

**ORDINANCE NO. 245**

**AN ORINANCE OF THE CITY OF GRAND TERRACE AMENDING CHAPTER 15.09.20 CALIFORNIA EXISTING BUILDING CODE, TITLE 15 CHAPTERS 15.09.20 OF THE GRAND TERRACE MUNICIPAL CODE RELATING TO REPAIRS OF DAMAGED STRUCTURES.**

**The City Council of the City of Grand Terrace, State of California, does ordain as follows:**

**Section 1. Title 15, Chapter 15.09.20 of the City of Grand Terrace Municipal Code is amended to read as follows:**

**Chapter 15.09.20, AMENDMENTS TO THE CALIFORNIA EXISTING BUILDING CODE.**

**Chapter 15.09.30, ADOPTION AND INTENT**

This chapter establishes regulations as amended to the building code for the expeditious repair of damaged structures. In the event an amendment to the California Building Standards Code result 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 ordinance codified in this article. 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 Clerks office fifteen (15) days prior to enactment of the ordinance codified in this Article. While this Article is in force, a true copy of this Chapter shall be kept for public inspection in the office of the City Clerk. A reasonable supply of this Chapter shall be available in the office of the City Clerk for public purchase.

**Chapter 15.09.40, DEFINITIONS**

For the purpose of this chapter, the following definition applies and is hereby added to Section 3402.1 Definitions of the 2007 California Building Code (CBC):

**Substantial Structural Damage.** A condition where:

1. In any story, the vertical elements of the lateral-force-load 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 support 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 live loads is less than 75 percent of that required by the building code for new buildings of similar structure, purpose, and location.

## **Chapter 15.09.50 REPAIRS**

For the purpose of this chapter, the following repair requirements are hereby added as a new Subsection 3403.5 to 3403 Additions, Alterations or Repairs in the 2007 California Building Code (CBC).

**3403.5.1 Repairs.** 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 procedures specified in the building code, ASCE 31 *Seismic Evaluation of Existing Buildings* (for evaluation only) or ASCE 41 *Seismic Rehabilitation of Existing Buildings*. The procedures contained in Appendix A of the *International Existing Building Code* shall be permitted to be used as specified in Section 3403.5.1.1.3.

**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 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 Earthquake Hazard Levels defined in ACSE 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 IBC 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 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 used for 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* as specified in Items 2.1 through 2.5 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 requirements for reduced building code forces 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 Appendix Chapter A1.
  - 2.2 Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I and II are permitted to be based on the procedures specified in Appendix Chapter A2.
  - 2.3 Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-framed wood construction in Occupancy Category I and II are permitted to be based on the procedures specified in Appendix Chapter A3.
  - 2.4 Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I and II are permitted to be based on the procedures specified in Appendix Chapter A4.
  - 2.5 Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all Occupancy Categories are permitted to be based on the procedures specified in Appendix Chapter A5.
3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 3403.5.1.1.2.