

CHAPTER 7

ALTERATIONS—LEVEL 1

User note:

About this chapter: Chapter 7 provides the technical requirements for those existing buildings that undergo Level 1 alterations as described in Section 503, which includes replacement or covering of existing materials, elements, equipment or fixtures using new materials for the same purpose. This chapter, similar to other chapters of this code, covers all building-related subjects, such as structural, mechanical, plumbing, electrical and accessibility as well as the fire and life safety issues when the alterations are classified as Level 1. The purpose of this chapter is to provide detailed requirements and provisions to identify the required improvements in the existing building elements, building spaces and building structural system. This chapter is distinguished from Chapters 8 and 9 by involving only replacement of building components with new components. In contrast, Level 2 alterations involve more space reconfiguration, and Level 3 alterations involve more extensive space reconfiguration, exceeding 50 percent of the building area.

SECTION 701 GENERAL

[S] 701.1 Scope. Level 1 alterations as described in Section 602 shall comply with the requirements of this chapter. ~~((Level 1 alterations to historic buildings shall comply with this chapter, except as modified in Chapter 12.))~~

701.2 Conformance. An existing building or portion thereof shall not be altered such that the building becomes less safe than its existing condition.

Exception: Where the current level of safety or sanitation is proposed to be reduced, the portion altered shall conform to the requirements of the *International Building Code*.

[S] 701.4 Emergency escape and rescue openings. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools. Bars, grilles, grates or similar devices placed over emergency escape and rescue openings shall comply with the minimum net clear opening size required by the code that was in effect at the time of construction. Such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening. Where such bars, grilles, grates or similar devices are installed, they shall not reduce the net clear opening of the emergency escape and rescue openings. ~~((Smoke alarms shall be installed in accordance with Section 907.2.10 of the *International Building Code* regardless of the valuation of the alteration.))~~

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SECTION 702 BUILDING ELEMENTS AND MATERIALS

702.1 Interior finishes. Newly installed interior wall and ceiling finishes shall comply with Chapter 8 of the *International Building Code*.

702.2 Interior floor finish. New interior floor finish, including new carpeting used as an interior floor finish material, shall comply with Section 804 of the *International Building Code*.

702.3 Interior trim. Newly installed interior trim materials shall comply with Section 806 of the *International Building Code*.

[S] 702.4 Window opening control devices on replacement windows. In Group R-2 or R-3 buildings containing dwelling units, ~~((and one- and two-family dwellings and townhouses regulated by the *International Residential Code*))~~ window opening control devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable.
2. The window replacement includes replacement of the sash and the frame.

~~((3. One of the following applies:))~~

~~((3.1))~~ 3. In Group R-2 or R-3 buildings containing dwelling units, the top of the sill of the window opening is at a height less than 36 inches (915 mm) above the finished floor.

~~((3.2. In one- and two-family dwellings and townhouses regulated by the *International Residential Code*, the top sill of the window opening is at a height less than 24 inches (610 mm) above the finished floor.))~~

4. The window will permit openings that will allow passage of a 4-inch-diameter (102 mm) sphere when the window is in its largest opened position.
5. The vertical distance from the top of the sill of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1030.2 of the *International Building Code*.

Exceptions:

1. Operable windows where the top of the sill of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.
2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F2090.

[S] 702.5 Replacement window emergency escape and rescue openings. Where windows are required to provide emergency escape and rescue openings in Group R-2 and R-3 occupancies, ~~((and one- and two-family dwellings and townhouses regulated by the *International Residential Code*))~~ replacement windows shall be exempt from the requirements of Sections 1030.2, 1030.3 and 1030.4 of the *International Building Code*, ~~((and Sections R310.2.1, R310.2.2 and R310.2.3 of the *International Residential Code*))~~ provided that the replacement window meets the following conditions:

1. The replacement window is the manufacturer’s largest standard size window that will fit within the existing frame or existing rough opening.
2. The replacement window is not part of a *change of occupancy*.

Window opening control devices complying with ASTM F2090 shall be permitted for use on windows required to provide *emergency escape and rescue openings*.

[S] 702.6 Materials and methods. New work shall comply with the materials and methods requirements in the *International Building Code*, *International Energy Conservation Code*, *International Mechanical Code*, and ~~((*International*))~~ *Uniform Plumbing Code*, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

[FG] 702.6.1 International Fuel Gas Code. The following sections of the *International Fuel Gas Code* shall constitute the fuel gas materials and methods requirements for Level 1 *alterations*.

1. Chapter 3, entitled “General Regulations,” except Sections 303.7 and 306.
2. Chapter 4, entitled “Gas Piping Installations,” except Sections 401.8 and 402.3.
 - 2.1. Sections 401.8 and 402.3 shall apply where the work being performed increases the load on the system such that the existing pipe does not meet the size required by code. Existing systems that are modified shall not require resizing as long as the load on the system is not increased and the system length is not increased even if the altered system does not meet code minimums.
3. Chapter 5, entitled “Chimneys and Vents.”
4. Chapter 6, entitled “Specific Appliances.”

**SECTION 703
FIRE PROTECTION**

703.1 General. *Alterations* shall be done in a manner that maintains the level of fire protection provided.

**SECTION 704
MEANS OF EGRESS**

704.1 General. *Alterations* shall be done in a manner that maintains the level of protection provided for the means of egress.

**[S] ((SECTION 705
REROOFING))**

**[S] ((SECTION 706
STRUCTURAL**

~~**[BS] 706.1 General.** Where *alteration* work includes replacement of equipment that is supported by the building or where a reroofing permit is required, the provisions of this section shall apply.~~

~~**[BS] 706.2 Addition or replacement of roofing or replacement of equipment.** Any existing gravity load-carrying structural element for which an *alteration* causes an increase in design dead, live or snow load, including snow drift effects, of more than 5~~

percent shall be replaced or altered as needed to carry the gravity loads required by the *International Building Code* for new structures.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the altered building complies with the conventional light-frame construction methods of the *International Building Code* or the provisions of the *International Residential Code*.
2. Buildings in which the increased dead load is due entirely to the addition of a second layer of roof covering weighing 3 pounds per square foot (0.1437 kN/m²) or less over an existing single layer of roof covering.

~~[BS] 706.3 Additional requirements for reroof permits.~~ The requirements of this section shall apply to *alteration* work requiring reroof permits.

~~[BS] 706.3.1 Bracing for unreinforced masonry bearing wall parapets.~~ Where a permit is issued for reroofing for more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall include installation of parapet bracing unless an evaluation demonstrates compliance of such items. Reduced seismic forces shall be permitted.

~~[BS] 706.3.2 Roof diaphragms resisting wind loads in high wind regions.~~ Where roofing materials are removed from more than 50 percent of the roof diaphragm or section of a building located where the ultimate design wind speed, V_{ult} , determined in accordance with Figure 1609.3(1) of the *International Building Code*, is greater than 115 mph (51 m/s) or in a special wind region, as defined in Section 1609 of the *International Building Code*, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in the *International Building Code*, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in the *International Building Code*.)

**[S] ((SECTION 707
ENERGY CONSERVATION**

~~707.1 Minimum requirements.~~ Level 1 *alterations* to *existing buildings* or structures do not require the entire building or structure to comply with the energy requirements of the *International Energy Conservation Code* or *International Residential Code*. The *alterations* shall conform to the energy requirements of the *International Energy Conservation Code* or *International Residential Code* as they relate to new construction only.)

