

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF BELMONT ADOPTING THE 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE BY REFERENCE AS AMENDED WITH LOCAL REACH STANDARDS

THE CITY COUNCIL OF THE CITY OF BELMONT DOES ORDAIN AS FOLLOWS:

SECTION 1. REPEALS

All ordinances or parts of ordinances of the City of Belmont that are in conflict with this ordinance are repealed to the extent that they are in conflict with this ordinance.

SECTION 2. DRAFTING SYNTAX

Belmont City Code (BCC) section text is italicized in this ordinance to assist the reader in distinguishing between City of Belmont modifications to the California Building Standards Code and the City Code section text adopting the modifications.

For each section of the California Building Standards Code that is modified in part by the City of Belmont, whole subsections that are not modified are indicated by the subsection number followed by "{text not modified}" with the appropriate acronym for the specific code, which is to be codified as written. Each subsection that is deleted in its entirety by the City of Belmont is indicated by the subsection number followed by "- deleted".

SECTION 3. BCC CHP 7, ART. IV, DIV. 10 ADDED

Division 10 is added to Belmont City Code Chapter 7, Article IV to read:

DIVISION 10 – GREEN BUILDING STANDARDS CODE

Sec. 7-96 2019 California Green Building Standards Code Adopted

The 2019 California Green Building Standards Code (CGBSC), California Code of Regulations, Title 24, Part 11 is adopted by reference as the Green Building Standards Code of the City of Belmont, California. A copy of 2019 CGBSC shall be maintained on file in the office of the City Clerk.

Sec. 7-97 2019 CGBSC Appendix Chapters Adopted

- (a) The following Appendix Chapters of the 2019 California Green Building Standards Code are adopted: none.
- (b) The remaining Appendix Chapters are not adopted unless adopted by a state agency for application to occupancies subject to that agency's jurisdiction.

SECTION 4. BCC SECTION 7-98 AMENDED

Belmont City Code Section 7-98 is amended to read as follows:

Sec. 7-98

Numbering of Amendments to 2019 CGBSC

The 2019 California Green Building Standards Code is amended as provided in Sections 7-98.202, 7-98.4.106, and 7-98.5.106. The number to the right of the first decimal point in these sections corresponds to the section in the 2019 California Green Building Standards Code that is amended.

SECTION 5. BCC SECTION 7-98.202 ADDED

Belmont City Code Section 7-98.202 is added to read:

Sec. 7-98.202

Amendment of 2019 CGBSC Section 202 (Definitions)

Section 202 of the 2019 California Green Building Standards Code is amended by adding or amending the following definitions. Definitions in 2019 CGBSC not shown below are unchanged.

AFFORDABLE HOUSING. Residential buildings that entirely consist of units below market rate and whose rents or sales prices are governed by local agencies to be affordable based on area median income.

ALL-ELECTRIC BUILDING. A building that contains no *combustion equipment* or plumbing for combustion equipment serving space heating (including fireplaces), water heating (including pools and spas), cooking appliances (including barbeques), and clothes drying, within the building or building property lines, and instead uses electric heating appliances for service.

AUTOMATIC LOAD MANAGEMENT SYSTEMS (ALMS). A control system designed to manage load across one or more electric vehicle supply equipment (EVSE), circuits, or panels, and share electrical capacity and/or automatically manage power at each connection point. ALMS systems must be designed to deliver no less than 3.3 kVa (208/240 volt, 16-ampere) to each EV Capable, EV Ready or EVCS space served by the ALMS, and meet the requirements of California Electrical Code Article 625. The connected amperage to the building site for the EV charging infrastructure shall not be lower than the required connected amperage per California Green Building Standards Code, Title 24 Part 11.

COMBUSTION EQUIPMENT. Any equipment or appliance used for space heating, water heating, cooking, clothes drying and/or lighting that uses fuel gas.

COMMERCIAL FOOD HEAT-PROCESSING EQUIPMENT. An equipment used in a food establishment for heat-processing food or utensils and that produces grease vapors, steam, fumes, smoke, or odors that are required to be removed through a local exhaust ventilation system, as defined in the California Mechanical Code.

DIRECT CURRENT FAST CHARGING (DCFC). A parking space provided with electrical infrastructure that meets the following conditions:

- i. A minimum of 48 kVa (480 volt, 100-ampere) capacity wiring.

ii. Electric vehicle supply equipment (EVSE) located within three (3) feet of the parking space providing a minimum capacity of 80-ampere.

ELECTRIC HEATING APPLIANCE. A device that produces heat energy to create a warm environment by the application of electric power to resistance elements, refrigerant compressors, or dissimilar material junctions, as defined in the California Mechanical Code.

ELECTRIC VEHICLE CHARGING STATION (EVCS). A parking space that includes installation of electric vehicle supply equipment (EVSE) at an EV Ready space. An EVCS space may be used to satisfy EV Ready space requirements. EVSE shall be installed in accordance with the California Electrical Code, Article 625.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The electric vehicle charging connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

FUEL GAS. A gas that is natural, manufactured, liquefied petroleum, or a mixture of these.

LABORATORY. Is a building or area where research, experiments, and measurements in medical and life sciences are performed and/or stored requiring examination. The building may include workbenches, countertops, scientific instruments, and supporting offices.

LEVEL 2 EV CAPABLE. A parking space provided with electrical infrastructure that meets the following requirements:

i. Conduit that links a listed electrical panel with sufficient capacity to a junction box or receptacle located within three (3) feet of the parking space.

ii. The conduit shall be designed to provide at least 8.3 kVa (208/240 volt, 40-ampere) per parking space. Conduit shall have a minimum nominal trade size of 1 inch diameter and may be sized for multiple circuits as allowed by the California Electrical Code. Conduit shall be installed at a minimum in spaces that will be inaccessible after construction, either trenched underground or where penetrations to walls, floors, or other partitions would otherwise be required for future installation of branch circuits, and such additional elements deemed necessary by the Building Official. Construction documents shall indicate future completion of conduit from the panel to the parking space, via the installed inaccessible conduit.

iii. The electrical panel shall reserve a space for a 40-ampere overcurrent protective device space(s) for EV charging, labeled in the panel directory as “EV CAPABLE.”

iv. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

v. The parking space shall contain signage with at least a 12” font adjacent to the parking space indicating the space is EV Capable.

LEVEL 1 EV READY. A parking space that is served by a complete electric circuit with the following requirements:

- i. A minimum of 2.2 kVa (110/120 volt, 20-ampere) capacity wiring.
- ii. A receptacle labeled “Electric Vehicle Outlet” or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.
- iii. Conduit oversized to accommodate future Level 2 EV Ready (208/240 volt, 40-ampere) at each parking space.

LEVEL 2 EV READY. A parking space that is served by a complete electric circuit with the following requirements:

- i. A minimum of 8.3 kVa (208/240 volt, 40-ampere) capacity wiring.
- ii. A receptacle labeled “Electric Vehicle Outlet” or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 30-ampere.

LOW POWER LEVEL 2 EV READY. A parking space that is served by a complete electric circuit with the following requirements:

- i. A minimum of 4.1 kVA (208/240 Volt, 20-ampere) capacity wiring.
- ii. A receptacle labeled “Electric Vehicle Outlet” or electric vehicle supply equipment located within three (3) feet of the parking space. If EVSE is provided the minimum capacity of the EVSE shall be 16-ampere.
- iii. Conduit oversized to accommodate future Level 2 EV Ready (208/240 volt, 40-ampere) at each parking space.

SECTION 6. BCC SECTION 7-98.4.106 AMENDED

Belmont City Code Section 7-98.4.106 is added as follows:

Sec. 7-98.4.106 Amendment of 2019 CGBSC Section 4.106 (Site Development)

2019 California Building Code Section 4.106 (Residential Mandatory Measures – Site Development) is amended to read:

4.106.1 – 4.106.3 {text unchanged}

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers.

Exceptions:

1. Where there is no commercial power supply.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities and without electrical panel upgrade or new panel installation. ADUs and JADUs without additional parking but with electrical panel upgrades or new panels must have reserved breakers and electrical capacity according to the requirements of 4.106.4.1.
3. Multifamily residential occupancy R-2 building projects with valid entitlements granted by the City that have not otherwise expired before the effective date of this ordinance shall provide at least ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, with *Level 2 EV Ready* circuits. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.
4. Code official may consider allowing exceptions on a case-by-case basis, if a building permit applicant provides documentation detailing that the increased cost of utility service or on-site transformer capacity would exceed an average of \$4,500 among parking spaces with *Level 2 EV Ready* Spaces and *Level 1 EV Ready* Spaces. If costs are found to exceed this level, the applicant shall provide EV infrastructure up to a level that would not exceed this cost for utility service or on-site transformer capacity.
5. One *DCFC* may be substituted for up to five (5) *EVCS* to meet the requirements Where *ALMS* serve *DCFC* stations, the power demand from the *DCFC* shall be prioritized above Level 1 and Level 2 spaces.

4.106.4.1 New one- and two-family dwellings and town- houses with attached private garages. For each dwelling unit, install a *Level 2 EV Ready Space* and *Level 1 EV Ready Space*.

Exception: For each dwelling unit with only one parking space, install a *Level 2 EV Ready Space*.

4.106.4.1.1 - deleted

4.106.4.2 New multifamily dwellings. The following requirements apply to all new multifamily occupancy R-2 dwellings.

1. New Construction

1.1 *Affordable Housing*

1.1.1 Fifteen percent (15%) of dwelling units with parking spaces shall be provided with at least a *Level 2 EV Ready space* and be *EVCS*. *ALMS* shall be permitted to reduce load when multiple vehicles are charging.

1.1.2 Twenty-five percent (25%) of dwelling units with parking spaces shall be provided with a *Low Power Level 2 EV Ready space*.

1.1.3 Sixty percent (60%) of dwelling units with parking spaces shall be provided with at minimum a *Level 1 EV Ready space*.

1.2. *All Other*

a. Forty percent (40%) of dwelling units with parking spaces shall be provided with at least a *Level 2 EV Ready space* and be *EVCS*. *ALMS* shall be permitted to reduce load when multiple vehicles are charging.

b. Sixty percent (60%) of dwelling units with parking spaces shall be provided with at minimum a *Level 1 EV Ready space*.

2. Existing Buildings

2.1 When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten percent (10%) of the total number of parking spaces added or altered shall be *EVCS*.

2.2 When new parking facilities are added and *ALMS* is installed, the *ALMS* system must be designed to deliver no less than 2.2 kVa (110/120 volt, 20-ampere).

Notes:

1. Installation of *Level 2 EV Ready Spaces* above the minimum number required level may offset the minimum number *Level 1 EV Ready Spaces* required on a 1:1 basis.
2. The requirements apply to multifamily buildings with parking spaces including: a) assigned or leased to individual dwelling units, and b) unassigned residential parking.
3. In order to adhere to accessibility requirements in accordance with California Building Code Chapters 11A and/or 11B, it is recommended that all accessible parking spaces for covered newly constructed multifamily dwellings are provided with *Level 1 or Level 2 EV Ready Spaces*.

4.106.4.2.1 {text unchanged}

4.106.4.2.1.1 {text unchanged}

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).

2. The minimum width of each EV space shall be 9 feet (2743 mm).
3. One in every 25 EV spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).
 - a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

Exception: Where the city's development regulations permit parking space dimensions that are less than the minimum requirements stated in this section 4.106.4.2.2, and the compliance with which would be infeasible due to particular circumstances of a project, an exception may be granted while remaining in compliance with 2019 California Building Code Section Table 11B-228.3.2.1 and 11B-812, as applicable.

4.106.4.2.3 – deleted

4.106.4.2.4 – deleted

4.106.4.2.5 – deleted

4.106.4.3 – 4.106.4.3.6 {text unchanged}

4.106.5 All-electric buildings. New construction buildings and qualifying alteration projects shall comply with Section 4.106.5.1 or 4.106.5.2 so that they do not use *combustion equipment* or are ready to accommodate installation of *electric heating appliances*.

4.106.5.1. New construction and qualifying alteration projects. All newly constructed buildings shall be *all-electric buildings*. Alterations that include replacement of over 50 percent of the existing foundation for purposes other than a repair or reinforcement as defined in California Existing Building Code Section 202; or where over 50 percent of the existing framing above the sill plate is removed or replaced for purposes other than repair, shall be *all-electric buildings*. If either of these criteria are met within a three-year period, measured from the date of the most recent previously obtained permit final date, the project shall be subject to the *all-electric buildings* requirements.

Tenant improvements shall not be considered new construction. The final determination whether a project meets the definition of substantial reconstruction/alteration shall be made by the local enforcing agency.

Exceptions:

1. Multifamily residential building projects that have approved entitlements before the effective date of this section may install *fuel gas* for water heating systems serving multiple dwelling units. The applicant shall comply with Section 4.106.5.2.

2. If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building under the California Building Energy Efficiency Standards, and that the building is not able to achieve the performance compliance standard applicable to the building under the Energy Efficiency Standards using commercially available technology and an approved calculation method, then the local enforcing agency may grant a modification. The applicant shall comply with Section 4.106.5.2.

Local enforcing agency may approve alternative materials, design and methods of construction or equipment per California Building Code Section 104.

4.106.5.2 Requirements for *combustion equipment*.

Where *combustion equipment* is allowed per Exceptions under 4.106.5.1, the construction drawings shall indicate electrical infrastructure and physical space accommodating the future installation of an *electrical heating appliance* in the following ways, as certified by a registered design professional or licensed electrical contractor:

1. Branch circuit wiring, electrically isolated and designed to serve all *electrical heating appliances* in accordance with manufacturer requirements and the California Electrical Code, including the appropriate voltage, phase, minimum amperage, and an electrical receptacle or junction box within five feet of the appliance that is accessible with no obstructions. Appropriately sized conduit may be installed in lieu of conductors; and,
2. Labeling of both ends of the unused conductors or conduit shall be with “For Future Electrical Appliance”; and,
3. Reserved circuit breakers in the electrical panel for each branch circuit, appropriately labeled (i.e. “Reserved for Future Electric Range”), and positioned on the opposite end of the panel supply conductor connection; and,
4. Connected subpanels, panelboards, switchboards, busbars, and transformers shall be sized to serve the *future electrical heating appliances*. The electrical capacity requirements shall be adjusted for demand factors in accordance with the California Electric Code; and,
5. Physical space for future *electrical heating appliances*, including equipment footprint, and if needed a pathway reserved for routing of ductwork to heat pump evaporator(s), shall be depicted on the construction drawings. The footprint necessary for future *electrical heating appliances* may overlap with non-structural partitions and with the location of currently designed *combustion equipment*.

SECTION 7. BCC SECTION 7-98.5.106 ADDED

Belmont City Code Section 7-98.5.106 is added as follows:

2019 California Building Code Section 5.106 (Nonresidential Mandatory Measures – Site Development) is amended to read:

5.106.1 through 5.106.5.2.1 {text unchanged}

5.106.5.3 Electric vehicle (EV) charging. [N] New construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code*, the *California Electrical Code* and as follows:

Exceptions:

1. Where there is no commercial power supply.
2. One *DCFC* may be substituted for up to five (5) *EVCS* to meet the requirements. Where *ALMS* serve *DCFC* stations, the power demand from the *DCFC* shall be prioritized above Level 1 and Level 2 spaces.

5.106.5.3.1 Class B Office buildings: Shared Parking Facilities.

1. *New Construction*
 - 1.1 Twenty percent (20%) of parking spaces provided shall be *Level 2 EV Ready* and *EVCS*. *ALMS* shall be permitted to reduce load when multiple vehicles are charging.
 - 1.2 Thirty percent (30%) of parking spaces provided shall be *Level 2 EV Capable*.
2. *Existing Building*. When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten percent (10%) of the total number of parking spaces added or altered shall be *Level 2 EV Ready* and *EVCS*.

5.106.5.3.2 Other nonresidential buildings – shared parking facilities:

1. *New Construction*
 - 1.1 Ten percent (10%) of parking spaces provided shall be *Level 2 EV Ready* and *EVCS*. *ALMS* shall be permitted to reduce load when multiple vehicles are charging.
 - 1.2 Ten percent (10%) of parking spaces provided shall be *Level 2 EV Capable*.
2. *Existing Building*: When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work

requires a building permit, ten percent (10%) of the total number of parking spaces added or altered shall be *Level 2 EV Ready* and *EVCS*.

5.106.5.3.3 Clean Air Vehicle Parking Designation. EVCS qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/policy/13-01.pdf.
2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.
3. The Governor’s Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.
4. Section 11B-812 of the California Building Code requires that a facility providing EVCS for public and common use also provide one or more accessible EVCS as specified in Table 11B-228.3.2.1.
5. It is encouraged that EV Ready parking spaces are designated as “EV preferred.”

5.106.5.3.4 - deleted

5.106.5.3.5 – deleted

5.106.8 through 5.106.12.3 {text unchanged}

5.106.13 All-electric buildings. New construction buildings and qualifying alteration projects shall comply with Section 5.106.13.1 or 5.106.13.2 so that they do not use *combustion equipment* or are ready to facilitate future electrification.

5.106.13.1. New construction and qualifying alteration projects. All newly constructed buildings shall be *all-electric buildings*. Alterations that include replacement of over 50 percent of the existing foundation for purposes other than a repair or reinforcement as defined in California Existing Building Code Section 202; or where over 50 percent of the existing framing above the sill plate is removed or replaced for purposes other than repair, shall be *all-electric buildings*. If either of these criteria are met within a three-year period, measured from the date of the most recent previously obtained permit final date, the project shall be subject to the *all-electric buildings* requirements.

Tenant improvements shall not be considered new construction. The final determination whether a project meets the definition of substantial reconstruction/alteration shall be made by the local enforcing agency.

Exceptions:

1. Nonresidential buildings containing kitchens located in a place of public accommodation, as defined in the California Building Code Chapter 2, may apply to the local enforcing agency for a modification to install *commercial food heat-processing equipment* served by *fuel gas*. The local enforcing agency may grant the modification if they find:
 - a. A business-related need to cook with combustion *equipment*; and,
 - b. The need cannot be achieved equivalently with an *electric heating appliance*; and,
 - c. The applicant has employed reasonable methods to mitigate the greenhouse gas emissions of the *combustion equipment*.

The applicant shall comply with Section 5.106.13.2.

2. Laboratory areas within Non-Residential Buildings may contain non-electric Space Conditioning Systems. To implement this exception, an applicant shall provide third party verification that the All-Electric space heating requirement is not cost effective and feasible. The applicant shall comply with Section 5.106.13.2.
3. Hotels and motels with eighty or more guestrooms may utilize *fuel gas* in on-site commercial clothes drying equipment. The applicant shall comply with Section 5.106.13.2.
4. If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building under the California Building Energy Efficiency Standards, and that the building is not able to achieve the performance compliance standard applicable to the building under the Energy Efficiency Standards using commercially available technology and an approved calculation method, then the local enforcing agency may grant a modification. The applicant shall comply with Section 5.106.13.2

Local enforcing agency may approve alternative materials, design and methods of construction or equipment per California Building Code Section 104.

5.106.13.2. Requirements for *combustion equipment*. Where *combustion equipment* is allowed per exceptions under Section 5.106.13.1, the construction drawings shall indicate electrical infrastructure and physical space accommodating the future installation of an *electrical heating appliance* in the following ways, as certified by a registered design professional or licensed electrical contractor:

1. Branch circuit wiring, electrically isolated and designed to serve all *electrical heating appliances* in accordance with manufacturer requirements and the California Electrical Code, including the appropriate voltage, phase, minimum amperage, and an electrical receptacle or junction box within five feet of the appliance that is accessible with no obstructions. Appropriately sized conduit may be installed in lieu of conductors; and,
2. Labeling of both ends of the unused conductors or conduit shall be with “For Future Electrical Appliance”; and,
3. Reserved circuit breakers in the electrical panel for each branch circuit, appropriately labeled (i.e “Reserved for Future Electric Range”), and positioned on the opposite end of the panel supply conductor connection; and
4. Connected subpanels, panelboards, switchboards, busbars, and transformers shall be sized to serve the *future electrical heating appliances*. The electrical capacity requirements shall be adjusted for demand factors in accordance with the California Electric Code; and
5. Physical space for future *electrical heating appliances*, including equipment footprint, and if needed a pathway reserved for routing of ductwork to heat pump evaporator(s), shall be depicted on the construction drawings. The footprint necessary for future *electrical heating appliances* may overlap with non-structural partitions and with the location of currently designed *combustion equipment*.

SECTION 8. SEVERABILITY.

If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held by a court of competent jurisdiction to be invalid, such a decision shall not affect the validity of the remaining portions of this Ordinance. The City Council of the City of Belmont hereby declares that it would have passed this Ordinance and each section or subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 9. EFFECTIVE DATE.

This Ordinance shall take effect and will be enforced thirty (30) days after its adoption.

* * *

The City Council of the City of Belmont, California introduced the foregoing ordinance, on [insert date], 2022 and adopted the ordinance at a regular meeting held on [insert date], 2022 by the following vote:

Ayes:

Noes:

Absent:

Abstain:

ATTEST:

City Clerk

Mayor

APPROVED AS TO FORM:

City Attorney