CHAPTER 5
REPAIRS

SECTION 501
GENERAL

501.1 Scope. Repairs as described in Section 302 shall comply with the requirements of this chapter. Repairs to historic buildings shall comply with this chapter, except as modified in Chapter 11.

501.2 Permitted materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted, provided no hazard to life, health or property is created.

Exception: Repairs to a historic building shall be permitted using original or like materials. Materials shall comply with Sections 502.1, 502.2 and 502.3.

501.3 Conformance. The work shall not make the building less conforming than it was before the repair was undertaken.

501.4 Flood hazard areas. In flood hazard areas, repairs that constitute substantial improvement shall require that the building comply with Section 1612 of the *Florida Building Code, Building.*

501.4.1 Structure seaward of a coastal construction line. Structures located seaward of the coastal construction line shall be designed to resist the predicted forces of a 100-year storm event in accordance with Section 3109 of the *Florida Building Code, Building.*

501.4.2 Floodplain construction. This code specifically defers to the authority granted to local government by Title 44 CFR, Sections 59 and 60. This code is not intended to supplant or supercede local ordinances adopted pursuant to that authority, nor are local floodplain management ordinances to be deemed amendments to the code.

501.5 Dangerous buildings. When an historic building is determined as dangerous, no work shall be required except as necessary to correct identified dangerous conditions.

SECTION 502
BUILDING ELEMENTS AND MATERIALS

502.1 Hazardous materials. Hazardous materials that are no longer permitted, such as asbestos and lead-based paint, shall not be used.

502.2 Glazing in hazardous locations. Replacement glazing in hazardous locations shall comply with the safety glazing requirements of the *Florida Building Code, Building* as applicable.

Exception: Glass block walls, louvered windows, and jalousies repaired with like materials.

502.3 Replacement. For repairs in an historic building, replacement or partial replacement of existing or missing features that match the original in configuration, height, size and original methods of construction shall be permitted.

Exception: Glazing in hazardous locations shall comply with Section 502.2.

SECTION 503
FIRE PROTECTION

503.1 General. Repairs shall be done in a manner that maintains the level of fire protection provided.

SECTION 504
MEANS OF EGRESS

504.1 General. Repairs shall be done in a manner that maintains the level of protection provided for the means of egress.

SECTION 505
ACCESSIBILITY

505.1 General. Repairs shall be done in accordance with Chapter 11 of the *Florida Building Code, Building.*

SECTION 506
STRUCTURAL

506.1 General. Repairs of structural elements shall comply with this section.

506.1.1 Nonstructural repairs exclusive of fixtures and furniture, the cost of which does not exceed 25 percent of the replacement value of the existing building or structure, with the approval of the building official, may be made of the same material of which the building or structure is constructed.

Exception: Historic buildings shall comply with Section 502.3.

506.1.1.1 Evaluation and design procedures. Reserved.

506.1.1.2 IBC level seismic forces. Reserved.

Table 506.1.1.2 FEMA 356 and ASCE 31 Performance Levels. Reserved.

506.1.1.3 Reduced IBC level seismic forces. Reserved.

506.1.2 Wind design. Wind design of existing buildings shall be in accordance with the building codes that were in effect when the building was permitted.

506.2 Repairs to damaged buildings. Repairs to damaged buildings shall comply with this section and Section 611, Reroofing.

506.2.1 Dangerous conditions. Regardless of the extent of structural damage, dangerous conditions shall be eliminated.

506.2.2 Substantial structural damage to elements of the lateral-force-resisting system. A building that has sustained substantial structural damage to the elements of its lateral-force-resisting system shall be evaluated and repaired in accordance with the applicable provisions of Sections 506.2.2.1 through 506.2.2.3.

506.2.2.1 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 predamaged state, would comply with the provisions of the codes that were in effect when the building was permitted. Wind forces for this evaluation shall be those prescribed in the codes that were in effect when the building was permitted.

506.2.2.2 Extent of repair for compliant buildings. If the evaluation establishes compliance of the predamaged building in accordance with Section 506.2.2.1, repairs shall be permitted that restore the building to its predamaged state using materials and strengths that existed prior to the damage.

506.2.2.3 Extent of repair for noncompliant buildings. If the evaluation does not establish compliance of the predamaged building in accordance with Section 506.2.2.1, the building shall be rehabilitated to comply with applicable provisions of the *Florida Building Code* for load combinations, including 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 *Florida Building Code*, whichever is greater. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the *Florida Building Code* for new buildings of similar structure, purpose and location.

506.2.3 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 *Florida 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 *Florida Building Code* for new buildings of similar structure, purpose and location.

506.2.3.1 Lateral-force-resisting elements. Regardless of the level of damage to 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 506.2.2.1 and, if noncompliant, rehabilitated in accordance with Section 506.2.2.3.

506.2.4 Less than substantial structural damage. For damage less than substantial structural damage, repairs shall be allowed that restore the building to its predamaged 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 *Florida Building Code, Building* for new buildings of similar structure, purpose and location.

506.2.5 Flood hazard areas. See Section 501.4.

SECTION 507
ELECTRICAL

507.1 Material. Existing electrical wiring and equipment undergoing repair shall be allowed to be repaired or replaced with like material in accordance with Chapter 27 of the *Florida Building Code, Building*.

Exceptions:

1. Existing electrical wiring and equipment undergoing repair shall be permitted to be repaired or replaced with like material.
2. For replacement of nongrounding-type receptacles with grounding-type receptacles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system or to any accessible point on the grounding electrode conductor, in accordance with Article 250-130 (C) of Chapter 27 of the *Florida Building Code, Building*.
3. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor in accordance with Article 250-140 of Chapter 27 of the *Florida Building Code, Building*.

507.1.1 Receptacles. Replacement of electrical receptacles shall comply with the applicable requirements of Section 406.3(D) of NFPA 70.

507.1.2 Plug fuses. Plug fuses of the Edison-base type shall be used for replacements only where there is no evidence of over fusing or tampering per applicable requirements of Section 240.51(B) of NFPA 70.

507.1.3 Nongrounding-type receptacles. For replacement of nongrounding-type receptacles with grounding-type receptacles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system or to any accessible point on the grounding electrode conductor in accordance with Section 250.130(C) of NFPA 70.

507.1.4 Group I-2 receptacles. Non-"hospital grade" receptacles in patient bed locations of Group I-2 shall be replaced with "hospital grade" receptacles, as required by NFPA 99 and Article 517 of NFPA 70.

507.1.5 Grounding of appliances. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor in accordance with Section 250.140 of NFPA 70.

SECTION 508
MECHANICAL

508.1 General. Existing mechanical systems undergoing repair shall comply with Section 301.11 of the *Florida Building Code, Mechanical* and shall not make the building less conforming than it was before the repair was undertaken.

SECTION 509
PLUMBING

509.1 Materials. Plumbing materials and supplies shall not be used for repairs that are prohibited in the *Florida Building Code, Plumbing*.

509.2 Plumbing fixture replacement. When any plumbing fixture is replaced, the replacement plumbing fixture shall comply with the *Florida Building Code, Plumbing*.

Exception: Blowout-design water closets [3.5 gallons (13 L) per flushing cycle].

FLORIDA BUILDING CODE

2nd DRAFT