition of the UMC and the 2019 CMC;

Repeal amendments to the model code that are no longer necessary, repeal or amend building standards that are not addressed by a model code;

Relocate or codify existing adopted and necessary amendments to the model code into the format of the model code proposed for adoption, the action of which has no regulatory effect.

**PROPOSED REPEALS, ADOPTIONS AND NEW AMENDMENTS**

# ITEM 1 Chapter 1, *Division I*, Section *1.1.0* *General*

BSC proposes to bring forward existing California amendments in Chapter 1*, Division I* through Chapter 1, *Division II* from the 2019 California Mechanical Code for adoption into the 2022 edition of the California Mechanical Code with additional amendments as follows:

**CHAPTER1*, CALIFORNIA ADMINISTRATION, DIVISION I***

***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 building regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the ~~2018~~ 2021 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.*** *No change to existing California amendment]*

***Note:*** *See ~~Preface to distinguish the model code provisions from the California provisions~~ “How to Distinguish Between Model Code Language and California Amendments” in the front of the code.*

***…***

***1.2.0 BUILDING STANDARDS COMMISSION***

***1.2.1 BSC*** *[No change to existing California amendment]*

***1.2.2 BSC-CG*** *[No change to existing California amendment]*

***1.2.3 Alternate Materials, Design, and Methods of Construction and Equipment.****,*

*[No change to existing California amendment]*

***…***

**Notation:**

Authority: Health and Safety Code Sections 18928, 18930.5, 18934.5, 18940.5, 18941.8, and 18949.6.

Reference: Health and Safety Code Section 18928.1, 18934.5, 18940.5, 18941.8, and 18949.6.

# ITEM 2 Chapter 1, *Division II* ADMINISTRATION, Section 104 Permits

BSC proposes to adopt only added Section *104.4.3.1* Chapter 1 of the 2021 UMC for use in the 2022 CMC as Administration *Division II*.

***104.4.3.1 Expiration****.* ***[BSC]*** *On or after January 1, 2019, every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 12 months after its issuance or if the work authorized on the site by such permit is suspended or abandoned for a period of 12 months after the time the work is commenced. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated*. *(See Health and Safety Code Section 18938.5 and 18938.6).*

***…***

**Notation:**

Authority: Health & Safety Code Sections 18931(c) and 18938.5(b)2(B)

Reference(s): Health & Safety Code Sections 18938.5(b)2(B), 18938.6

# ITEM 3 Chapter 2, Definitions, Section 209.0

BSC proposes to adopt the entire Chapter 2 of the 2021 UMC, as amended, with amended section (definition) listed below, and carry forward the existing amendment without change.

**CHAPTER 2, DEFINITIONS**

***…***

**209.0 Galvanized steel** *[No change to existing California amendment]*

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 4 Chapter 3, General regulations

BSC proposes to adopt the entire Chapter 3 of the 2021 UMC, without amendment.

**CHAPTER 3, GENERAL REGULATIONS**

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 5 Chapter 4, Ventilation air, Section 402.1 Occupied spaces

BSC proposes to adopt the entire Chapter 4 of the 2021 UMC and carry forward existing amendments with some modification as shown.

**CHAPTER 4, VENTILATION AIR**

***…***

**401.2 Filters. [BSC-CG]** In mechanically ventilated buildings, … in compliance with Chapter 5, Division 5.5. of the California Green Building Standards Code (CALGreen).

***Exception:*** *[No change to existing California amendment]*

***401.2.1 Labeling.*** *[No change to existing California amendment]*

***…***

**402.1 Occupied spaces.** *[Not permitted for OSHPD 1, 2, 3, & 4]* Occupiable spaces listed in Table 402.1 shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter. *~~Ventilation air supply requirements for occupancies regulated by the California Energy Commission are found in the California Energy Code.~~*

**402.1.1…**

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928, 18934.5 and 18940.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 6 Chapters 5 through 14

BSC proposes to adopt Chapters 5 through 14 of the 2021 UMC, without amendment.

**CHAPTER 5 – EXHAUST SYSTEMS**

**CHAPTER 6** **– DUCT SYSTEMS**

**CHAPTER 7 – COMBUSTION AIR**

**CHAPTER 8 – CHIMNEYS AND VENTS**

**CHAPTER 9 – INSTALLATION OF SPECIFIC APPLIANCES**

**CHAPTER 10 – BOILERS AND PRESSURE VESSELS**

**CHAPTER 11 – REFRIGERATION**

**CHAPTER 12 – HYDRONICS**

**CHAPTER 13 – FUEL GAS PIPING**

**CHAPTER 14 – PROCESS PIPING**

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 7 Chapter 15, Solar systems

BSC proposes to NOT adopt Chapter 15 of the 2021 UMC.

**CHAPTER 15 - SOLAR SYSTEMS**

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 8 Chapters 16 and 17

BSC proposes to adopt Chapters 16 and 17 of the 2021 UMC, without amendment.

**CHAPTER 16 – STATIONARY POWER PLANTS**

**CHAPTER 17 – REFERENCED STANDARDS**

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 9 Chapter Appendix A, Residential Plan Examiner Review Form for HVAC System Design

BSC proposes to NOT adopt Appendix Chapter A of the 2021 UMC.

**APPENDIX A** – **Residential Plan Examiner Review Form for HVAC System Design**

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 10 Chapter Appendix B and C

BSC proposes to adopt Appendix Chapters B and C of the 2021 UMC, without amendment.

APPENDIX B – Procedures to be Followed to Place Gas Equipment in Operation.

APPENDIX C – Installation and Testing of Oil (Liquid) Fuel-Fired Equipment.

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

# ITEM 11 Chapter Appendix D through H

BSC proposes to NOT adopt Appendix Chapters D, E, F, G, and H of the 2021 UMC.

APPENDIX D – Fuel Supply: Manufactured/Mobile Home Parks and Recreational Vehicles

APPENDIX E – Sustainable Practices

APPENDIX F – Geothermal Energy Systems

APPENDIX G – Sizing of Venting Systems and Outdoor Combustion and Ventilation Opening Design

APPENDIX H – Example Calculation of Outdoor Air Rate

***…***

**Notation:**

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5