

CITY OF ALAMEDA ORDINANCE NO. _____
New Series

AMENDING THE ALAMEDA MUNICIPAL CODE BY
ADDING ARTICLE XVIII (EARTHQUAKE HAZARD
REDUCTION IN EXISTING WOOD FRAME ONE
AND TWO STORY RESIDENTIAL STRUCTURES)
TO CHAPTER XIII (BUILDING AND HOUSING)

BE IT ORDAINED by the City Council of the City of Alameda that:

Section 1. The Alameda Municipal Code is amended by adding Article XVIII, Earthquake Hazard Reduction in Existing One to Two Story Residential Structures, to Chapter XIII, Building and Housing, consisting of subsections 13-70.1 through 13-70.6 which shall read as follows:

**ARTICLE XVIII. EARTHQUAKE HAZARD REDUCTION IN EXISTING
WOOD FRAME ONE TO TWO STORY RESIDENTIAL
STRUCTURES**

13-70.1 Purpose

The provisions of this article are intended to promote public safety and welfare by reducing the risk of earthquake-induced damage to existing wood frame residential structures. The voluntary minimum standards contained in this Article shall substantially improve the seismic performance of these residential buildings but will not necessarily prevent all earthquake damage. When fully followed, these standards will strengthen the portion of the structure that is most vulnerable to earthquake damage. This article does not require alteration of existing electrical, plumbing, mechanical, or fire safety systems unless they constitute a hazard to life or property.

13-70.2 Scope

This chapter sets standards for strengthening that may be approved by the Building Official without requiring plans or calculations prepared by an architect or engineer. In accordance with the restrictions outlined below one of two prescriptive standards may be used.

a. *Standard Plan A – Residential Seismic Strengthening Plan.* The provisions of this article may be applied to one and two story, conventional light-frame wood construction, Group R, Division 3 Occupancies.

1. The provisions of this article do not apply to buildings or elements thereof, listed below.

(a) Buildings without a continuous perimeter concrete foundation.

Approved as to Form

City Attorney

- (b) Buildings with cripple walls that exceed four feet in height.
- (c) Buildings exceeding two stories in height.
- (d) Buildings or portions thereof, constructed on a concrete slab on grade.
- (e) Buildings where the Building Official determines conditions exist that are beyond the scope of the prescriptive requirements of this chapter.

b. *Chapter A3 2006 International Existing Building Code.* The provisions of this article may be applied to one to two story, conventional light-frame wood construction, Group R, Division 3 Occupancies, containing one or more of the structural weaknesses specified in Sec 13-70.2 (b) 2

1. The provisions of this section do not apply to the buildings, or elements thereof, listed below. These buildings or elements require analysis by an engineer or architect in accordance with Section A301.3 of the 2006 International Existing Building Code to determine appropriate strengthening:

- (a) Group R-1, R-2 or R-4 occupancies with more than four dwelling units.
- (b) Buildings with a lateral-force-resisting system using poles or columns embedded in the ground.
- (c) Cripple walls that exceed 4 feet in height.
- (d) Buildings exceeding three stories in height and any three-story building with cripple wall studs exceeding 14 inches in height.
- (e) Buildings where the Building Official determines that conditions exist that are beyond the scope of the prescriptive requirements of Chapter A3 of the 2006 International Existing Building Code.
- (f) Buildings or Portions thereof constructed on concrete slabs on grade.

2. **Structural Weaknesses.** For the purposes of this section structural weaknesses shall be as specified below.

- (a) Sill plates or floor framing that are supported directly on the ground without an approved foundation system.
- (b) A perimeter foundation system that is constructed only of wood posts supported on isolated pad footings.
- (c) Perimeter foundation system that is not continuous.

Exceptions:

- 1. Existing single story exterior walls not exceeding 10 feet in length, forming an extension of floor area beyond the line of an existing continuous perimeter footing.
- 2. Porches, storage rooms, and similar spaces not containing fuel-burning appliances.
- (d) A perimeter foundation system that is constructed of

unreinforced masonry or stone.

- (e) Sill plates that are not connected to the foundation or that are connected with less than what is required by the building code.

Exceptions:

1. When approved by the Building Official connections of a sill plate to the foundation made with other than sill bolts may be accepted if the capacity of the connection is equivalent to that required by the building code.
- (f) Cripple walls that are not braced in accordance with the requirements of Section A304.4 and Table A3-A of the 2006 International Existing Building Code, or cripple walls not braced with diagonal sheathing or wood structural panels in accordance with the building code.

13-70.3 Submittal Requirements

a. *Standard Plan A – Residential Seismic Strengthening Plan.* When submitting for building permit using the provisions of Section 13-70.2(a) the applicant shall be required to submit 4 copies of the completed Standard Plan A – Residential Seismic Strengthening Plan available for the City of Alameda Permit Center.

b. *Chapter A3 2006 International Existing Building Code.* When submitting for building permit using the provisions of Section 13-70.2(b) the applicant shall be required to submit 4 copies of all necessary plans to show compliance with Chapter A3 of the 2006 IEBC.

13-70.4 Fees

Plan review and inspection fees shall be established by resolution of the City Council.

13-70.4 Inspections

a. Construction or work for which a permit is required shall be subject to inspection by the Building Official and such construction work shall remain accessible and exposed for inspection purposes until approved. The following inspections by the Planning and Building Department may be required for work permitted under this chapter:

1. Pre-construction,
2. Footings or forms,
3. Foundation bolt / anchor plate installation,
4. Concrete slab or underfloor inspection,
5. Installation of blocking,

6. Plywood panel installation on cripple wall,
7. Metal hardware installation,
8. Other inspections as required by the California Building Standards Code.
9. Final Inspection.

Prior to final inspection, smoke detectors shall be installed in the attached dwelling (s) in accordance with the building code requirements.

13-70.5 Incentives

a. The requirements of this Chapter are voluntary. In order to encourage the largest application of this Chapter the following incentives are offered for those projects that use the prescriptive provisions of Section 13-70.2 (a) or (b).

1. Plans are not required to be prepared by a licensed architect or engineer.
2. Projects do not require upgrades of the plumbing, mechanical, electrical or fire life/safety systems unless they constitute a hazard to life or property.

13-70.6 Findings

The City of Alameda is located within Seismic Zone 4.

The City Council desires to lessen the risks to life and property of the residents of the City of Alameda posed by a major earthquake in Northern California.

The California Building Code does not contain provisions governing the earthquake retrofit of existing wood frame residential structures.

The City Council, therefore, has determined to implement voluntary prescriptive retrofit standards for existing one to two story residential structures and to provide incentives to encourage the use of these standards.

Section 2. If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held invalid or unconstitutional, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council of the City of Alameda hereby declares that it would have passed 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 be declared unconstitutional.

Section 3. All former ordinances or parts thereof conflicting or inconsistent with the provisions of this ordinance hereby adopted, to the extent of such conflict only, are hereby repealed.

Section 4. The City Clerk of the City of Alameda is hereby directed to cause this ordinance to be published in the Official Newspaper of the City of Alameda

Section 5. This ordinance and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect 30 days after the date of its final passage and adoption.

Presiding Officer of the Council

Attest:

Lara Weisiger, City Clerk
City of Alameda

* * * * *

I, the undersigned, hereby certify that the foregoing Ordinance was duly and regularly adopted and passed by Council of the City of Alameda in regular meeting assembled on the ____ day of _____, 2006, by the following vote to wit:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

IN WITNESS, WHEREOF, I have hereunto set my hand and affixed the official seal of said City this ____ day of _____, 2006.

Lara Weisiger, City Clerk
City of Alameda