ORDINANCE NO. 2008-08

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF GILROY, AMENDING THE 2007 CALIFORNIA BUILDING CODE (CBC) ADOPTED BY THE CITY COUNCIL AS ORDINANCE 2007-24, TO MODIFY, ADD AND AMEND SECTIONS 3402 AND 3403 REGARDING REPAIR OF DAMAGED STRUCTURES.

WHEREAS, Section 6.1 of the Gilroy City Code provides that the latest edition of the uniform codes shall be submitted to the City Council for adoption subject to local changes and modifications; and

WHEREAS, on December 17, 2007 by Emergency Ordinance No. 2007-24 the City Council adopted the 2007 California Building Code (CBC) as the City of Gilroy Building Code and made findings therein pursuant to California Health and Safety Code § 17958.5 and 17958.7 with regard to local climatic, geological or topographical conditions necessitating changes to the provisions of the CBC; and

WHEREAS, the City Council hereby adopts those findings which are on file with the California Building Standards Commission by reference hereto; and

WHEREAS, the City Council finds that the Silicon Valley area, which includes the City, is within a very active seismic area and local soil conditions can be highly expansive and are prone to shrink and swell during seasonal drying and wetting; and

WHEREAS, the City Council further finds that portions of the City are in hillside areas that are hazardous fire areas that have only limited fire suppression forces and facilities available for the protection of life and property; and

WHEREAS, the City Council further finds fire protection and suppression services for multi-family dwellings and other buildings of three stories or more than

thirty feet in height are limited and therefore require supplemental fire suppression services such as automated fire sprinkler systems; and

WHEREAS, the City Council further finds the City has local climatic considerations including temperatures ranging from below freezing to over one hundred degrees, local geological considerations including the presence of seismic activity and expansive clay soils, and local topographical considerations including extensive hillside construction that is prone to erosion; and

WHEREAS, a duly noticed public hearing was held prior to the adoption of the City of Gilroy Building Code by the City Council on December 17, 2007; and

WHEREAS, the City Council adopted Ordinance 2007-24 as the Gilroy Building Code with an effective date of January 1, 2008; and

WHEREAS, City staff recommends that additional local amendments to the City of Gilroy Building Code are necessary as are set forth herein; and

WHEREAS, this Ordinance is exempt from the requirements of the California Environmental Quality Act of 1970 ("CEQA"), as amended, because it does not involve an activity that may cause either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment; and

WHEREAS, the City Council has reviewed all of the written materials and considered all of the oral testimony presented to it on this matter.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF GILROY DOES HEREBY ORDAIN AS FOLLOWS:

SECTION I

This Ordinance establishes regulations as amendments to the City of Gilroy Building Code for the expeditious repair of damaged structures. In the event an amendment to the California Building Standards Code results in differences between these building standards and the California Building Standards Code, the text of these building standards shall govern. In accordance with California Health and Safety Code Section 17958.7, express findings that modifications to the California Building Standards Code are reasonably necessary because of local climatic, geological or topographical conditions are either already on file with the California Building Standards Commission, or will be filed prior to the effective date of the ordinance. In accordance with California Government Code Section 50022.6, at least one true copy of the California Building Code has been on file with the City Clerk since fifteen (15) days prior to enactment of the ordinance.

SECTION II

The following modifications and changes as recommended by the Building Official are adopted to the City of Gilroy Building Code (Ordinance 2007-24) as amendments to the California Building Code, 2007 Edition, which is the 2006 International Building Code as amended by the State of California:

AMEND: 2007 CBC SECTION 3402.1

ADD SECTION 3402.1 - Substantial Structural Damage, to read:

Section 3402.1 – Substantial Structural DamageA condition where:

1. In any story, the vertical elements of the lateral-force-resisting system, have suffered damage such that the lateral load-carrying capacity of the structure in any direction has been reduced by more than 20 percent from its pre-damaged condition, or

2. The capacity of any vertical gravity load-carrying component, or any group of such components, that supports more than 30 percent of the total area of the structure's floor (s) and roof (s) has been reduced more than 20 percent from its pre-damaged condition, and the remaining capacity of such affected elements with respect to all dead and alive loads is less than 75 percent of that required by the building code for new buildings of similar structure, purpose, and location.

AMEND: 2007 CBC Section 3403
ADD: Section 3403.5 to read:

Section 3403.5. - Repairs.

3403.5.1 Scope. Repairs of structural elements shall comply with this section.

3403.5.1.1. Seismic evaluation and design. Seismic evaluation and design of an existing building and its components shall be based on the following criteria:

3403.5.1.1.1. Evaluation and design procedures. The seismic evaluation and design shall be based on the following procedures:

1. As specified in the building code (Chapter 16)
2. ASCE 31 (American Society of Engineers) Seismic Evaluation of Existing Buildings (for evaluation only)
3. ASCE 41 Seismic Rehabilitation of Existing Buildings
4. The procedures contained in Appendix Chapter A2 and A3 of the International Existing Building Code (IEBC) and Appendix Chapter A1 of California Existing Building Code (CEBC) shall be permitted to be used as specified in Section 3403.1.1.3.

3403.5.1.1.2. CBC level seismic forces. When seismic forces are required to meet the building code level, they shall be one of the following:

1. 100 percent of the values in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor specified for structural systems classified as "Ordinary" unless it can be demonstrated that the structural system satisfies the proportioning and detailing requirements for systems classified as "Intermediate" or "Special".

2. Forces corresponding to BSE-1 and BSE-2 (Basic Safety Earthquake) Earthquake Hazard Levels defined in ASCE 41. Where ASCE 41 is used, the corresponding performance levels shall be those shown in Table 3403.5.1.1.2.

TABLE 3403.5.1.1.2
ASCE 41 and ASCE 31 PERFORMANCE LEVELS

OCCUPANCY CATEGORY (BASED ON CBC TABLE 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 31 AND WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-2 EARTHQUAKE HAZARD LEVEL
I	Life Safety (LS)	Collapse Prevention (CP)
II	Life Safety (LS)	Collapse Prevention (CP)
III	Note (a)	Note (a)
IV	Immediate Occupancy (IO)	Life Safety (LS)

a. Performance Levels for Occupancy Category III shall be taken as halfway between the performance levels specified for Occupancy Category II and Occupancy Category IV.

3403.5.1.1.3 Reduced CBC level seismic forces When seismic forces are permitted to meet reduced building code levels, they shall be one of the following:

1. 75 percent of the forces prescribed in the Building Code. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor as specified in Section 3403.5.1.1.2.

2. In accordance with the applicable chapters in Appendix A of the International Existing Building Code and California Existing Building Code, as specified in Items 2.1 through 2.3 below. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A shall be deemed to comply with the requirement for reduced Building Code force levels.

2.1 The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in part 10 of 2007 CBC.

2.2 Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforcements for reduced building code force levels. Masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A2 of IEBC.

2.3 Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A3 of IEBC.

3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 3403.5.1.1.2.

4. Those associated with the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 3403.5.1.1.2. Where ASCE 41 is used, the design spectral response acceleration parameters S_{xs} and S_{x1} shall not be taken less than 75 percent of the respective design spectral response acceleration parameters S_{DS} and S_{D1} defined by the California Building Code and its reference standards.

3403.5.1.2. Wind Design. Wind design of existing buildings shall be based on the procedures specified in the building code.

3403.5.2. Repairs to damaged buildings. Repairs to damaged buildings shall comply with this section.

3403.5.2.1. Unsafe conditions. Regardless of the extent of structural damage, unsafe conditions shall be eliminated.

3403.5.2.2 Substantial structural damage to vertical elements of the lateral–force-resisting system. A building that has sustained substantial structural damage to the vertical elements of its lateral-force-resisting system shall be evaluated and repaired in accordance with the applicable provisions of Section 3403.5.2.2.1 through 3403.5.2.2.3.

3403.5.2.2.1. Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the code official. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with the provisions of the building code.

-Wind forces for this evaluation shall be those prescribed in the Building Code.

-Seismic forces for this evaluation are permitted to be the reduced level seismic forces specified in Code Section 3403.5.1.1.3.

3403.5.2.2.2. Extent of repair for compliant buildings. If the evaluation establishes compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then repairs shall be permitted that restore the building to its pre-damage state, using materials and strengths that existed prior to the damage.

3403.5.2.2.3. Extent of repair for non-compliant buildings. If the evaluation does not establish compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then the building shall be rehabilitated to comply with applicable provisions of the building code for load combinations including wind or seismic forces.

1. Wind

The wind design level for the repair shall be as required by the building code in effect at the time of original construction unless the damage was caused by wind, in which case the design level shall be as required by the code in effect at the time of original construction or as required by the building code, whichever is greater.

2. Seismic

Seismic forces for this rehabilitation design shall be those required for the design of the predamaged building, but not less than the reduced level seismic forces specified in Section 3403.5.1.1.3. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3. Substantial structural damage to vertical load-carrying components. Vertical load-carrying components that have sustained substantial structural damage shall be rehabilitated to comply with the applicable provisions for dead and live loads in the building code. Undamaged vertical load-carrying components that receive dead or live loads from rehabilitated components shall also be rehabilitated to carry the design loads of the rehabilitation design. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3.1. Lateral force-resisting elements. Regardless of the level of damage to vertical elements of the lateral force-resisting system, if substantial structural damage to vertical load-carrying components was caused primarily by wind or seismic effects, then the building shall be evaluated in accordance with

Section 3403.5.2.2.1 and, if non-compliant, rehabilitated in accordance with Section 3403.5.2.2.3.

3403.5.2.4. Less than substantial structural damage. For damage less than substantial structural damage, repairs shall be allowed that restore the building to its pre-damage state, using materials and strengths that existed prior to the damage. New structural members and connections used for this repair shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.3 Referenced Standards

Standard Referenced Number	TITLE	Reference In Code Section Number
ASCE 31-03	Seismic Evaluation of Existing Buildings	3403.5.1.1.1, TABLE 3403.5.1.1.2, 3403.5.1.1.3
ASCE 41-06	Seismic Rehabilitation of Existing Buildings	3403.5.1.1.1, 3403.5.1.1.2, TABLE 3403.5.1.1.2, 3403.5.1.1.3

SECTION III

The City of Gilroy is located in an area of high seismic activities as indicated by the United States Geological Survey and California Division of Mines and Geology. Recent earthquake activities have indicated the lack of adequate design and detailing, flexibility of materials and/or building systems are contributing factors to damages that reduce the protection of the life safety of building occupants. The amendments contained in this Ordinance will assist the property owners and the City of Gilroy in the repair and reconstruction of damaged building in the community to their pre-existing condition and more importantly will reduce the likelihood of future structural damages.

SECTION IV

If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council of the City of Gilroy hereby declares that it would have passed and adopted this Ordinance, and each section, subsection, sentence, clause or phrase hereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases may be declared invalid or unconstitutional.

SECTION V

This Ordinance shall take effect immediately and be in full force and effect thirty (30) days after its adoption.

PASSED AND ADOPTED BY THE COUNCIL OF THE CITY OF GILROY this 4th day of August, 2008, by the following vote:

AYES: COUNCILMEMBERS:	ARELLANO, BRACCO, DILLON, GARTMAN, TUCKER, WOODWARD, and PINHEIRO
NOES: COUNCILMEMBERS:	NONE
ABSENT: COUNCILMEMBERS:	NONE

APPROVED:

Al Pinheiro, Mayor

ATTEST:

Shawna Freels, City Clerk

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I, SHAWNA FREELS, City Clerk of the City of Gilroy, do hereby certify that the attached Ordinance No. 2008-08 is an original ordinance, or true and correct copy of a city ordinance, duly adopted by the Council of the City of Gilroy at a regular meeting of said Council held on the 4th day of August, 2008, at which meeting a quorum was present.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Official Seal of the City of Gilroy this 11th day of September, 2008.

Shawna Freels, CMC
City Clerk of the City of Gilroy

(Seal)