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APPROVED FOR FORM AND LEGALITY  
**DRAFT**  
DEPUTY CITY ATTORNEY

**OAKLAND CITY COUNCIL**

**Resolution No. \_\_\_\_\_ C.M.S.**

**RESOLUTION OF FINDINGS MADE AND SUPPORTING LOCAL AMENDMENTS TO THE 2010 EDITIONS OF THE CALIFORNIA MODEL BUILDING CODES, CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 2 (BUILDING), PART 2.5 (RESIDENTIAL), PART 3 (ELECTRICAL), PART 4 (MECHANICAL), PART 5 (PLUMBING), PART 6 (ENERGY), AND PART 11 (GREEN BUILDING STANDARDS)**

**WHEREAS**, pursuant to California Health and Safety Code Sections 18938(b) and 18941.5, the 2010 editions of the California Model Building Codes, California Code of Regulations (CCR), Title 24, Part 2 (Building), Part 2.5 (Residential), Part 3 (Electrical), Part 4 (Mechanical), Part 5 (Plumbing), Part 6 (Energy), and Part 11 (Green Building Standards) shall become effective on January 1, 2011; and

**WHEREAS**, said editions of the California Model Building Codes are derived from the regulations set forth in the 2009 editions of the International Building Code (published by the International Code Council), International Residential Building Code (published by the International Code Council), International Mechanical Code (published by the International Code Council), International Plumbing Code (published by the International Association of Plumbing and Mechanical Officials), and the National Electrical Code (published by the National Fire Protection Association); and

**WHEREAS**, said editions of the California Model Building Codes shall be the governing codes for local jurisdictions on and after said effective date; and

**WHEREAS**, pursuant to California Health and Safety Code Section 17958.5, local jurisdictions may adopt local amendments to said editions of the California Model Building Codes in the intervening time between its date of publication on July 1, 2010, and its effective date; and

**WHEREAS**, said local amendments shall be set forth and adopted by the local jurisdiction through an ordinance before the effective date of the said edition of the California Model Building Codes; and

**WHEREAS**, the Council of the City of Oakland has considered the adoption of such an ordinance amending said editions of the California Model Building Codes; and

**WHEREAS**, said ordinance will establish said editions of the California Model Building Codes with said local amendments as the governing codes for the City of Oakland and will entitle said governing code as the Oakland Building Construction Code in Chapter 15.04 of the Oakland Municipal Code; and

**WHEREAS**, pursuant to California Health & Safety Code, Section 17958.7, as a condition of and concurrent with the adoption of such local amendments, the local jurisdiction is required to make express findings that such amendments are reasonably necessary because of local climatic, geologic, or topographic conditions; and

**WHEREAS**, the Council of the City of Oakland hereby finds that the requirements of the California Environmental Quality Act (CEQA) of 1970, the Guidelines as prescribed by the Secretary for Resources, and the provisions of the Statement of Objectives, Criteria and Procedures for Implementation of the California Environmental Quality Act: City of Oakland, have been satisfied, and that in accordance with Section 15061(b)(3) of the California Code of Regulations the adoption of local amendments to the California Model Building Codes, California Code of Regulations (CCR), Title 24, Part 2 (Building), 3 (Electrical), 4 (Mechanical), and 5 (Plumbing) and amending Chapter 15.04 of the Oakland Municipal Code are exempt from the provisions of the California Environmental Quality Act; now, therefore, be it

**RESOLVED:** That the City Council finds and determines that said local amendments of the California Model Building Codes, as set forth in said edition of the Oakland Building Construction Code, impose local requirements which exceed uniform industry codes and current California Model Building Codes requirements; and be it

**FURTHER RESOLVED:** That the Council of the City of Oakland finds that such local amendments of the California Model Building Codes are necessary as result of unique local conditions:

**I. California Building Code - Appendix Chapters 3B, 3C, and 3D - Requirements For Joint Living And Work Quarters**

These added appendix chapters establish alternative requirements for construction of Joint Living and Work Quarters (pursuant to Health and Safety Code Section 17958.11) and Conversion Residence Quarters. These changes are needed and necessary and reasonable due in part to the following local conditions:

- The level topography and the alluvial soil geology, which have resulted in wide and straight streets, intersections, sidewalks, and alleyways, have contributed to enhanced emergency response time to the existing building stock for fire rescue; and the maintained and upgraded water supply facilities in the urban core area, which have resulted in abundant fire hydrant locations and water pressure, have contributed to enhanced assets for fire suppression.

- The moderated micro-climate and prevailing winds, which is due to proximity to the marine estuary of the urban core area, have contributed significantly to reduced comfort heating and cooling requirements for residential occupancies.
- The alluvial soil geology and low water table levels, which have resulted in extensive prior basement construction and stiffened foundation support for the existing building stock in the urban core area, have contributed to a reduced likelihood of life-threatening seismic-induced building collapse due to sympathetic vibratory response of a flexible structural system.
- Abundant annual days of sunshine, which have resulted in prior location of occupied spaces along building perimeters and separated and away from stairwells and emergency exits and other points of congestion in panic egress situations for the existing building stock in the urban core area, have contributed to ready accessibility into the exiting system by occupants and emergency response personnel.

## II. California Building Code - Appendix Chapter 7B - Special Requirements For Construction In The Very High Fire Hazard Severity Zone

This added appendix chapter establishes special requirements for construction in the Very High Fire Hazard Zone. These changes are needed and are necessary and reasonable due to the following local conditions:

- The area is physically isolated from the rest of the City and is characterized by heavily landscaped areas, natural wilderness, and open space, which results in extremely dry vegetation with a high fuel load for potential wildfire conflagrations annually from May through October.
- The topography is hilly and the geology is rocky and subject to land subsidence due to poor soil quality and water saturation, which dictates minimum excavation of hillsides and resulting narrow and winding streets. Emergency response time and access is adversely impacted.
- Electrical transmission facilities are necessarily above ground and subject to damage from land instability, seismic activity, prevailing winds, and natural vegetation fire hazards, which results in power failures supplying water pumping stations.
- Sanitary sewer facilities are necessarily close to the ground surface and subject to similar damage, which results in vermin and other vector population explosions.

## III. California Building Code - Appendix Chapter 16B - Private Driveway Access Bridges

These changes clarify design loads for engineered structures in the Oakland hills. These changes are needed, necessary, and reasonable due to the inherently steep and circuitous topography, the rocky geology, and the risk of land subsidence due to poor soil quality and water saturation which dictates minimum excavation of hillsides.

#### IV. California Building Code - Appendix Chapter 18B – Grading, Excavations, And Fills

This added appendix chapter establishes alternative requirements for grading construction in the Oakland hills and is equivalent in purpose, scope, and application to Appendix Chapter J. These changes are needed, necessary, and reasonable due to the inherently steep and circuitous topography, unstable in situ soil geology, preponderance of seismic hazard zones (landslides) as identified by the California Geological Survey, and proximity of the Hayward earthquake fault.

#### V. California Building Code - Chapter 4 - Special Detailed Requirements Based Upon Use And Occupancy

These changes establish added fire design parameters for residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault.

#### VI. California Building Code - Chapter 6 - Types Of Construction

These changes establish added fire and panic design parameters for high-rise buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following major building fires in jurisdictions in California and Nevada. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered buildings in the downtown core area, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey along transportation corridors, and the proximity of the Hayward earthquake fault that reduces the ability of adjoining jurisdictions to provide timely mutual response for building conflagrations.

#### VII. California Building Code - Chapter 7 - Fire Resistance And Fire Rated Construction

These changes establish added fire and panic design parameters for high-rise buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following major building fires in jurisdictions in California and Nevada.

These changes are needed, necessary, and reasonable due to the high number of non-sprinklered buildings in the downtown core area, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey along transportation corridors, and the proximity of the Hayward earthquake fault that reduces the ability of adjoining jurisdictions to provide timely mutual response for building conflagrations.

#### **VIII. California Building Code - Chapter 10 - Means Of Egress**

These changes establish added fire and panic design parameters for high-rise buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following major building fires in jurisdictions in California and Nevada. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered buildings in the downtown core area, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey along transportation corridors, and the proximity of the Hayward earthquake fault that reduces the ability of adjoining jurisdictions to provide timely mutual response for building conflagrations.

#### **IX. California Building Code - Chapter 12 - Interior Environment**

These changes establish added habitability design parameters for high-rise buildings by retaining passive ventilation construction elements from the 2001 edition of the California Building Code. These changes are needed, necessary, and reasonable due to the moderated micro-climate and prevailing winds due to proximity to the marine estuary of the urban core area which contribute significantly to reduced comfort heating and cooling requirements for residential occupancies.

#### **X. California Building Code - Chapter 15 - Roof Assemblies And Roof Top Structures**

These changes clarify fire design parameters for residential structures in the Very High Fire Hazard Severity Zone. The purpose, scope, and application of these changes were derived from forensic inspections following the 1991 Oakland Fire Storm. These changes are needed, necessary, and reasonable due to the local conditions as set forth in Section II above.

#### **XI. California Building Code - Chapter 16 - Structural Design**

These changes clarify design loads for engineered structures. The purpose, scope, and application of these changes were derived from forensic inspections following the 1989 Loma Prieta earthquake. These changes are needed, necessary, and reasonable due to the inherently unstable in situ soil geology throughout Oakland, the high non-seasonal ground water (phreatic) surface, the preponderance of seismic hazard zones (landslide and liquefaction) as identified by the California Geological Survey, and proximity of the Hayward earthquake fault.

**XII. California Building Code - Chapter 18 - Soils And Foundations**

These changes establish minimum prescriptive construction requirements for non-engineered foundations supporting residential occupancies. The purpose, scope, and application of these changes were derived from forensic inspections following the 1989 Loma Prieta earthquake. These changes are needed, necessary, and reasonable due to the inherently unstable in situ soil geology throughout Oakland, the high non-seasonal ground water (phreatic) surface, the preponderance of seismic hazard zones (landslide and liquefaction) as identified by the California Geological Survey, and proximity of the Hayward earthquake fault.

**XIII. California Building Code - Chapter 19 - Concrete**

These changes establish minimum prescriptive construction requirements for non-engineered foundations supporting residential occupancies. The purpose, scope, and application of these changes were derived from forensic inspections following the 1989 Loma Prieta earthquake. These changes are needed, necessary, and reasonable due to the inherently unstable in situ soil geology throughout Oakland, the high non-seasonal ground water (phreatic) surface, the preponderance of seismic hazard zones (landslide and liquefaction) as identified by the California Geological Survey, and proximity of the Hayward earthquake fault.

**XIV. California Building Code - Chapter 23 - Wood**

These changes establish minimum prescriptive construction requirements for non-engineered foundations supporting residential occupancies. The purpose, scope, and application of these changes were derived from forensic inspections following the 1989 Loma Prieta earthquake. These changes are needed, necessary, and reasonable due to the inherently unstable in situ soil geology throughout Oakland, the high non-seasonal ground water (phreatic) surface, the preponderance of seismic hazard zones (landslide and liquefaction) as identified by the California Geological Survey, and proximity of the Hayward earthquake fault.

**XV. California Building Code - Chapter 24 - Glass And Glazing**

These changes establish minimum prescriptive construction requirements for non-engineered foundations supporting residential occupancies. The purpose, scope, and application of these changes were derived from forensic inspections following the 1989 Loma Prieta earthquake. These changes are needed, necessary, and reasonable due to the inherently unstable in situ soil geology throughout Oakland, the high non-seasonal ground water (phreatic) surface, the preponderance of seismic hazard zones (landslide and liquefaction) as identified by the California Geological Survey, and proximity of the Hayward earthquake fault.

**XVI. California Electrical Code - Chapters 2 - Wiring And Protection, 3 – Wiring Methods And Materials, 4 – Equipment For General Use, 6 – Special Equipment, 7 – Special Conditions**

This added section establishes supplemental regulations setting forth special requirements for ministerial electrical permits for construction in the Very High Fire Hazard Severity Zone. These changes are needed and are necessary and reasonable due to the following local conditions:

- The area is physically isolated from the rest of the City and is characterized by heavily landscaped areas, natural wilderness, and open space which have extremely dry vegetation with a high fuel load for potential wildfire conflagrations annually from May through October.
- The topography is hilly and the geology is rocky and subject to land subsidence due to poor soil quality and water saturation, which dictates minimum excavation of hillsides and resulting narrow and winding streets. Emergency response time and access is adversely impacted.
- Electrical transmission facilities are necessarily above ground and subject to damage from land instability, seismic activity, and prevailing winds and resulting power failures supplying water pumping stations or natural vegetation fire hazards.

**XVII. California Mechanical Code - Chapter 5 - Exhaust Systems**

These changes establish added fire design parameters for residential buildings and commercial restaurant occupancies by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault.

**XVIII. California Mechanical Code - Chapter 8 - Chimneys And Vaults**

These changes establish added fire design parameters for residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault.

**IX. California Plumbing Code - Chapter 5 - Water Heaters**

These changes establish added fire design parameters for residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault.

**XX. California Plumbing Code - Chapter 7 - Sanitary Drainage**

These changes establish added fire design parameters for residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault, and the inadequacy of hillside geology to adequately dissipate and absorb effluent from septic system leach fields.

**XXI. California Plumbing Code - Chapter 9 - Vents**

These changes establish added fire design parameters for residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault, and the inadequacy of hillside geology to adequately dissipate and absorb effluent from septic system leach fields.

**XXII. California Plumbing Code - Chapter 10 - Traps And Interceptors**

These changes establish added fire design parameters for commercial restaurant occupancies buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault.

**XXIII. California Plumbing Code - Chapter 12 - Fuel Piping**



These changes establish added fire design parameters for residential and non-residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault; and be it

#### **XXIV. California Residential Code**

These changes establish added fire design parameters for residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault, and the inadequacy of hillside geology to adequately dissipate and absorb effluent from septic system leach fields.

#### **XXV. California Energy Code**

These changes establish added fire design parameters for residential buildings by retaining passive life-safety construction elements from the 2001 edition of the California Building Code. The purpose, scope, and application of these changes were derived from forensic inspections following structure fires in California and Oakland. These changes are needed, necessary, and reasonable due to the high number of non-sprinklered residences in Oakland, the preponderance of seismic hazard zones (liquefaction) as identified by the California Geological Survey, and the proximity of the Hayward earthquake fault, and the inadequacy of hillside geology to adequately dissipate and absorb effluent from septic system leach fields.

#### **XXIV. California Green Building Standards Code**

These changes were previously reviewed with comments and approved by the California Energy Standards Commission on September 33, 2010, and establish by an ordinance, adopted by the Council of the City of Oakland on October 19, 2010, and included in the Oakland Municipal Code, Title 18 – Sustainability, Chapter 18.02 – Sustainable Green Building Requirement For Private Development To Establish Environmentally Sustainable Regulations For Building Construction, Remodeling, Landscaping, And Demolition, and.

**FURTHER RESOLVED:** That this Resolution shall become effective immediately, unless otherwise required by the Charter of the City of Oakland; and be it

**FURTHER RESOLVED:** That the Building Official of the City of Oakland is hereby authorized to file a copy of this Resolution, along with a copy of said ordinance adopting local amendments to the 2010 editions of the California Model Building Codes, with the California Building Standards Commission.

**IN COUNCIL, OAKLAND, CALIFORNIA, \_\_\_\_\_, 2010**

PASSED BY THE FOLLOWING VOTE:

AYES - BROOKS, DE LA FUENTE, KAPLAN, KERNIGHAN, NADEL, QUAN, REID, and  
PRESIDENT BRUNNER

NOES -

ABSENT -

ABSTENTION -

ATTEST: \_\_\_\_\_  
LATONDA SIMMONS  
City Clerk and Clerk of the Council  
of the City of Oakland, California