



Federal Emergency Management Agency

3003 Chamblee Tucker Road, Atlanta, GA 30341

Region IV

NATIONAL FLOOD INSURANCE PROGRAM

COASTAL HIGH HAZARD AREAS VE, V1-99 ZONES

MINIMUM CONSTRUCTION REQUIREMENTS

1. MINIMIZE FLOOD DAMAGES: Design and construct buildings to minimize future flood damage to life and property.
2. ELEVATED BUILDING: The *bottom surface of the lowest horizontal structural member* (e.g. Floor beam) of the lowest floor of all primary buildings must be elevated to or above the Base Flood Elevation (BFE), utilizing pilings, piers, or stem walls. Basements are not allowed. We recommend elevating at least one foot above BFE.
3. MECHANICAL AND ELECTRICAL EQUIPMENT: All mechanical and electrical equipment servicing the building **MUST** be elevated to or above the BFE, or must be floodproofed to prevent the entry of water into the system. This includes bathrooms, laundry facilities, electrical panels, AC units, furnaces, and freezers.
4. FOUNDATION SYSTEMS: Foundation systems must be designed to adequately withstand the simultaneous forces of both wind and water associated with a Base Flood, acting on all building components, including buoyancy, flotation, collapse and lateral movement. Buildings must be adequately anchored to such foundation systems. Each building/foundation system must be certified by a registered professional architect or engineer that it conforms to the minimum NFIP standards (use V-Zone certificate).
5. ENCLOSURES BELOW FLOOD LEVEL: Enclosed areas below an elevated habitable floor are subject to numerous restrictions:
 - A. Uses allowed: only parking, storage, and building access are allowed. A bathroom, laundry, in-law suite, recreation room, etc., is **NOT** permissible.
 - B. Breakaway Walls: Prohibit solid walls below BFE to keep the area “free of obstruction”, unless they are designed to be “breakaway” when subjected to water loads of only 10 to 20 psi, or are designed and certified by a registered professional architect or engineer to breakaway during a Base Flood, without damaging the superstructure. We recommend use of only lattice or insect screening to provide enclosure.
 - C. Size of area: if more than 299 square feet are enclosed with solid breakaway walls, flood insurance rates will be significantly higher. Therefore, we recommend limiting the size of such enclosed areas to 299 square feet. Enclosure by screening or lattice is exempted.

- D. Materials: flood resistant materials must be used below BFE (See FEMA Technical Bulletin 2-93).

 - E. Electrical services: the number of switches and outlets must be the minimum necessary for adequate safety and security. All electrical service below BFE must be provided on a ground-fault interrupt (GFI) circuit separate from other circuits in the building.

 - F. Other: heating and/or air conditioning of enclosed areas should not be permitted. Any interior partitioning must be minimized to that necessary to accommodate fire, life, safety, and security standards; for example, separating the parking area from the rest of the enclosed area. Foyers should be designed to be structurally separated from the habitable living areas, since the lower foyer is intended to be destroyed during a 100-year storm. Unless the building is carefully designed, such an event could create a large opening in the elevated building “envelope”, rendering it subject to severe damage by high winds.
7. Fill: prohibit use of structural fill.
8. Environmental Protection: protect sand dunes and mangroves from man-made alteration that would increase flood hazard.