ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO

AMENDING MUNICIPAL CODE CHAPTERS 15.11 AND 15.25 OF TITLE 15 (BUILDINGS AND CONSTRUCTION) OF THE EAST PALO ALTO MUNICIPAL CODE TO ADOPT A LOCAL "REACH" CODCE AND ADOPTING FINDINGS JUSTIFYING THE LOCAL AMENDMENTS TO THE 2022 CALIFRONIA GREEN BUILDING STANDARDS CODE AND THE 2022 CALIFORNIA ENERGY CODE

WHEREAS, on January 6, 2023 the City of East Palo Alto ("City") adopted the 2022 California Energy Code, with amendments to make it a "reach" code, in accordance with law and to use the most updated regulations in the processing of development in the City; and

WHEREAS, California Health and Safety Code section 17958 requires that cities adopt building regulations that are substantially the same as those adopted by the California Building Standards Commission and contained in the California Building Standards; and

WHEREAS, the California Energy Code is a part of the California Building Standards which implements minimum energy efficiency standards in building through mandatory requirements, prescriptive standards, and performance standards; and

WHEREAS, California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5 provide that the City may make changes or modifications to the building standards contained in the California Building Standards based upon express finding that such changes or modifications are reasonably necessary because of local climatic, geological or topographical conditions; and

WHEREAS, the City Council of the City of East Palo Alto finds that each of the amendment additions and deletions to the California Energy Code contained in this ordinance are reasonably necessary because of local climatic, geological or topographical conditions; and

WHEREAS, Public Resources Code Section 25402.1(h)2 and Section 10-106 of the Building Energy Efficiency Standards (Standards) establish a process which allows local adoption of energy standards that are more stringent than the statewide Standards, provided that such local standards are cost effective and the California Energy Commission finds that the standards will require building to be designed to consume no more energy than permitted by the California Energy Code; and

WHEREAS, on or about September 20, 2016, the State of California enacted Senate Bill (SB) 32, which added Health and Safety Code Section 38566 to require

greenhouse gas emissions to be reduced to 40 percent below 1990 levels by no later than December 31, 2030; and

WHEREAS, in December 2011, the City Council adopted the City's Climate Action Plan (CAP), which included policies directing staff to prepare a "green building policy"; and

WHEREAS, such modifications will result in designs that consume less energy than they would under the 2022 State Energy Code through the California Codes and Standards Reach Code Program, the State has performed cost effectiveness analyses as required by the California Energy Commission for the local amendments to the California Energy Code contained in this ordinance which is hereby incorporated by reference; and

WHEREAS, consistent with the CAP, the local amendments to the 2022 California Building Codes, including the California Green Building Code, establish requirements for single-family (e.g., townhomes), multifamily, and nonresidential structures to electrify, which will reduce demands for local energy and resources, reduce regional pollution, and promote a lower contribution to greenhouse gases emissions as evidenced by the statewide cost-effectiveness studies prepared by the California Statewide Investor Owned Utilities Codes and Standards Program, which demonstrate the potential for both a reduction in emissions and energy usage; and

WHEREAS, cost effectiveness studies prepared by the California Statewide Investor-Owned Utilities Codes and Standards Program demonstrate that the local amendments are cost-effective and do not result in buildings consuming more energy than is permitted by the 2022 California Green Building Code; and

WHEREAS, that such modifications will result in designs that consume less energy than they would under the 2022 State Energy Code through the California Codes and Standards Reach Code Program, has performed cost effectiveness analyses as required by the California Energy Commission for the local amendments to the California Energy Code contained in this ordinance which is hereby incorporated by reference;

WHEREAS, based upon these analyses, the City Council of the City of East Palo Alto finds that the local amendments to the California Energy Code contained in this ordinance are cost effective and will require buildings to be designed to consume no more energy than permitted by the California Energy Code;

WHEREAS, because of the City's unique local climatic, geologic and topographic conditions, the City desires to make amendment and additions to the code.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF EAST PALO ALTO DOES ORDAIN AS FOLLOWS:

SECTION 1. INCORPORATION OF RECITALS

The City Council finds that all the foregoing recitals are true and correct and incorporated herein by reference.

SECTION 2: PURPOSE AND INTENT

It is the purpose and intent of this Ordinance to adopt the local amendments to the 2022 California Energy Code (Title 24, Part 6) that provide local, cost effective standards for new residential, non-residential, and hotel and motel buildings that exceed the minimum standards of the 2022 California Energy Code to achieve energy savings, reduce local pollution, reduce greenhouse gas emissions, and address unique local climatic, geological, and topographical conditions.

SECTION 3: LOCAL CONDITIONS

The City Council makes the following findings regarding local climatic, geological, topographical, and environmental conditions related to the local amendments to the 2022 California Green Building Code and California Energy Code, as described below:

The following local climatic, conditions justify modifications to the California Building Standards Code:

a. Climatic: The City is located in Climate Zones 3 and 4 as established in the 2022 California Energy Code, Climate Zones 3 and 4 incorporate mostly coastal communities from Marin County to southern Monterey County including San Francisco. The City experiences precipitation ranging from 13 to 20 inches per year with an average of approximately 15 inches per year. Ninety- five percent of precipitation falls during the months of November through April, leaving a dry period of approximately six months each year. Relative humidity remains moderate most of the time. Temperatures in the summer average around 80 degrees Fahrenheit and in the winter in the mid 50 degrees Fahrenheit. Prevailing winds in the area come from the west with velocities generally in the 12 miles per hour range, gusting from 25 to 35 miles per hour.

   These climatic conditions along with the greenhouse emissions generated from structures in both the residential and nonresidential sectors requires exceeding the energy standards for building construction established in the 2022 California Buildings Standards Code. The City Council also adopted a Climate Action Plan that has a goal of reducing greenhouse gas emissions. In order to achieve and maintain this goal, the City needs to adopt policies and regulations that reduce the use of fossil fuels that contribute to climate change, such as natural gas in buildings, in new development.

Human activities, such as burning natural. gas to heat buildings, releases greenhouse gases into the atmosphere and causes an overall increase in global average temperature. This causes sea levels to rise, affecting the City's shoreline and infrastructure. Roughly 49% of the City remains in a regulatory flood inundation zone associated with the 100 -year sea level rise FEMA maps adopted April, 2019. San Francisquito Creek also runs through the City, which creates an increasing potential flooding risk with climate change as a result of human generated greenhouse gas emissions. East Palo Alto is vulnerable to sea level rise where new developments are proposed in this code cycle. New buildings that are directly vulnerable to sea level rise should avoid generating additional greenhouse gas emissions.

The proposed Reach Code would ensure that new buildings use cleaner sources of energy that are greenhouse gas free. Vehicular traffic through East Palo Alto is significant, and it continues to increase as East Palo Alto, and it' s neighboring cities, become an employment center as well as the location of residential projects. Moreover, the observed increase in plug- in electric vehicle adoption reduces the climate impact of vehicular greenhouse gas emissions.

b. Seismic/Geologic: The City of East Palo Alto is subject to earthquake hazard caused by its proximity to San Andreas fault. This fault runs from Hollister, through the Santa Cruz Mountains, epicenter of the 1989 Loma Prieta earthquake, then on up the San Francisco Peninsula, then offshore at Daly City near Mussel Rock. This is the approximate location of the epicenter of the 1906 San Francisco earthquake. The other fault is Hayward Fault. This fault is about 74 miles long, situated mainly along the western base of the hills on the east side of San Francisco Bay. Both of these faults are considered major Northern California earthquake faults which may experience rupture at any time. Thus, because the City is within a seismic area which includes these earthquake faults, the modifications and changes cited herein are designed to better limit property damage as a result of seismic activity and to 2of14 establish criteria for repair of damaged properties following a local emergency. In the event of a natural disaster such as an earthquake or fire, the natural gas infrastructure in and around the City of East Palo Alto presents a risk to the life and safety of residents and first responders. Moreover, the electric grid system can be brought back online more swiftly than the natural gas pipeline when the community is recovering from such an event.

c. Topographic: The City of East Palo Alto is a low-lying contiguous portion of the San Francisco Bay, resulting in a natural receptor for storm and wastewater run-off. Also, the City is located in an area that has relatively high liquefaction potential given its proximity to the Bay. The surface condition consists mostly of stiff to dense sandy clay, which is highly plastic and expansive in nature. The aforementioned conditions within the City create hazardous conditions for which departure from the California Building Standards Code is warranted.

SECTION 4: LOCAL **AMENDMENTS TO GREEN BUILDING CODE**

Notwithstanding any provisions of the 2022 California Green Building Standards Code, or other codes adopted in any Chapter in the East Palo Alto Municipal Code to the contrary, the City Council hereby amends and replaces it with the following local amendments to the 2022 California Green Building Standards Code underlined for additions and ~~strike through~~ for deletions; otherwise, unchanged). Sections and subsections that are not amended by this Ordinance are not included below and shall remain in full force and effect.

CHAPTER 2
DEFINITIONS

[…]

SECTION 202
GENERAL

[…]

~~**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.~~

[…]

~~**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.~~

[…]

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

[…]

CHAPTER 4

RESIDENTIAL MANDATORY MEASURES

Division 4.1 PLANNING AND DESIGN

[…]

SECTION 4.106
SITE DEVELOPMENT

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 or addition 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 Building Official.

Exceptions:

1. If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building system 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 Building Official may grant a modification. The applicant shall comply with Section 4.106.5.2.

2. All-Electric domestic water heating requirements shall not apply to new residential structures that have central water heating and entirely consist of affordable rental units, defined as units rented at an amount consistent with the maximum rent levels for a housing development that receives an allocation of state or federal low-income housing tax credits from the California Tax Credit Allocation Committee. Residential developments meeting the above definition must have an Inclusionary Housing Plan that is approved by the Housing Division pursuant to Section 18.37.090.

3. Multifamily residential building projects that have been granted planning entitlements before January 1, 2021, or have been approved, before the effective date of this ordinance, are not required to install all-electric water heating systems. If the Building Official grants a modification pursuant to this Exception, the applicant shall comply with the pre-wiring provision of Note 1 below.

4. When improvements to existing buildings contain physical constraints that prevent conformance to the All-Electric Building requirements, the applicant may request an exception. In applying for an exception, the burden is on the applicant to identify the size requirements to comply with an All-Electric Building.

Inactive *Fuel Gas Infrastructure* may be extended to spaces that are anticipated to qualify for the exceptions contained in this chapter. The inactive *Fuel Gas Infrastructure* shall not be activated, have a meter installed, or otherwise used unless the exemptions specified in this chapter have been confirmed as part of the issuance of a building permit. If the *Fuel Gas Infrastructure* is no longer serving one of the exceptions contained in this chapter, it shall either be capped, otherwise terminated, or removed by the entity previously entitled to the exemption, in a manner pursuant to all applicable Codes.

The City shall have the authority to 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 (e.g.. "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.

CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES
Division 5.1 PLANNING AND DESIGN
SECTION 5.106
SITE DEVELOPMENT

5.106.5.3.2 Hotel and Motel Occupancies – Shared Parking Facilities.

5.106.5.3.2.1 New Construction. Five percent (5%) of parking spaces provided shall be EVCS with Level 2 EV Ready. ALMS shall be permitted to reduce load when multiple vehicles are charging. Twenty-five percent (25%) of parking spaces provided shall be Low Power Level 2 EV Ready space. Ten percent (10%) of parking spaces provided shall be Level 2 EV Capable.

5.106.5.3.2.2 Existing Buildings. 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 with Level 2 EV Ready. Any existing EV Capable spaces on the building property required by the locally adopted codes at the time of building permit shall be upgraded to a minimum of Level 1 EV Ready. Upgrades shall be required at currently designated vehicle parking spaces. Upgrades shall be required for remaining parking spaces after meeting the accessibility requirements of California Building Code Chapters 11A and 11B.

[…]

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 Building Official.

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 Building Official for a modification to install *commercial food heat-processing equipment* served by *fuel gas*. The Building Official 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 installed energy efficient equipment based on Energy Star or California Energy Wise qualifications, as available.

   d. The applicant shall comply with Section 5.106.13.2.

2. If the applicant establishes that there is not an all-electric prescriptive compliance pathway for the building system 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 Building Official may grant a modification. The applicant shall comply with Section 5.106.13.2.

3. Non-Residential Buildings containing a Scientific Laboratory Building, such area may contain a non-electric Space Conditioning System.

3. Exemption for public agency owned and operated emergency centers. To take advantage of this exception applicant shall provide third party verification that All-Electric space heating requirement is not cost effective and feasible.

4. When improvements to existing buildings contain physical constraints that prevent conformance to the All-Electric Building requirements, the applicant may request an exception. In applying for an exception, the burden is on the applicant to identify the size requirements to comply with an All-Electric Building.

Inactive Fuel Gas Infrastructure may be extended to spaces that are anticipated to qualify for the exceptions contained in this chapter. The inactive Fuel Gas Infrastructure shall not be activated, shall not have a meter installed, and/or shall not otherwise be used unless the exemptions specified in this chapter have been confirmed as part of the issuance of a building permit. If the Fuel Gas Infrastructure is no longer serving one of the exceptions contained in this chapter, it shall either be capped, otherwise terminated, or removed by the entity previously entitled to the exemption, in a manner pursuant to all applicable Codes.

The Building Official shall have the authority to 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 (e.g., "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 5: AMENDMENTS TO CALIFORNIA ENERGY CODE

The City Council hereby amends and replaces Chapter 15.25 of the East Palo Alto Municipal Code to read as follows (with text in ~~strikeout~~ indicating deletion and underlined text indicating addition). Sections and subsections that are not amended by this Ordinance are not included below and shall remain in full force and effect.

15.25.010 Adoption by reference.

The City of East Palo Alto ("City") hereby adopts by reference as the Energy Code of the City of East Palo Alto, the California Building Energy Efficiency Standards, 2022 Edition, Title 24, Part 6 of the California Code of Regulations ("2022 California Energy Code") in its full form with the following amendments. All references to jurisdictional requirements are found in the East Palo Alto Municipal Code or other appropriate schedules.

One copy of the 2022 California Energy Code, as amended, is and shall be maintained on file in the office of the building official, for use and examination by the public.

15.25.020 Energy Code amendments.

Energy Code amendments are as follows:

SECTION 100.1(b) – DEFINITIONS AND RULES OF CONSTRUCTION

Section 100.1(b) is modified by adding the following definitions:

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.

NET FREE AREA (NFA) is the total unobstructed area of the air gaps between louver and grille slats in a vent through which air can pass. The narrowest distance between two slats, perpendicular to the surface of both slats is the air gap height. The narrowest

width of the gap is the air gap width. The NFA is the air gap height multiplied by the air gap width multiplied by the total number of air gaps between slats in the vent.

SECTION 120.2 – REQUIRED CONTROLS FOR SPACE-CONDITIONING SYSTEMS

Subchapter 3 is amended to add Section 120.2(l) to be numbered, entitled, and to read as follows:

(l) HVAC Hot Water Temperature. Zones that use hot water for space heating shall be designed for a hot water supply temperature of no greater than 130 °F.

SECTION 120.6 – GENERAL

Subchapter 3 is amended to add Section 120.6 to be numbered, entitled, and to read as follows:

(a) – (j): Subsections 120.6(a) – (j) are adopted without modification.

(k) Mandatory requirements for commercial kitchens. Electric Readiness for Newly Constructed Commercial Kitchens shall meet the following requirements:

1. Quick-service commercial kitchens and institutional commercial kitchens shall meet all of the following requirements:

a. Include a dedicated branch circuit wiring and outlet that would be accessible to cookline appliances.

b. The branch circuit conductors shall be rated at 50 amps minimum.

c. The electrical service shall have a capacity not less than 800 amps.

2. Main electrical service panel shall be sized to accommodate at least two additional 50 amp breakers.

SECTION 130.0 – LIGHTING SYSTEMS AND EQUIPMENT, AND ELECTRICAL POWER DISTRIBUTION SYSTEMS —GENERAL

Section 130.0 is amended to read as follows:

a. The design and installation of all lighting systems and equipment in nonresidential and hotel/motel buildings, outdoor lighting, and electrical power distribution systems

within the scope of Section 100.0(a), shall comply with the applicable provisions of Sections 130.0 through 130.6.

NOTE: The requirements of Sections 130.0 through 130.6 apply to newly constructed buildings. Section 141.0 specifies which requirements of Sections 130.0 through 130.6 also apply to additions and alterations to existing buildings.

SECTION 130.6 – ELECTRIC READINESS REQUIREMENTS FOR SYSTEMS USING GAS OR PROPANE

Subchapter 4 is amended to add Section 130.6 to be numbered, entitled, and to read as follows:

130.6 Electric Readiness Requirements for Systems Using Gas or Propane

Where nonresidential systems using gas or propane are installed, the construction drawings shall indicate electrical infrastructure and physical space accommodating the future installation of an electric heating appliance in the following ways, as certified by a registered design professional or licensed electrical contractor.

a) Branch circuit wiring, electrically isolated and designed to serve all electric 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

b) Labeling of both ends of the unused conductors or conduit shall be with “For Future Electrical Appliance”; and

c) Reserved circuit breakers in the electrical panel for each branch circuit, appropriately labeled (e.g. “Reserved for Future Electric Range”), and positioned on the opposite end of the panel supply conductor connection; and

d) Connected subpanels, panelboards, switchboards, busbars, and transformers shall be sized to serve the future electric heating appliances. The electrical capacity requirements shall be adjusted for demand factors in accordance with the California Electric Code; and

e) Physical space for future electric 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 electric heating appliances may overlap with non-structural partitions and with the location of currently designed combustion equipment.

SECTION 140.0 – PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES

Section 140.0 is amended to read as follows:

Nonresidential and hotel/motel buildings shall comply with all of the following:

a) The requirements of Sections 100.0 through 110.12 applicable to the building project (mandatory measures for all buildings).

b) The requirements of Sections 120.0 through 130.6 (mandatory measures for nonresidential and high-rise residential and hotel/motel buildings).

c) Either the performance compliance approach (energy budgets) specified in Section 140.1 or the prescriptive compliance approach specified in Section 140.2 for the Climate Zone in which the building will be located. Climate zones are shown in FIGURE 100.1-A.

NOTE to Section 140.0(c): The Commission periodically updates, publishes and makes available to interested persons and local enforcement agencies precise descriptions of the Climate Zones, which is available by zip code boundaries depicted in the Reference Joint Appendices along with a list of the communities in each zone.

NOTE to Section 140.0: The requirements of Sections 140.1 through 140.9 apply to newly constructed buildings. Section 141.0 specifies which requirements of Section 140.1 through 140.9 also apply to additions or alterations to existing buildings.

SECTION 140.1 - PERFORMANCE APPROACH: ENERGY BUDGETS

Section 140.1 is amended to read as follows:

A building complies with the performance approach provided that:

1. The time-dependent valuation (TDV) energy budget calculated for the Proposed Design Building under Subsection (b) is no greater than the TDV energy budget calculated for the Standard Design Building under Subsection (a), and

2. The source energy budget calculated for the proposed design building under Subsection (b) has a source energy compliance margin, relative to the energy budget calculated for the standard design building under Subsection (a), of at **least 7 percent** for all nonresidential occupancies.

EXCEPTION 1 to 140.1 item 2 A source energy compliance margin of **0 percent** or greater is required when nonresidential occupancies are designed with single zone space-conditioning systems complying with Section 140.4(a)2.

(a) – (c) Subsections 140.1 (a) – (c) are adopted without modification.

Section 150.0 is amended as follows:

Single-family residential buildings shall comply with the applicable requirements of Sections 150(a) through 150.0(v).

NOTE: The requirements of Sections 150.0 (a) through (v) apply to newly constructed buildings. Sections 150.2(a) and 150.2(b) specify which requirements of Sections 150.0(a) through 150.0(r) also apply to additions or alterations. The amendments to sections 150.0 (t) do not apply to additions or alterations.

(a) – (s): Subsections 150.0(a) – (s) are adopted without modification.

(t) Heat pump space heater ready. Systems using gas or propane furnace to serve individual dwelling units shall include the following:

1. A dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the furnace and accessible to the furnace with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as “240V ready.” All electrical components shall be installed in accordance with the California Electrical Code.

2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future heat pump space heater installation. The reserved space shall be permanently marked as “For Future 240V use.”

3. A designated exterior location for a future heat pump compressor unit with either a drain or natural drainage for condensate.

(u) – (v): Subsections 150.0(u) – (v) are adopted without modification.

SECTION 150.1 - PERFORMANCE AND PRESCRIPTIVE COMPLIANCE APPROACHES FOR SINGLE FAMILY RESIDENTIAL BUILDINGS

Section 150.1 is amended to read as follows:

(a) Section (a) is adopted without modification

(b) Performance Standards. A building complies with the performance standards if the energy consumption calculated for the proposed design building is no greater than the energy budget calculated for the standard design building using Commission-certified compliance software as specified by the Alternative Calculation Methods Approval Manual, as specified in sub-sections 1, 2 and 3 below.

1. Newly Constructed Buildings. The Energy Budget for newly constructed buildings is expressed in terms of the Energy Design Ratings, which are based on source energy and time-dependent valuation (TDV) energy. The Energy Design Rating 1 (EDR1) is based on source energy. The Energy Design Rating 2 (EDR2) is based on TDV energy and has two components, the Energy Efficiency Design Rating, and the Solar Electric Generation and Demand Flexibility Design Rating. The total Energy Design Rating shall account for both the Energy Efficiency Design Rating and the Solar Electric Generation and Demand Flexibility Design Rating. The proposed building shall separately comply with the Source Energy Design Rating, Energy Efficiency Design Rating and the Total Energy Design Rating. A building complies with the performance approach if the TDV energy budget calculated for the proposed design building is no greater than the TDV energy budget calculated for the Standard Design Building AND Source Energy compliance margin of at least 9, relative to the Source Energy Design Rating 1 calculated for the Standard Design building.

   EXCEPTION 1 to Section 150.1(b)1. A community shared solar electric generation system, or other renewable electric generation system, and/or community shared battery storage system, which provides dedicated power, utility energy reduction credits, or payments for energy bill reductions, to the permitted building and is approved by the Energy Commission as specified in Title 24, Part 1, Section 10-115, may offset part or all of the solar electric generation system Energy Design Rating required to comply with the Standards, as calculated according to methods established by the Commission in the Residential ACM Reference Manual.
   EXCEPTION 2 to Section 150.1(b)1. A newly constructed building with a conditioned floor area less than 1,500 square feet shall achieve a Source Energy compliance margin of 4 or greater, relative to the Source Energy Design Rating 1 calculated for the Standard Design building.

   EXCEPTION 3 to Section 150.1(b)1. Due to conditions specific to the project, if it is technically infeasible to achieve source energy compliance margins mandated by City, the Building Official may reduce the compliance margin for a newly constructed building. The

Building Official may adopt interpretative guidance to implement this exception.

2. Additions and Alterations to Existing Buildings. The Energy Budget for additions and alterations is expressed in terms of TDV energy.

3. Section (b)(3) is adopted without modification.

(c) Section (c) is adopted without modification.

SECTION 160.4 MANDATORY REQUIREMENTS FOR WATER HEATING SYSTEMS

Section 160.4 is amended to remove subsection (a) as follows:

(a) Reserved. ~~Systems using gas or propane water heaters to serve individual dwelling units shall include the following components:~~

~~1. A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within 3 feet from the water heater and accessible to the water heater with no obstructions. In addition, all of the following:~~

~~A. Both ends of the unused conductor shall be labeled with the word "spare" and be electrically isolated; and~~

~~B. A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words "Future 240V Use"; and~~

~~2. A Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; and~~

~~3. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance; and~~

~~4. A gas supply line with a capacity of at least 200,000 Btu/hr.~~

Sections (b) to (f) are adopted without amendments.

SECTION 160.9 MANDATORY REQUIREMENTS FOR ELECTRIC READY BUILDINGS

Section 160.9 Sections (a) to (c) are adopted without amendments. Sections (d) through (f) are added as follows:

(a) – (c): Subsections 150.0(a) – (c) are adopted without modification.

(d) Individual Heat Pump Water Heater Ready. Systems using gas or propane water heaters to serve individual dwelling units shall include the following components and shall meet the requirements of Section 160.9(f):

1. A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 120/240 volt 3 conductor, copper branch circuit rated to 30 amps, within 3 feet from the water heater and accessible to the water heater with no obstructions. In addition, such systems shall provide all of the following:
   A. Both ends of the unused conductor shall be labeled with the word "spare" and be electrically isolated; and
   B. A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words "For Future Use".
2. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance.
3. The construction drawings shall indicate the location of the future heat pump water heater. The reserved location shall have minimum interior dimensions of 39"x39"x96".
4. A ventilation method meeting one of the following:
   A. The designed space reserved for the future heat pump water heater shall have a minimum volume of 700 cubic feet; or
   B. The designed space reserved for the future heat pump water heater shall vent to a communicating space in the same pressure boundary via permanent openings with a minimum total net free area of 250 square inches so that the total combined volume connected via permanent openings is 700 cu. ft. or larger. The permanent openings shall be:
      i. Fully louvered doors with fixed louvers consisting of a single layer of fixed flat slats; or
      ii. Two permanent fixed openings, consisting of a single layer of fixed flat slat louvers or grilles, one commencing within 12 inches from the top of the enclosure and one commencing within 12 inches from the bottom of the enclosure.
   C. The designed space reserved for the future heat pump water heater shall include two 8" capped ducts, venting to the building exterior:
      i. All ducts, connections and building penetrations shall be sealed,
      ii. Exhaust air ducts and all ducts which cross pressure boundaries shall

be insulated to a minimum insulation level of R-6,

iii. Airflow from termination points shall be diverted away from each other.

(e) **Central Heat Pump Water Heater Electric Ready.** Central water heating systems using gas or propane to serve multiple dwelling units shall include the following:

1. The system input capacity of the gas or propane water heating system shall be determined as the sum of the input gas or propane capacity of all water heating devices associated with each gas or propane water heating system.

2. Space reserved shall include:

A. Heat Pump. The minimum space reserved shall include space for service clearances and air flow clearances and shall meet one of the following:

i. If the system input capacity of the gas water heating system is less than 200,000 BTU per hour, the minimum space reserved for the heat pump shall be 2.0 square feet per input 10,000 BTU per hour of the gas or propane water heating system, and the minimum linear dimension of the space reserved shall be 48 linear inches.

ii. If the system input capacity of the gas water heating system is greater than or equal to 200,000 BTU per hour, the minimum space reserved for the heat pump shall be 3.6 square feet per input 10,000 BTU per hour of the gas or propane water heating system, and the minimum linear dimension of the space reserved shall be 84 linear inches.

iii. The space reserved shall be the space required for a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project.

B. Tanks. The minimum space reserved shall include space for service clearances and shall meet one of the following:

i. If the system input capacity of the gas water heating system is less than 200,000 BTU per hour, the minimum space reserved for the storage and temperature maintenance tanks shall be 4.4 square feet per input 10,000 BTU per hour. of the gas or propane water heating system.

ii. If the system input capacity of the gas water heating system is greater than or equal to 200,000 BTU per hour, the minimum physical space reserved for the storage and temperature maintenance tanks shall be 3.1 square feet per input 10,000 BTU per hour. of the gas or propane water heating system.

iii. The space reserved shall be the space required for a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project.

3. Ventilation shall be provided by meeting one of the following:

   A. Physical space reserved for the heat pump shall be located outside, or

   B. A pathway shall be reserved for future routing of supply and exhaust air via ductwork from the reserved heat pump location to an appropriate outdoor location. Penetrations through the building envelope for louvers and ducts shall be planned and identified for future use. The reserved pathway and penetrations through the building envelope shall be sized to meet one of the following:

      i. If the system input capacity of the gas water heating system is less than 200,000 BTU per hour, the minimum air flow rate shall be 70 CFM per input 10,000 BTU per hour of the gas or propane water heating system and the total external static pressure drop of ductwork and louvers shall not exceed 0.17 inch when the future heat pump water heater is installed.

      ii. If the system input capacity of the gas water heating system is greater than or equal to 200,000 BTU per hour, the minimum air flow rate shall be 420 CFM per input 10,000 BTU per hour of the gas or propane water heating system and the total external static pressure drop of ductwork and louvers shall not exceed 0.17 inch when the future heat pump water heater is installed.

      iii. The reserved pathway and penetrations shall be sized to serve a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project.

4. Condensate drainage piping. An approved receptacle that is sized in accordance with the California Plumbing Code to receive the condensate drainage shall be installed within 3 feet of the reserved heat pump location, or piping shall be installed from within 3 feet of the reserved heat pump location to an approved discharge location that is sized in accordance with the California Plumbing Code, and meets one of the following:

   A. If the system input capacity of the gas water heating system is less than 200,000 BTU per hour, condensate drainage shall be sized for 0.2 tons of refrigeration capacity per input 10,000 BTU per hour.

   B. If the system input capacity of the gas water heating system is greater than or equal to 200,000 BTU per hour, condensate drainage shall be sized for 0.7 tons of refrigeration capacity per

input 10,000 BTU per hour.

C. Condensate drainage shall be sized to serve a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project.

5. Electrical.

A. Physical space shall be reserved on the bus system of the main switchboard or on the bus system of a distribution board to serve the future heat pump water heater system including the heat pump and temperature maintenance tanks. In addition, the physical space reserved shall be capable of providing adequate power to the future heat pump water heater as follows:

i. Heat Pump. For the Heat Pump, the physical space reserved shall comply with one of the following:

A. If the system input capacity of the gas water heating system is less than 200,000 BTU per hour, provide 0.1 kVA per input 10,000 BTU per hour.

B. If the system input capacity of the gas water heating system is greater than or equal to 200,000 BTU per hour, provide 1.1 kVA per input 10,000 BTU per hour.

C. The physical space reserved supplies sufficient electrical power required to power a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project.

ii. Temperature Maintenance Tank. For the Temperature Maintenance Tank, the physical space reserved shall comply with one of the following:

A. If the system input capacity of the gas water heating system is less than 200,000 BTU per hour, provide 1.0 kVA per input 10,000 BTU per hour.

B. If the system input capacity of the gas water heating system is greater than or equal to 200,000 BTU per hour, provide 0.6 kVA per input 10,000 BTU per hour.

C. The physical space reserved supplies sufficient electrical power required to power a heat pump water heater system that meets the total building hot water demand as calculated and documented by the responsible person associated with the project.

(f) The building electrical system shall be sized to meet the future electric requirements of the electric ready equipment specified in sections 160.9 a – e. To meet this requirement the building main service conduit, the electrical system to the point specified in each subsection, and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at

each electric ready appliance in accordance with the California Electric Code.

SECTION 170.1 – PERFORMANCE APPROACH

Section 170.1 is adopted with amendments as follows:

A building complies with the performance approach if the TDV energy budget calculated for the proposed design building under Subsection (b) is no greater than the TDV energy budget calculated for the Standard Design Building under Subsection (a).

Additionally, where applicable, a building must comply with the following requirements:

1. The energy budget, expressed in terms of source energy, of a newly constructed low-rise multifamily building (three habitable stories or less) shall be at least 10 percent lower than that of the Standard Design Building.

2. Newly Constructed high-rise multifamily buildings (greater than four habitable stories) shall be at least 4 percent lower than that of the Standard Design Building.

Sub-sections (a) to (d) are adopted without amendments.

SECTION 6: CALIFORNIA ENVIRONMENTAL QUALITY ACT

The City Council finds that adoption of this Ordinance is exempt from CEQA pursuant to CEQA Guidelines section 15061(b)(3) in that the standards set forth in the ordinance are more protective of the environment than the California Energy Code standards, and there is no possibility that the activity in question may have a significant effect on the environment. As a separate and independent basis, this action is exempt from CEQA pursuant to CEQA Guidelines section 15308 in that the standards set forth in the ordinance assure the maintenance, restoration, enhancement or protection of natural resources and the environment. In addition, CEQA Guidelines section 15183 (Projects Consistent with a Community Plan, General Plan, or Zoning) applies to the project in that the standards set forth in the Ordnance are consistent with the General Plan and the Climate Action Plan.

SECTION 7: **IMPLIED REPEAL.**

Any provision of the East Palo Alto Municipal Code inconsistent with this Ordinance, to the extent of such inconsistencies and no further, is hereby repealed or modified to the extent necessary to effectuate this Ordinance.

SECTION 8: **REFERENCES TO PRIOR CODE**

Unless superseded and repealed (express or implied), references in City forms, documents and regulation to the chapters and sections of the former City codes, shall be construed to apply to the corresponding provisions contained within this Ordinance.

SECTION 9: SEVERABILITY

If any section, subsection, sentence, clause, phrase, or word of this Ordinance is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares it would have passed and adopted this Ordinance, and each and all provisions hereof, irrespective of the fact that one or more provisions may be declared invalid.

SECTION 10: EFFECTIVE DATE

This Ordinance shall become effective 30 days after the second public hearing.

SECTION 11: PUBLICATION

Within fifteen (15) days of tis adoption, the Ordinance shall be posted in three (3) public places within the City of East Palo Alto, and the Ordinance, or summary of the Ordinance prepared by the City Attorney, shall be published in a local newspaper used to publish official notice for the City of East Palo Alto prior to the effective date.

This Ordinance was introduced at the_____ meeting of the City Council of the City of East Palo Alto.

PASSED AND ADOPTED this _____ day of _____, 202[ ] by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Antonio D. Lopez, Mayor

ATTEST: **APPROVED AS TO FORM**:

_____ _____