

Ordinance No. 5393

Ordinance of the Council of the City of Palo Alto Amending and Restating Chapter 16.14 of the Palo Alto Municipal Code, California Green Building Standards Code 2016 Edition, and Local Amendments and Related Findings

The Council of the City of Palo Alto does ORDAIN as follows:

SECTION 1. Chapter 16.14 of the Palo Alto Municipal Code is hereby amended by repealing in its entirety Chapter 16.14 and adopting a new Chapter 16.14 to read as follows:

16.14.010 2016 California Green Building Standards Code adopted.

The California Green Building Standards Code, 2016 Edition, Title 24, Part 11 of the California Code of Regulations, together with those omissions, amendments, exceptions and additions thereto, is adopted and hereby incorporated in this Chapter by reference and made a part hereof the same as if fully set forth herein.

Unless superseded and expressly repealed, references in City of Palo Alto forms, documents and regulations to the chapters and sections of the former California Code of Regulations, Title 24, shall be construed to apply to the corresponding provisions contained within the California Code of Regulations, Title 24, 2016. Ordinance No. 5324 of the City of Palo Alto and all other ordinances or parts of ordinances in conflict herewith are hereby suspended and expressly repealed.

Wherever the phrases “California Green Building Standards Code” or “Cal Green” are used in this code or any ordinance of the City, such phrases shall be deemed and construed to refer and apply to the California Green Building Standards Code, 2016 Edition, as adopted and amended by this chapter.

One copy of the California Green Building Standards Code, 2016 Edition, has been filed for use and examination of the public in the Office of the Building Official of the City of Palo Alto.

16.14.020 2016 California Green Building Standards Code Appendix Chapters adopted.

The following Appendix Chapters of the California Green Building Standards Code, 2016 Edition, are adopted and hereby incorporated in this Chapter by reference and made a part hereof the same as if fully set forth herein:

- A. Appendix A4 - Residential Voluntary Measures (Tier 1 and Tier 2)
- B. Appendix A5 - Nonresidential Voluntary Measures (Tier 1 and Tier 2)

16.14.030 Cross - References to California Green Building Standards Code.

The provisions of this Chapter contain cross-references to the provisions of the California Green Building Standards Code, 2016 Edition, in order to facilitate reference and comparison to those provisions.

16.14.040 Violations – Penalties.

Any person, firm or corporation violating any provision of this chapter is guilty of a misdemeanor and upon conviction thereof shall be punished as provided in subsection (a) of Section 1.08.010 of this code. Each separate day or any portion thereof during which any violation of this chapter occurs or continues shall be deemed to constitute a separate offense, and upon conviction thereof shall be punishable as provided in this section.

16.14.050 Enforcement -- Citation authority.

The employee positions designated in this section may enforce the provisions of this chapter by the issuance of citations; persons employed in such positions are authorized to exercise the authority provided in Penal Code section 836.5 and are authorized to issue citations for violations of this chapter. The designated employee positions are: (1) chief building official; (2) building inspection supervisor; (3) Director of Development Services, and (4) Code enforcement officer.

16.14.060 Local Amendments.

The provisions of this Chapter shall constitute local amendments to the cross-referenced provisions of the California Green Building Standards Code, 2016 Edition, and shall be deemed to replace the cross-referenced sections of said Code with the respective provisions set forth in this Chapter.

16.14.070 Section 202 amended – Definitions added.

Section 202 of the California Green Building Standards Code is amended to include the following definitions:

CPAU: The City of Palo Alto Utilities Department.

CALGREEN MANDATORY: Calgreen mandatory requirements are triggered for projects outlined in Section 301.1 Scope of the code, as amended. Projects that trigger only Calgreen mandatory measures are not required to fulfill Calgreen Tier 1 or Tier 2 as listed in Appendix A4 and A5.

CALGREEN “TIER 1”: To achieve Tier 1 status, a project must comply with the requirements identified in Appendix A4, Division A4.601.4 for residential projects and

Appendix A5.601.2 for non-residential projects. The local adaptations to these appendices are identified in this ordinance. Projects subject to Tier 1 must fulfill on Calgreen mandatory measures and Calgreen Tier 1 prerequisite measures. Tier 1 projects must also select the minimum amount Calgreen elective measures required for Tier 1.

CALGREEN “TIER 2”: To achieve Tier 2 status, a project must comply with the requirements identified in Appendix A4, Division A4.601.5 for residential projects and Appendix A5.601.3 for non-residential projects. The local adaptations to these appendices are identified in this ordinance. Projects subject to Tier 2 must fulfill on Calgreen mandatory measures and Calgreen Tier 2 prerequisite measures. Tier 2 projects must also select the minimum amount of Calgreen elective measures required for Tier 2.

CALGREEN “TIER 1” AND “TIER 2” PREREQUISITE MEASURES: Projects subject to Calgreen Tier 1 or Tier 2 must fulfill the minimum prerequisites as described within Appendix A4, Division A4.6 for Residential projects and Appendix A5.6 for Non-Residential Projects, and local amendments within this ordinance. Tier 1 and Tier 2 prerequisite and elective measures are generally preceded by an “A”.

CALGREEN “TIER 1” AND “TIER 2” ELECTIVE MEASURES: Projects subject to Calgreen Tier 1 or Tier 2 must fulfill the minimum number of electives as described within Appendix A4, Division A4.6 for Residential projects and Appendix A5.6 for Non-Residential Projects, and local amendments within this ordinance. Tier 1 and Tier 2 prerequisite and elective measures are generally preceded by an “A”.

DEDICATED IRRIGATION METER. A dedicated irrigation meter is a water meter that exclusively meters water used for outdoor watering and irrigation, and is completely independent from the meter used for indoor water use.

CALGREEN PLANS EXAMINER: A Calgreen Plans Examiner is an individual certified through the International Code Council (ICC) for demonstrating knowledge and application of Green Building concepts during plan review. For projects that require a Calgreen Plans Examiner verification, the Examiner must be contracted directly with the owner and may not be a contractor or employee of the design or construction firm.

CALGREEN INSPECTOR: A Calgreen Inspector is an individual certified through the International Code Council (ICC) for demonstrating knowledge and application of Green Building concepts during inspection. For projects that require a Calgreen Inspector verification, the Inspector must be contracted directly with the owner and may not be a contractor or employee of the design or construction firm.

GREEN POINT RATER: A GreenPoint Rater is an individual rated by Build It Green—a professional non-profit membership organization whose mission is to promote healthy, energy- and resource-efficient buildings in California. For projects that require Green Point Rater verification, the Green Point Rater must be contracted directly with the owner and may not be a contractor or employee of the design or construction firm. The city shall maintain a list of pre-approved Special Inspectors in accordance with Chapter 7, section 702.2 Special Inspection.

INVASIVE PLANTS. Invasive plants are both indigenous and non-indigenous species with growth habits that are characteristically aggressive. Invasive plants that are of concern and may be prohibited by this code are defined as such in the “Water Use Classification of Landscape Species (WUCOLS), A Guide to the Water Needs of Landscape Plants,” from the University of California Cooperative Extension.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. The California Department of Water Resources Model Water Efficient Landscape Ordinance (or “Model Water Ordinance”) ordinance regulating new construction and rehabilitated landscape project design, installation and maintenance. The Model Water Ordinance assigns a Maximum Applied Water Allowance (MAWA) based on landscaped area and climatological parameters. The City of Palo Alto has adopted more stringent compliance regulations in this code than the Model Water Ordinance; however, the Model Water Ordinance is referenced as the guiding document for water use calculations, irrigation system design, and water waste prevention.

PROCESS WATER. Process water means untreated wastewater, uncontaminated by toilet discharge or an unhealthy bodily waste, which is not a threat from unhealthful processing, manufacturing or operating wastes.

SALVAGE. Salvage means the controlled removal of construction or demolition debris/ material from a building, construction, or demolition site for the purpose of on- or off-site reuse, or storage for later reuse. Examples include air conditioning and heating systems, columns, balustrades, fountains, gazebos, molding, mantels, pavers, planters, quoins, stair treads, trim, wall caps, bath tubs, bricks, cabinetry, carpet, doors, ceiling fans, lighting fixtures, electrical panel boxes, fencing, fireplaces, flooring materials of wood, marble, stone or tile, furnaces, plate glass, wall mirrors, door knobs, door brackets, door hinges, marble, iron work, metal balconies, structural steel, plumbing fixtures, refrigerators, rock, roofing materials, siding materials, sinks, stairs, stone, stoves, toilets, windows, wood fencing, lumber and plywood.

SQUARE FOOTAGE. For application of green building requirements, square footage means all new and replacement square footage, including basement areas (7 feet or greater in height) and garages, except that unconditioned garage space shall only count as 50% . Areas demolished shall not be deducted from the total new construction square footage. Square footage may also apply to landscapes, in which case it is the total surface area of the site not covered by impervious surfaces.

16.14.080 Section 301 amended – voluntary tiers added.

Section 301 of the California Green Building Standards Code is amended to read:

SECTION 301

GENERAL

301.1 Scope. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code and any applicable local amendments. In addition, the City requires the use of Voluntary Tiers, as provided in Sections A4.601 and A5.601, for certain residential and nonresidential new construction, additions, and alterations.

301.1.1 Residential additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

Tier 1 adopted. All residential building additions or alterations exceeding 1000 square feet must meet California Green Building Standards Code Mandatory plus Tier 1 requirements, as amended by this Chapter and as applicable to the scope of work.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 Low-rise and high-rise residential buildings. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings, high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

301.3 Nonresidential additions and alterations. [BSC] The provisions of individual sections of Chapter 5 apply to building nonresidential additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and alterations [AA]. When the code section applies to both, no banner will be used.

Tier 1 adopted. Nonresidential alterations (including tenant improvements or renovations) of 5,000 square feet that include replacement or alteration of at least two of the following: HVAC system, building envelope, hot water system, or lighting system, must comply with Mandatory California Green Building Standards Code plus Tier 1 requirements, as amended by this Chapter and as applicable to the scope of work.

Tier 2 adopted. Nonresidential additions of 1000 square feet or greater must comply with California Green Building Standards Code Mandatory plus Tier 2 requirements, as amended by this Chapter and as applicable to the scope of work.

301.4 Residential new construction – Tier 2 adopted. All newly constructed Residential Buildings must meet California Green Building Standards Code Mandatory plus Tier 2 requirements, as amended by this Chapter and as applicable to the scope of work.

301.5 Non-residential new construction – Tier 2 adopted. All new nonresidential construction must meet California Green Building Standards Code Mandatory plus Tier 2 requirements, as amended by this Chapter and as applicable to the scope of work.

301.6 Special Inspector Requirements. Residential project owners subject to Calgreen Mandatory plus Tier 1 or Tier 2 requirements shall contract a special inspector in accordance with section 702.2 of this code, as amended.

16.14.090 Section 702.2 Special Inspection.

Section 702.2 of the California Green Building Standards Code is amended to read:

702.2 Special Inspection. When required by the enforcing agency, the owner or responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector. The city shall maintain a list of pre-approved Special Inspectors in accordance with this section. The owner shall contract a Special Inspector meeting one of the following;

1) Certification by a national or regional green building program:

ICC Certified Plans Examiner and ICC Certified Calgreen Inspector: Contract a Calgreen Plans Examiner and Calgreen Inspector to provide third-party verification of compliance prior to Permit Issuance and prior to Final Inspection. This Special Inspector may fulfill both requirements if the individual, or company, maintains both the Calgreen Plans Examiner and Calgreen Inspector designation.

2) Other programs acceptable to the enforcing agency.

When required by the enforcing agency, the owner or responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The city shall maintain a list of pre-approved Special Inspectors in accordance with this section.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

16.14.100 Section 303.1.2 Cumulative construction.

Section 303.1.2 is added to the California Green Building Standards Code to read:

303.1.2 Cumulative construction. Cumulative construction over any two-year period, or a project completed in phases, shall be considered as a single project, subject to the highest level of green building requirements for that project, unless exempted by the Director of Development Services as impractical for compliance. If a project is developed in phases, such as a core and shell development following by a tenant improvement, regardless of ownership each phase will be subject to the green building requirements which apply to the scope of work constructed as part of that phase.

16.14.110 Residential Projects. Chapter 4 Preface: Green building requirements for project type and scope.

A preface is added to Chapter 4 of the California Green Building Standards Code to read:

Preface - Green Building Requirements for Project Type and Scope For design and construction of residential projects, the City requires compliance with the mandatory measures of Chapter 4, in addition to use of Tier 1 and Tier 2 as specified in Palo Alto Municipal Code Chapter 16.14. See Section 202 for definitions on Calgreen mandatory, Tier 1 prerequisites and electives, and Tier 2 prerequisites and electives. All elective measures are adopted as written under Appendix A4 unless otherwise indicated in this Section.

16.14.120 Section A4.104 Site Preservation.

Section A4.104.1 is adopted as a Tier 1 and Tier 2 elective and is amended to read:

A4.104.1 Supervision and Education by a Special Inspector. Individuals with oversight authority on the project, as defined in 16.14.090 of this code, who have been trained in areas related to environmentally friendly development, can teach green concepts to other members of the builder's staff and ensure training and written instruction has been provided to all parties associated with the development of the project. Prior to the beginning the construction activities, all the builder shall receive a written guideline and instruction specifying the green goals of the project.

Note: Lack of adequate supervision and dissemination of the project goals can result in negative effects on green building projects. If the theme of green building is not carried through the project, the overall benefit can be substantially reduced by the lack of knowledge and information provided to the various entities involved with the construction of the project.

16.14.130 Section A4.105.1 and A4.105.2 Deconstruction and Reuse of Existing Materials.

Sections A4.105.1 and A4.105.2 are adopted as Tier 1 and Tier 2 elective measures and are amended to read:

A4.105.1 General. Existing buildings on the site are deconstructed and the salvaged materials are reused. Reused materials or products must comply with the current building standards requirements or be an accepted alternate method or material. Salvaged materials may be reused onsite or for a different project. The Chief Building Official may require documentation confirming that salvageable materials have been reused.

A4.105.2 Reuse of materials. Non-hazardous materials which can be easily reused include but are not limited to the following:

1. Light fixtures
2. Plumbing fixtures
3. Doors and trim
4. Masonry
5. Electrical devices
6. Appliances
7. Foundations or portions of foundations

Note: Reused material must be in compliance with the appropriate Title 24 requirements.

16.14.135 Section A4.105.3 Deconstruction Survey.

Section A4.105.3 is added as mandatory to read:

A4.105.3 Deconstruction Survey. All single family residential dwelling units required to obtain a demolition permit shall complete a deconstruction survey provided by third party approved by the Chief Building Official. The survey shall include a list of materials that are reusable in the project, as well as the values of such materials.

16.14.140 Reserved.

16.14.150 Section A4.106.8 Electric Vehicle (EV) Charging for New Construction.

Section A4.106.8 is not adopted as a Tier 1 and Tier 2 elective measure. Projects must comply with the mandatory electric vehicle supply equipment (EVSE) requirements stated in Section 4.106.4, as amended.

16.14.160 Section A4.106.9 Bicycle Parking.

Section A4.106.9 is not adopted as a Tier 1 and Tier 2 elective measure. Projects must comply with the bicycle parking requirements in the Palo Alto Municipal Code.

16.14.170 Section A4.106.10 Light Pollution Reduction.

Section A4.106.10 is adopted as a Tier 1 and Tier 2 elective measure for all covered projects and is amended to read:

A4.106.10 Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and
2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and
3. Allowable BUG ratings not exceeding those shown in Table A4.106.10; or
4. Comply with a local ordinance lawfully enacted pursuant to Section 101.7 of this code, whichever is more stringent.

Projects may use an approved equal reference standard for light fixtures where BUG ratings are unavailable.

Exceptions:

1. Luminaires that qualify as exceptions to the *California Energy Code*.
2. Emergency lighting.
3. One- and two-family dwellings.

16.14.180 Section A4.203.1 Performance Approach for Newly Constructed Buildings.

Sections A4.203.1 is not adopted as a Tier 1 and Tier 2 elective measure. Projects shall comply with Chapter 16.17 of the Palo Alto Municipal Code (Energy Reach Code).

16.14.190 Reserved.

16.14.200 Reserved.

16.14.210 Reserved.

16.14.220 Section A4.304.2.1 Irrigation Metering Device.

Section A4.304.2.1 is adopted as a Tier 1 and Tier 2 prerequisite and is amended to read:

A4.304.2.1 Irrigation Metering Device. Dedicated irrigation meters are to be installed in all new construction and rehabilitated landscapes when the landscape is greater than 1,000 square feet.

16.14.230 Section A4.305 Water Reuse Systems.

Sections A4.305.1 through A4.305.3 are adopted as Tier 1 and Tier 2 electives and are amended to read:

A4.305.1 Graywater. Alternative plumbing piping is installed to permit the discharge from the clothes washer and other fixtures (except toilets and kitchen sinks) to be used for an irrigation system in compliance with the California Plumbing Code.

A4.305.2 Recycled Water Piping. Based on projected availability, dual water piping is installed for future use of recycled water at the following locations:

1. Interior piping for the use of recycled water is installed to serve all water closets, urinals, and floor drains.
2. Exterior piping is installed to transport recycled water from the point of connection to the structure. Recycled water systems shall be designed and installed in accordance with the California Plumbing Code.

A4.305.3 Recycled water for landscape irrigation. Recycled water is used for landscape irrigation.

Section A4.305.4 is added and adopted as Tier 1 and Tier 2 prerequisite and shall read as follows:

A4.305.4 Additions and alterations. All multifamily residential additions and alterations must install recycled water infrastructure for irrigation when the landscape area exceeds 1,000 square feet.

Section A4.305.5 is added and adopted a Tier 2 prerequisite and shall read as follows:

A4.305.5 Laundry to Landscape Infrastructure. Newly constructed Residential Buildings with a landscape area of any size shall install an independent plumbing drainage system including a trap and vent that shall begin near the interior laundry fixtures and will terminate at the exterior of the home. This piping system will be capped at all outlets and will assist in the future installation of a “Laundry-to-Landscape” irrigation system. A complete irrigation system installation shall meet the requirements of the California Plumbing Code 1502.1.1, Clothes Washer System.

Exception: Laundry fixtures located below grade.

A4.305.5.1 Identification. Independent laundry to landscape capable system shall be labeled as "LAUNDRY-TO-LANDSCAPE CAPABLE" and be readily visible to the user.

16.14.240 Section A4.403.1 Frost Protection Foundation Systems.

Sections A4.203.1 is not adopted as a Tier 1 and Tier 2 elective measure.

16.14.250 Section A4.403.2 Reduction in cement use.

Section A4.403 is not adopted as a Tier 1 and Tier 2 prerequisite. Section A4.403 is adopted as a Tier 1 and Tier 2 elective measure and shall read as:

A4.403.2 Reduction in cement use. As allowed by the enforcing agency, cement used in foundation mix design shall be reduced as follows:

Tier 1. Not less than a 20 percent reduction in cement.

Tier 2: Not less than a 25 percent reduction in cement.

Note: Products commonly used to replace cement in concrete mix designs include, but are not limited to:

1. Fly ash
2. Slag
3. Silica fume
4. Rice hull ash

16.14.260 Section A4.408.1 Enhanced Construction Waste Reduction.

Section A4.408.1 is adopted as mandatory and is amended to read:

A4.408.1 Enhanced Construction Waste Reduction. Nonhazardous construction and demolition debris generated at the site is diverted to recycle or salvage in compliance with the following:

Tier 1 and Tier 2. At least a 80-percent reduction. Any mixed recyclables that are sent to mixed-waste recycling facilities shall include a qualified third party verified facility average diversion rate. Verification of diversion rates shall meet minimum certification eligibility guidelines, acceptable to the local enforcing agency.

A4.408.1.1 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with all construction and demolition waste reduction requirements.

16.14.270 Section A4.504.3 Thermal insulation.

Section A4.504.3 is not adopted as a Tier 1 and Tier 2 prerequisite. Section A4.504.3 is adopted as a Tier 1 and Tier 2 elective measure.

16.14.280 Non-Residential Projects: Chapter 5 Preface Green Building Requirements for Project Type and Scope.

A Preface is added to Chapter 5 of the California Green Building Standards Code to read:

Preface – Green Building Requirements for Project Type and Scope. For design and construction of non-residential projects, the City requires compliance with the mandatory measures of Chapter 5, in addition to use of Tier 1 and Tier 2 as specified in Palo Alto Municipal Code Chapter 16.14. See Section 202 for definitions on Calgreen mandatory, Tier 1 prerequisites and electives, and Tier 2 prerequisites and electives. All elective measures are adopted as written under Appendix A5 unless otherwise indicated in this Section.

16.14.290 Section 5.106.1.1 Local storm water pollution prevention.

Section 5.106.1.1 Local ordinance is amended to read:

5.106.1.1 Local ordinance. Newly constructed projects and additions shall comply with additional storm water pollution prevention measures as applicable. (See Chapter 16.11, Storm Water Pollution Prevention, of the Palo Alto Municipal Code.)

16.14.295 Section 5.106.8 Light pollution reduction

Section 5.106.8 Light pollution reduction is amended to read:

5.106.8 Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and
2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and
3. Allowable BUG ratings not exceeding those shown in Table A4.106.10; or
4. Comply with a local ordinance lawfully enacted pursuant to Section 101.7 of this code, whichever is more stringent.

Projects may use an approved equal reference standard for light fixtures where BUG ratings are unavailable.

Exceptions:

1. Luminaires that qualify as exceptins in Section 140.7 of the California Energy Code.
2. Emergency lighting.
3. Building façade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs, and methods of construction.

16.14.300 Section 5.303.5 Dual Plumbing.

Section 5.303.5 Dual plumbing is added as mandatory and is amended to read:

5.303.5 Dual plumbing. New buildings and facilities shall be dual plumbed for potable and recycled water systems for toilet flushing when recycled water is available. All building projects for which CPAU recycled water service is available must install dual Plumbing and use recycled water for toilet and urinal flushing when the building area is greater than 10,000 square feet or where installation of 25 or more toilets and urinals is proposed. All projects for which CPAU recycled water service is not yet available must install dual plumbing for use of recycled water for toilet and urinal flushing when the building area exceeds 100,000 square feet or where installation of 100 or more toilets and urinals is proposed.

16.14.310 Reserved.

16.14.320 Reserved.

16.14.330 Reserved.

16.14.340 Reserved.

16.14.350 Section 5.304.5 Potable water elimination.

Section 5.304.5 Potable water elimination is adopted as mandatory and amended to read:

5.304.5 Potable water elimination. Recycled water infrastructure for irrigation systems is required for all projects for which CPAU recycled water service is available. All projects for which CPAU recycled water service is not yet available must install recycled water infrastructure for irrigation when the landscape area exceeds 1,000 square feet. Dedicated irrigation meters are to be installed in all new construction and rehabilitated landscapes when the landscape is greater than 1,000 square feet.

16.14.360 Section 5.304.6 Invasive species prohibited.

Section 5.304.6 is added as mandatory to read:

5.304.6 Invasive species prohibited. All nonresidential new construction, additions, and alterations shall not install invasive species in a landscape area of any size.

16.14.365 Section 5.305.1 Non-residential enhanced water budget.

Section 5.305.1 Non-residential enhanced water budget is added as mandatory to read:

5.305.1 Non-residential enhanced water budget. Non-residential buildings anticipated to use more than 1,000 gallons of water a day shall complete an Enhanced Water Budget Calculator as established by the Chief Building Official.

16.14.370 Section A5.408 Construction Waste, Reduction, Disposal and Recycling.

Section A5.408.3.1.1 Enhanced Construction Waste Reduction is adopted at Tier 2 (80% construction waste reduction) as a mandatory requirement for all nonresidential construction, including new construction, additions, and alterations, as long as the construction has a valuation exceeding \$25,000. Nonresidential projects with a lower valuation shall remain subject to California Green Building Code Chapter 5 mandatory requirements.

16.14.380 Section 5.410.4.6 Energy STAR portfolio manager.

Section 5.410.4.6 Energy STAR portfolio manager is added as mandatory to read:

5.410.4.6 Energy STAR portfolio manager. All nonresidential projects exceeding \$100,000 valuation must provide evidence of an Energy STAR Portfolio Manager project profile prior to Permit Issuance, acquire an Energy STAR Portfolio Manager Rating, and submit the rating to the City of Palo Alto once the project has been occupied after 12 months.

16.14.390 Section 5.410.4.7 Performance reviews – energy.

Section 5.410.4.7 Performance reviews - energy is added to read:

5.410.4.7 Performance reviews – energy. All projects over 10,000 square feet. The City reserves the right to conduct a performance review, no more frequently than once every five years unless a project fails review, to evaluate the building's energy use to ensure that resources used at the building and/or site do not exceed the maximum allowance set forth in the rehabilitation or new construction design. Energy use reviews may be initiated by the Building Division or as a coordinated effort between the City's Utilities Department and/or its designated contractors. Following the findings and recommendations of the review, the City may require adjustments to the energy usage or energy-using equipment or systems if the building is no longer compliant with the original design. Renovation or rehabilitation resulting from such audit activity shall be considered a project, and shall be subject to applicable documentation submittal

requirements of the City. This section is effective only for those projects for which a building permit was issued after January 1, 2009.

16.14.400 Section 5.410.4.8 Performance reviews – water.

Section 5.410.4.8 Performance reviews - water is added to read:

5.410.4.8 Performance reviews – water. All sites greater than one acre: The City reserves the right to conduct performance reviews, no more frequently than once every five years unless a project fails review, to evaluate water use to ensure that resources used at the building and/or site do not exceed a maximum allowance set forth in the rehabilitation or new construction design. Water use reviews may be initiated by the Building Division, or as a coordinated effort between the City's Utilities Department and the Santa Clara Valley Water District (SCVWD), or as part of SCVWD's established water conservation programs. Following the findings and recommendations of the review, the City may require adjustments to irrigation usage, irrigation hardware, and/or landscape materials to reduce consumption and improve efficiency. Renovation or rehabilitation resulting from such audit activity shall be considered a project, and shall be subject to applicable documentation submittal requirements of the City.

16.14.420 Section A4.106.8 Electric Vehicle (EV) Charging.

Section A4.106.8 of the California Green Building Standards Code is added as mandatory and amended to read:

A4.106.8 Electric Vehicle (EV) Charging for Residential Structures. Newly constructed single family and multifamily residential structures, including residential structures constructed as part of a mixed use development, shall comply with the following requirements for electric vehicle supply equipment (EVSE). All parking space calculations under this section shall be rounded up to the next full space. The requirements stated in this section are in addition to those contained in Section 4.106.4 of the California Green Building Standards Code. In the event of a conflict between this section and Section 4.106.4 of the California Green Building Standards Code, the more robust EV Charging requirements shall prevail.

A4.106.8.1 Definitions. For the purposes of this section, the following definitions shall apply:

- (a) Level 2 EVSE. “Level 2 EVSE” shall mean an EVSE capable of charging at 30 amperes or higher at 208 or 240 VAC. An EVSE capable of simultaneously charging at 30 amperes for each of two vehicles shall be counted as two Level 2 EVSE.
- (b) Conduit Only. “Conduit Only” shall mean, at minimum: (1) a panel capable to accommodate a dedicated branch circuit and service capacity to install a 208/240V, 50 amperes grounded AC outlet; and (2) raceway or wiring with capacity to accommodate a 100 ampere circuit; terminating in (3) a listed cabinet, box, enclosure, or NEMA receptacle. The raceway shall be installed so that minimal removal of materials is necessary to complete the final installation.
- (c) EVSE-Ready Outlet. “EVSE-Ready Outlet” shall mean, at minimum: (1) a panel capable to accommodate a dedicated branch circuit and service capacity to install a 208/240V, 50 amperes grounded AC outlet; (2) a two-pole circuit breaker; (3) raceway with capacity to accommodate 100-ampere circuit; (4) 50 ampere wiring; terminating in (5) a 50 ampere NEMA receptacle in a covered outlet box.
- (d) EVSE Installed. “EVSE Installed” shall mean an installed Level 2 EVSE.

A4.106.8.2 Single Family Residences. The following standards apply to newly constructed detached and attached single family residences.

- (a) In general. The property owner shall provide Conduit Only, EVSE-Ready Outlet, or EVSE Installed for each residence.
- (b) Location. The proposed location of a charging station may be internal or external to the dwelling, and shall be in close proximity to an on-site parking space consistent with City guidelines, rules, and regulations.

A4.106.8.3 Multi-Family Residential Structures. The following standards apply to newly constructed residences in a multi-family residential structure, except as provided in section A4.106.8.4.

- (a) Resident parking. The property owner shall provide at least one EVSE-Ready Outlet or EVSE Installed for each residential unit in the structure.

- (b) Guest parking. The property owner shall provide Conduit Only, EVSE-Ready Outlet, or EVSE Installed, for at least 25% of guest parking spaces, among which at least 5% (and no fewer than one) shall be EVSE Installed.
- (c) Accessible spaces. Projects shall comply with the 2016 California Building Code requirements for accessible electric vehicle parking.
- (d) Minimum total circuit capacity. The property owner shall ensure sufficient circuit capacity, as determined by the Chief Building Official, to support a Level 2 EVSE in every location where Circuit Only, EVSE-Ready Outlet or EVSE Installed is required.
- (e) Location. The EVSE, receptacles, and/or raceway required by this section shall be placed in locations allowing convenient installation of and access to EVSE. In addition, if parking is deed-restricted to individual residential units, the EVSE or receptacles required by subsection (a) shall be located such that each unit has access to its own EVSE or receptacle. Location of EVSE or receptacles shall be consistent with all City guidelines, rules, and regulations.

A4.106.8.4 Exception – Multi-Family Residential Structures with Individual, Attached Parking. The property owner shall provide Conduit Only, EVSE-Ready Outlet, or EVSE Installed for each newly constructed residence in a multi-family residential structure featuring: (1) a parking space attached to the residence; and (2) a shared electrical panel between the residence and parking space (e.g., a multi-family structure with tuck-under garages).

16.14.430 Section A5.106.5.3 Electric Vehicle (EV) Charging for Non-Residential Structures.

Section A5.106.5.3 of the California Green Building Standards Code is added as mandatory and amended to read:

A5.106.5.3 Electric Vehicle (EV) Charging for Non-Residential Structures. New non-residential structures shall comply with the following requirements for electric vehicle supply equipment (EVSE). All parking space calculations under this section shall be rounded up to the next full space. The requirements stated in this section are in addition to those contained in Section 5.106.5.3 of the California Green Building Standards Code. In the event of a conflict between this section and Section 5.106.5.3, the more robust EV Charging requirements shall prevail.

A5.106.5.3.1 Definitions. For the purposes of this section, the following definitions shall apply:

- (a) Level 2 EVSE. "Level 2 EVSE" shall mean an EVSE capable of charging at 30 amperes or higher at 208 or 240 VAC. An EVSE capable of simultaneously charging at 30 amperes for each of two vehicles shall be counted as two Level 2 EVSE.
- (b) Conduit Only. "Conduit Only" shall mean, at minimum: (1) a panel capable to accommodate a dedicated branch circuit and service capacity to install at least a 208/240V, 50 amperes grounded AC outlet; and (2) raceway or wiring with capacity to accommodate a 100 ampere circuit; terminating in (3) a listed cabinet, box, enclosure, or NEMA receptacle. The raceway shall be installed so that minimal removal of materials is necessary to complete the final installation.
- (c) EVSE-Ready Outlet. "EVSE-Ready Outlet" shall mean, at minimum: (1) a panel capable to accommodate a dedicated branch circuit and service capacity to install at least a 208/240V, 50 amperes grounded AC outlet; (2) a two-pole circuit breaker; (3) raceway with capacity to accommodate a 100-ampere circuit; (4) 50 ampere wiring; terminating in (5) a 50 ampere NEMA receptacle in a covered outlet box.
- (d) EVSE Installed. "EVSE Installed" shall mean an installed Level 2 EVSE.

A5.106.5.3.2 Non-Residential Structures Other than Hotels. The following standards apply to newly constructed non-residential structures other than hotels.

- (a) In general. The property owner shall provide Conduit Only, EVSE-Ready Outlet, or EVSE Installed for at least 25% of parking spaces, among which at least 5% (and no fewer than one) shall be EVSE Installed.
- (b) Accessible spaces. Projects shall comply with the 2016 California Building Code requirements for accessible electric vehicle parking.
- (c) Minimum total circuit capacity. The property owner shall ensure sufficient circuit capacity, as determined by the Chief Building Official, to support a Level 2 EVSE in every location where Circuit Only, EVSE-Ready Outlet or EVSE Installed is required.
- (d) Location. The EVSE, receptacles, and/or raceway required by this section shall be placed in locations allowing convenient installation of and access to EVSE. Location of EVSE or receptacles shall be consistent with all City guidelines, rules, and regulations.

A5.106.5.3.3 Hotels. The following standards apply newly constructed hotels.

- (a) In general. The property owner shall provide Conduit Only, EVSE-Ready Outlet, or EVSE Installed for at least 30% of parking spaces, among which at least 10% (and no fewer than one) shall be EVSE Installed.
- (b) Accessible spaces. Projects shall comply with the 2016 California Building Code requirements for accessible electric vehicle parking.
- (c) Minimum total circuit capacity. The property owner shall ensure sufficient circuit capacity, as determined by the Chief Building Official, to support a Level 2 EVSE in every location where Circuit Only, EVSE-Ready Outlet or EVSE Installed is required.
- (d) Location. The EVSE, receptacles, and/or raceway required by this section shall be placed in locations allowing convenient installation of and access to EVSE. Location of EVSE or receptacles shall be consistent with all City guidelines, rules, and regulations.

SECTION 2. The Council adopts the findings for local amendments to the California Green Building Standards Code, 2016 Edition, attached hereto as Exhibit “A” and incorporated herein by reference.

SECTION 3. If any section, subsection, clause or phrase of this Ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion or sections of the Ordinance. The Council hereby declares that it should have adopted the Ordinance and each section, subsection, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 4. The Council finds that this project is exempt from the provisions of the California Environmental Quality Act (“CEQA”), pursuant to Section 15061 of the CEQA Guidelines, because it can be seen with certainty that there is no possibility that the amendments herein adopted will have a significant effect on the environment.

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SECTION 5. This ordinance shall be effective on the thirty-first day after the date of its adoption.

INTRODUCED: October 4, 2016

PASSED: October 24, 2016

AYES: BERMAN, BURT, FILSETH, HOLMAN, KNISS, SCHARFF, SCHMID

NOES:

ABSENT: DUBOIS, WOLBACH

ABSTENTIONS:

ATTEST:

DocuSigned by:
Beth Minor
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City Clerk

DocuSigned by:
Patrick Burt
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Mayor

APPROVED AS TO FORM:

DocuSigned by:
Albert Yang
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Senior Deputy City Attorney

APPROVED:
DocuSigned by:
Jack George
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City Manager

DocuSigned by:
Peter Pimejad
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Director of Development Services

DocuSigned by:
David Ramberg for Lalo Perez
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Director of Administrative Services

Exhibit A

FINDINGS FOR LOCAL AMENDMENTS TO CALIFORNIA GREEN BUILDING STANDARD CODE, 2016 EDITION

Section 17958 of the California Health and Safety Code provides that the City may make changes to the provisions in the uniform codes that are published in the California Building Standards Code. Sections 17958.5 and 17958.7 of the Health and Safety Code require that for each proposed local change to those provisions in the uniform codes and published in the California Building Standards Code which regulate buildings used for human habitation, the City Council must make findings supporting its determination that each such local change is reasonably necessary because of local climatic, geological, or topographical conditions.

Local building regulations having the effect of amending the uniform codes, which were adopted by the City prior to November 23, 1970, were unaffected by the regulations of Sections 17958, 17958.5 and 17958.7 of the Health and Safety Code. Therefore, amendments to the uniform codes which were adopted by the City Council prior to November 23, 1970, and have been carried through from year to year without significant change, need no required findings. Also, amendments to provisions not regulating buildings used for human habitation, including amendments made only for administrative consistency, do not require findings.

Code: Cal Green					
Section	Title	Add	Deleted	Amended	Justification (See below for keys)
301	Voluntary tiers added	✓		✓	C & E
303.1.2	Cumulative Construction	✓			C & E
4.105	Deconstruction Survey	✓			C & E
4.304	Outdoor Water Use	✓		✓	C
5.105.1	Salvage	✓			E
5.106.1.1	Local ordinance	✓			C
5.106.8	Light pollution reduction			✓	E
5.303.5	Dual Plumbing	✓			C
5.304.5	Potable Water Elimination	✓			C
5.304.6	Invasive Species	✓			E
5.305.1	Non-residential enhanced water budget	✓			C
5.410.4.6	Energy STAR portfolio manager	✓			C & E
5.410.4.7	Performance reviews – energy	✓			C & E
5.410.4.8	Performance reviews – water	✓			C & E
702.2	Special Inspection			✓	E
Appendix A4	Residential Voluntary Measures	✓		✓	C & E
Appendix A5	Non-Residential Voluntary Measures	✓		✓	C & E

Key to Justification for Amendments to Title 24 of the California Code of Regulations

- C** This amendment is justified on the basis of a local **climatic** condition. The seasonal climatic conditions during the late summer and fall create severe fire hazards to the public health and welfare in the City. The hot, dry weather frequently results in wild land fires on the brush covered slopes west of Interstate 280. The aforementioned conditions combined with the geological characteristics of the hills within the City create hazardous conditions for which departure from California Building Standards Code is required. Failure to address and significantly reduce greenhouse gas (GHG) emissions could result in rises in sea level, including in San Francisco Bay, that could put at risk Palo Alto homes and businesses, public facilities, and Highway 101 (Bayshore Freeway), particularly the mapped Flood Hazard areas of the City. Energy efficiency is a key component in reducing GHG emissions, and construction of more energy efficient buildings can help Palo Alto reduce its share of the GHG emissions that contribute to climate change. The burning of fossil fuels used in the generation of electric power and heating of buildings contributes to climate change, which could result in rises in sea level, including in San Francisco Bay, that could put at risk Palo Alto homes and businesses 1 public facilities, and Highway 101. Due to decrease in annual rain fall, Palo Alto experiences the effect of drought and water saving more than some other communities in California.
- E** Green building enhances the public health and welfare by promoting the **environmental** and economic health of the City through the design, construction, maintenance, operation and deconstruction of buildings and sites by incorporating green practices into all development. The green provisions in this Chapter are designed to achieve the following goals:
- (a) Increase energy efficiency in buildings;
 - (b) Increase water and resource conservation;
 - (c) Reduce waste generated by construction and demolition projects;
 - (d) Provide durable buildings that are efficient and economical to own and operate;
 - (e) Promote the health and productivity of residents, workers, and visitors to the city;
 - (f) Recognize and conserve the energy embodied in existing buildings;
 - (g) Encourage alternative transportation; and
 - (h) Reduce disturbance of natural ecosystems.
- G** This amendment is justified on the basis of a local **geological** condition. The City of 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 mi 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 establish criteria for repair of damaged properties following a local emergency.
- T** The City of Palo Alto **topography** includes hillsides with narrow and winding access, which makes timely response by fire suppression vehicles difficult. Palo Alto is contiguous with the San Francisco Bay, resulting in a natural receptor for storm and waste water run-off. Also the City of Palo Alto is located in an area that is potentially susceptible to liquefaction during a major earthquake. 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 California Building Standards Code is warranted.

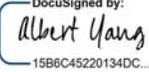
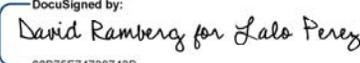
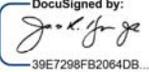
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Document Pages: 24	Signatures: 6
Certificate Pages: 5	Initials: 0
AutoNav: Enabled	Envelope Originator:
Envelopeld Stamping: Enabled	Kim Lunt
Time Zone: (UTC-08:00) Pacific Time (US & Canada)	250 Hamilton Ave
	Palo Alto , CA 94301
	kimberly.lunt@cityofpaloalto.org
	IP Address: 199.33.32.254

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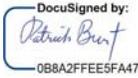
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Signer Events

Signer Events	Signature	Timestamp
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<p>Peter Pirnejad Peter.Pirnejad@CityofPaloAlto.org Development Services Director Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Not Offered via DocuSign ID:</p>	<p>DocuSigned by:  F7A325D57F1D4C9...</p> <p>Using IP Address: 199.33.32.254</p>	<p>Sent: 11/21/2016 7:35:03 AM Viewed: 11/21/2016 9:19:51 AM Signed: 11/21/2016 1:47:05 PM</p>
<p>James Keene james.keene@cityofpaloalto.org City Manager City of Palo Alto Security Level: Email, Account Authentication (None) Electronic Record and Signature Disclosure: Accepted: 4/14/2015 5:40:07 PM ID: 44fe333a-6a81-4cb7-b7d4-925473ac82e3</p>	<p>DocuSigned by:  39E7298FB2064DB...</p> <p>Using IP Address: 199.33.32.254</p>	<p>Sent: 11/21/2016 1:47:06 PM Viewed: 11/21/2016 5:22:25 PM Signed: 11/21/2016 5:23:01 PM</p>

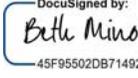
Signer Events	Signature	Timestamp
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Patrick Burt
patrick.burt@cityofpaloalto.org
Mayor
City of Palo Alto
Security Level: Email, Account Authentication (None)
Electronic Record and Signature Disclosure:
Not Offered via DocuSign
ID:

DocuSigned by:

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Beth Minor
Beth.Minor@CityofPaloAlto.org
City Clerk
City of Palo Alto
Security Level: Email, Account Authentication (None)
Electronic Record and Signature Disclosure:
Not Offered via DocuSign
ID:

DocuSigned by:

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Electronic Record and Signature Disclosure
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