

Chapter 7

FLOOD DAMAGE PREVENTION

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Sec. 7-1. Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meaning ascribed to them in this section, except where the context clearly indicates a different meaning. Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

Addition (to an existing building) means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a firewall. Any walled and roofed addition, which is connected by a firewall or is separated by independent perimeter load-bearing walls, is new construction.

Appeal means a request for a review of the interpretation by the Building and Zoning Administrator of any provision of this chapter or a request for a variance.

Area of shallow flooding means a designated AO or VO Zone on a community's Flood Insurance Rate Map (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and undetermined, and where velocity flow may be evident.

Area of Special Flood Hazard means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. ***Base flood*** means the flood having a one percent chance of being equaled or exceeded in any given year.

Basement means that portion of a building having its floor subgrade (below ground level) on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

Building means any structure built for support, shelter, or enclosure for any occupancy or storage.

Development means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials or equipment.

Elevated building means a non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), or shear walls. If solid foundation perimeter walls are used, they shall be provided with openings sufficient to facilitate the unimpeded movement of flood waters into and out of the enclosed area.

Existing construction means any structure for which the "start of construction" commenced before the effective date of the initial FIRM, May 1, 1991. "Existing construction" also means "existing structures."

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads)

is completed before the May 1, 1991, which is the effective date of the first floodplain management code.

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters;
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood Hazard Boundary Map (FHBM) means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as zone A.

Flood Insurance Rate Map (FIRM) means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and/or the risk premium zones applicable to the community.

Flood Insurance Study means the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Boundary Floodway Map and the water surface elevation of the base flood.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Floor means the top surface of an enclosed area in a building (including basement), i.e., the top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a building.

Historic Structure means any structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

- (3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior; or
 - b. Directly by the Secretary of the Interior in states without approved programs.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of article II.

Manufactured home means a building, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.

Mean Sea Level means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this chapter, the term is synonymous with National Geodetic Vertical Datum (NGVD).

National Geodetic Vertical Datum (NGVD) as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means any structure for which the "start of construction" commenced after September 5, 1995. The term also includes any subsequent improvements to such structure.

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

Recreational vehicle means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred square feet or less when measured at the largest horizontal projection;
- (3) Designed to be self-propelled or permanently towable by a light duty truck; and
- (4) Designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

Start of construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348)), includes substantial improvement

and means the date the building permit was issued; provided, the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent constructions does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main building. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other manmade facilities or infrastructures.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means the total cost of reconstruction, alteration, rehabilitation, addition or other improvements to a building, (including electrical, plumbing, heating and air conditioning) taking place during a two-year period, which equals or exceeds 50 percent of the market value of the building. The market value of the building is the appraised or assessed value of the building, less the land, prior to the start of the initial repair or improvement. In the case of damage, the market value of the building is that prior to the damage occurring. If the assessed value represents only a percentage of building value, then the market value equals the assessed value plus an amount representing the discount percentage. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. It does not include repairs for damage from any origin which are determined to be less than “substantial damage” as defined in this ordinance. For the purposes of this definition, “substantial improvement” is considered to occur when the first alternation of any wall, ceiling, floor, or other structural part of the building commences, whether or not the alteration affects the external dimensions of the building. The term does not, however, include any:

- (1) Project for improvement of a building required to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official, which have been cause for issuance of a citation or condemnation, and which are solely the minimum necessary to assure safe living conditions; or
- (2) Alteration of a “historic structure,” provided that the alteration will not preclude the structure’s continued designation as a “historic structure,” and for which a variance has been granted pursuant to this ordinance.

Substantially improved existing manufactured home parks or subdivisions means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equal or exceed 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance means a grant of relief from the requirements of this chapter, which permits construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary hardship.

Violation means the failure of a structure or other development to be fully compliant with the provisions of this chapter. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in article I is presumed to be in violation until such time as that documentation is provided.

Sec. 7-2. Statutory authorization.

The Legislature of the state in the Georgia Code Annotated, Article IX, Section II, Paragraph I, has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the Board of Commissioners does ordain the following in this chapter.

Sec. 7-3. Findings of fact.

(a) The flood hazard areas of the County are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods, or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

Sec. 7-4. Statement of purpose.

It is the purpose of this ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas, by provisions designed to:

- (1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights, or velocities.
- (2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction or substantial improvement.
- (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters.
- (4) Control filling, grading, dredging and other development which may increase erosion or flood damage.
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

Sec. 7-5. Objectives.

The objectives of this ordinance are to:

- (1) Protect human life and health.
- (2) Minimize expenditures of public money for costly flood control projects.
- (3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- (4) Minimize prolonged business interruptions.
- (5) Minimize damage to public facilities and utilities, such as the following: water and gas mains, electric, telephone and sewer lines, and street and bridges located in floodplains.
- (6) Help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize flood blight areas.
- (7) Ensure that potential home buyers are notified that the property is in a flood area; and
- (8) Comply with the requirements of the national Flood Insurance Program so as to ensure the availability of flood insurance for residents and property owners.

Sec. 7-6. Lands to which chapter applies.

This chapter shall apply to all Areas for Special Flood Hazard within the jurisdiction of the County.

Sec. 7-7. Basis for establishing Areas of Special Flood Hazard.

The Areas of Special Flood Hazard identified by the Federal Emergency Management Agency in its Flood Insurance Rate Map, for the County dated May 2, 1991, with accompanying maps and other supporting data, and any revision thereto, are adopted by reference and declared to be a part of this chapter. In addition, upon annexation to the County, the Areas of Special Flood Hazard identified by the Federal Emergency Management Agency in its Flood Insurance Study for unincorporated Bulloch County, with accompanying maps and other supporting data, and any revision thereto, are adopted by reference and declared to be a part of this chapter.

Sec. 7-8. Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and other conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

Sec. 7-9. Interpretation.

In the interpretation and application of this chapter, all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and; deemed neither to limit nor repeal any other powers granted under state statutes.

Sec. 7-10. Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the Areas of Special Flood Hazard or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the County or by any officer or employee thereof, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

Sec. 7-11. Compliance.

No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

Sec. 7-12. Penalties for violation.

Violation of the provisions of this chapter or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be subject to punishment as provided in section 1-11; and, in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the County from taking such other lawful action as is necessary to prevent or remedy any violation.

Sec. 7-13. Designation of local administrator.

The Building and Zoning Administrator is hereby appointed to administer and implement the provisions of this chapter.

Sec. 7-14. Duties and responsibilities of local administrator.

Duties of the Building and Zoning Administrator, as the local administrator of this chapter, shall include, but not be limited to:

- (1) Review all development permits to assure that the permit requirements of this chapter have been satisfied.
- (2) Advise permittee that additional federal or state permits may be required, and if specific federal or state permit requirements are known, require that copies of such permits be provided and maintained on file with the development permit.
- (3) Notify adjacent communities, and the state Georgia Department of Natural Resources prior to any alteration or relocation of a watercourse, and submit evidence of such notification along with a copy of the notice to the FEMA Region IV office.

- (4) Assure that the flood-carrying capacity of such watercourse is not diminished by the proposed alteration or relocation.**
- (5) Verify and record the actual elevation (in relation to mean sea level) of the lowest floor, (including basement), of all new or substantially improved buildings, in accordance with Section 7-37(2).**
- (6) Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved buildings have been flood-proofed, in accordance with Section 7-37(2).**
- (7) When flood-proofing is utilized for a particular building, the Building and Zoning Administrator shall obtain certification from a registered professional engineer or architect, in accordance with Section 7-37(2).**
- (8) Determine whether a building or development site is located within an Area of Special Flood Hazard by referencing the FEMA Flood Insurance Study and accompanying maps. If detailed topographic mapping is available, the boundary of the Area of Special Flood Hazard shall be plotted on such mapping utilizing the base flood elevations provided in the Flood Insurance Study. This more detailed definition of the boundary of the base flood shall be utilized as "best available date" for purposes of regulating the Area of Special Flood Hazard. If there are significant discrepancies between the boundary as shown on the FEMA maps and the topographic mapping available, the Building and Zoning Administrator shall so advise the FEMA Region IV office.**
- (9) Within numbered A and AE Zones along rivers, streams, lakes, swamps, and marshes, determine the appropriate base flood elevation for each individual building site utilizing the Flood Date Tables (for lakes) and the Stream Profiles contained in the FEMA Flood Insurance Study. The base flood elevations printed on the FEMA maps are illustrative only. The Building and Zoning Administrator shall interpolate the base flood elevation at a site between two given base flood elevation markers by referring to the stream profiles and measuring the distance of the site upstream or downstream from a cross-section shown on the FEMA map.**
- (10) Within coastal AE or numbered A Zones, for which stream profiles are not provided, determine the Base Flood Elevations (BFEs) by interpolating along a line perpendicular to and running between the midpoints of the adjoining zones, utilizing the printed BFE shown on the FIRMs as the BFE at the midpoint of each zone. The printed BFEs are the average within each zone. The zone boundaries ("gutter lines") of the coastal numbered A and AE zones actually denote an elevation midway between the printed BFEs in one zone and that of the adjoining zone.**
- (11) Where interpretation is needed as to the exact location of boundaries of the Areas of Special Flood Hazard (for example, where there appears to be a conflict between a mapped boundary and the natural grade of actual field conditions), the Building and Zoning Administrator shall make the necessary interpretation, and shall utilize the most accurate topographic mapping available. The elevations published in the FEMA Flood Insurance Study, as portrayed in the profile sheets, shall be the ruling reference for delineating the boundary of the floodplain. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.**

Property may not be excluded from the Area of Special Flood Hazard as a result of filling, unless a Letter of Map Revision has been approved by FEMA.

- (12) Where the Building and Zoning Administrator has determined all or a portion of a property to be located outside of the flood hazard area, yet it is shown as being within the flood hazard area on the FEMA maps, the applicant shall be advised of the need to obtain a Letter of Map Amendment or Revision from the FEMA Region IV office and shall be given an application packet utilizing forms provided by FEMA. Which the property may be exempt the requirements of this chapter, flood insurance purchase will remain mandatory until FEMA authorizes a Letter of Map Amendment or Revision.
- (13) When base flood elevation data or floodway data have not been provided in accordance with Section 7-7, then the Building and Zoning Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer the provisions of Article II. Base flood elevations may be estimated using topographic maps of scientific engineering methodology. Base flood elevation and floodway data shall be developed and provided for subdivision proposals and other proposed developments (including industrial parks, shopping centers, public facilities, and manufactured home parks and subdivisions) which are greater in size than the lesser of 50 lots or five acres. Such data shall be submitted to FEMA Region IV office within 30 days of receipt and acceptance by the community for review as a possible Map Revision.
- (14) When a development project will cause a reconfiguration of the flood hazard area due to grading, filling, channel alteration or relocation, development of a stormwater management system, or the excavation of lakes, the Building and Zoning Administrator shall require the applicant to submit and obtain approval from FEMA of a Conditional Letter of Map Revision. Where a floodway is being impacted, this must be obtained prior to construction. Following completion of all or each phase of such a development, the Building and Zoning Administrator shall required the applicant to submit to FEMA the as-built topographic and hydrologic information to obtain a final Letter of Map Revision.
- (15) The office of the Building and Zoning Administrator shall serve as the official "map repository" for FEMA Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, and Flood Hazard Boundary Maps for the community, together with Letters of Map Amendment (LOMAs) and Letters of Map Revision (LOMRs). At least one copy of all current and supersede maps, LOMAs and LOMRs shall be maintained for public use and viewing.
- (16) All records pertaining to the provisions of this chapter shall be maintained in the office of the Building and Zoning Administrator and shall be open for public inspection. Copies of all development permits and summary supporting documentation shall be filed by geographic area for ease of coordination all floodplain development activities.
- (17) Obtain a "no-rise" certification, pursuant to 7-38(1), or a Conditional Letter of Map Revision from FEMA prior to issuance of final approval of a proposed development located within a regulatory floodway.

Sec. 7-15. Establishment of development permit.

A development permit shall be required in conformance with the provisions of this chapter prior to the commencement of any development activities. "Development" means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials or equipment.

Sec. 7-16. Permit procedures for building construction.

Application for a development permit for constructing or substantially improving a structure shall be made to the Building and Zoning Administrator on forms furnished by the Building and Zoning Administrator's office prior to any development activities, and may include, but not be limited to the following: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question, existing or proposed structures, earthen fill, storage of materials or equipment, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

(1) *Application stage.*

- a. Elevation in relation to mean sea level of the proposed lowest floor, (including basement), or the lowest surface of any heating or air conditioning ductwork installed below the lowest floor, of all proposed buildings or substantial improvements.
- b. Elevation in relation to mean sea level to which any proposed non-residential building or substantial improvement will be flood-proofed.
- c. Signed, sealed, certificate, separate from the engineer or architect that the non-residential floodproofed building will meet the floodproofing criteria in section 7-37(2).
- d. Description of the extent to which any watercourse, swamp, marsh, lake, or pond will be altered, or relocated, or created as a result of proposed construction.
- e. Description of the type, extent, and depth of proposed fill and the elevation in relation to mean sea level of the top surface of the fill.
- f. Description of the type, extent, and depth of proposed excavation in relation to mean sea level.
- g. Plot plan, to scale, illustrating the locations of all proposed construction, fill, excavating, and other aspects of the development.
- h. Copy of the proposed stormwater management report and floodplain study, if any, complete with technical supporting data.
- i. "No-rise" certification, pursuant to section 7-38(1), if located in a regulatory floodway.

(2) *Construction stage.* Flood elevation or floodproofing certifications.

- a. Upon placement of the lowest floor it shall be the duty of the permit holder to submit to the Building and Zoning Administrator a certification of the elevation of the top of lowest floor, as built, in relation to mean sea level, or the lowest surface of any heating or air conditioning ductwork installed below the lowest floor. The certification shall be made on a FEMA Elevation

Certificate form No.81-31, or a form containing at least the same information, and shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same, except that in "A" zones for which flood elevations have not been provided or determined and in AO Zones, the Building and Zoning Administrator may certify the lowest floor elevation.

- b. When floodproofing is utilized for a nonresidential building, the permit holder shall submit to the Building and Zoning Administrator a floodproofing certification at the time the exterior walls are completed to the required flood proofed elevation. The certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same, utilizing the FEMA floodproofing certificate form No. 81-65, or the equivalent.
- c. Any additional work undertaken prior to submission and approval of the certification shall be at the permit holder's risk.
- d. The Building and Zoning Administrator shall review the floor elevation survey data or floodproofing certification submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed.
- e. Failure to submit the elevation of floodproofing certifications or failure to make such corrections required hereby, shall be cause to issue a stop-work order for the project.

Sec. 7-17. Permit procedures for other developments (including subdivisions).

Application for a development permit for developments other than the construction of buildings, such as bridges, subdivisions, shopping centers, and other large construction projects that include substantial site development or alteration, shall be made to the Building and Zoning Administrator on forms furnished by the Building and Zoning Administrator office prior to any development plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question, existing or proposed structures, earthen fill, storage of materials or equipment, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

(1) *Application Stage:*

- a. Plot plan, to scale illustrating the locations of all proposed construction, fill, excavating, and other aspects of the development;
- b. Grading and drainage plans;
- c. Stormwater management plans;
- d. Floodplain studies, including computer modeling of hydrology;
- e. Description of the extent to which any watercourse, swamp, marsh, lake, or pond will be altered, relocated, or created as result of proposed construction;
- f. Description of the type, extent, and depth of proposed fill and the elevation in relation to mean sea level of the top surface of the fill;

- g. Description of the type, extent and depth of proposed excavation in relation to mean sea level;**
- h. Topographic mapping;**
- i. "No-rise" certification for projects within a regulatory floodway, prepared pursuant to 7-38(1).**

(2) *Conditions of approval (mapping of flood hazard areas).*

- a. If the project proposed to alter the boundaries of a regulatory floodway or the configuration of the watercourse contained within the floodway, the applicant shall submit the proposed grading and drainage plans, stormwater management plans, floodplain studies, and all supporting computer modeling to the FEMA Region IV Office for a conditional letter of map revision. The project will not receive final approval until the proposed alteration of the watercourse and/or floodway boundaries has been approved by FEMA.**
- b. If a proposed project will alter the boundaries of the area of special flood hazard as shown on the FEMA flood insurance rate maps, the applicant shall submit the approved grading and drainage plans, stormwater management plans, floodplain studies, and all supporting computer modeling to the FEMA Region IV office for a conditional letter of map revision, within 30 days of receiving final approval.**
- c. Within 30 days following completion of the entire project or a phase thereof, the applicant shall submit engineer's certified copies of the final, constructed grading and drainage plans and stormwater management plans to the FEMA region IV office for a issuance of a final letter of map revision.**
- d. The building and zoning administrator shall be provided copies of all related correspondence, and shall sign the required "community acknowledgment form."**

Sec. 7-187. Variance procedures.

(a) The planning and zoning commission, as established by the board of commissioners, shall hear and decide appeals and requests for variances from the requirements of this chapter.

(b) The planning and zoning commission shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Building and Zoning Administrator in the enforcement or administration of this chapter.

(c) Any person aggrieved by the decision of the planning and zoning commission, or any taxpayer, may appeal such decision to the Superior Court of the County as provided under state law.

(d) Variances may be issued for the repair or rehabilitation of historic structures (see definition) upon a determination that the proposed repair or rehabilitation will not preclude the structure's continuing designation as a historic structure and the variance is the minimum to preserve the historic character and design of the structure.

(e) In passing upon such applications, the planning and zoning commission shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter, and:.

- (1) The danger that materials may be swept onto other lands to the injury of others.**
- (2) The danger to life and property due to flooding or erosion damage.**
- (3) The susceptibility of the proposed facility and its contents to flood damage, and the effect of such damage on the individual owner.**
- (4) The importance of the services provided by the proposed facility to the community.**
- (5) The necessity of the facility to a waterfront location, in the case of a functionally dependent facility (see definition).**
- (6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use.**
- (7) The compatibility of the proposed use with existing and anticipated development.**
- (8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area.**
- (9) The safety of access to the property in times of flood for ordinary and emergency vehicles.**
- (10) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site.**
- (11) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and street and bridges.**

(f) Upon consideration of the factors listed above, and the purposes of this chapter, the planning and zoning commission may attach such conditions to the granting of variances as it seems necessary to further the purposes of this chapter.

(g) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(h) Conditions for variances:

- (1) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and in the instance of historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.**
- (2) Variances shall only be issued upon:**
 - a. Showing of good and sufficient cause;**
 - b. Determination that failure to grant the variance would result in exceptional hardship; and;**
 - c. Determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public**

expense, the creation of a nuisance, cause, fraud on or victimization of the public, or conflict with existing local laws or ordinances.

- (3) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the building is to be built, and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
- (4) The Building and Zoning Administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

Secs. 7-18—7-35. Reserved

ARTICLE II. FLOOD HAZARD REDUCTION

Sec. 7-36. General standards for all areas of special flood hazard.

In all Areas of Special Flood Hazard, the following provisions are required:

- (1) New construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
- (2) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces.
- (3) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (4) New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (5) Electrical, heating, ventilation, plumbing, air conditioning equipment, including ductwork and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (6) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
- (7) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
- (8) On-site water disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (9) Any alteration, repair, reconstruction or improvements to a building which is in compliance with the provisions of this chapter shall meet the requirements of "new construction" as contained in this chapter.

- (10) Any alteration, repair, reconstruction or improvements to a building which is not in compliance with the provisions of this chapter shall be undertaken only if the non-conformity is not furthered, extended, or replaced.
- (11) The flood-carrying capacity of a watercourse shall not be diminished by any relocation or alteration or bridge construction.
- (12) Adequate drainage paths shall be provided around structures to guide stormwater runoff away from them.
- (13) The cumulative effect of proposed development, when combined with all other existing and anticipated development, will not increase the flood elevation more than one foot at any point in the community.

Sec. 7-37. Specific standards for A-zone flood hazard areas.

In all Areas of Special Flood Hazard, areas denoted with an “A” prefix on the Flood Insurance Rate Map where base flood elevation data have been provided, as set forth in section 7-7, or section 7-14(11), the following provisions are required:, in addition to the general standards of this section: (Note: The A-zone designation is assigned to flood hazard areas along streams, swamps, and marshes, as well as to coastal areas inland of the high hazard velocity area, known as the V-zone.)

- (1) ***Residential construction*** New construction or substantial improvement of any residential building (or manufactured home) shall have the lowest floor, together with all mechanical and electrical equipment, including laundry facilities and food freezers, and including any basement, elevated no lower than two feet above the base flood elevation, or two feet above the crown of adjoining road, whichever is greater. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of subsection (3) of this section. The floor of an attached garage may be placed below the base flood elevation, provided the openings required in subsection (3) are installed and all mechanical and electrical equipment, including laundry facilities and food freezers, are elevated above the base flood elevation. One switch and outlet connected to a ground-fault interrupt breaker may be installed below the base flood elevation, and all construction below that elevation shall be flood-resistant materials.
- (2) ***Non-residential construction.*** New construction or substantial improvement of any commercial, industrial, or non-residential building (or manufactured home) shall have the lowest floor, together with all mechanical and electrical equipment, and including any basement and/or ductwork installed below the lowest floor, elevated no lower than two feet above the base flood elevation, or two feet above the crown of the adjoining road, whichever is greater. Buildings located in all A zones may be flood-proofed to an elevation one foot above the required lowest floor elevation noted above, in lieu of being elevated, provided that all areas of the building below the required elevation are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in section 7-14(7). The floor of an

attached garage or loading dock may be placed below the base flood elevation, provided the openings required in subsection (3) are installed and all mechanical and electrical equipment are elevated above the base flood elevation. One switch and outlet connected to a ground-fault breaker may be installed below the base flood elevation, and all construction below that elevation shall be of flood resistant materials.

(3) ***Elevated buildings.*** New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation, shall be designed to preclude finished living space and shall be designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:

1. Provide a minimum of two openings (in walls or doors) having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
2. The bottom of all openings shall be no higher than one foot above grade; and,
3. Openings may be equipped with screens, louvers, valves or other coverings or devices, provided they permit the automatic flow of floodwater in both directions.

b. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connecting with the premises (standard exterior door) or entry to the living area (stairway or elevator).

c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.

d. Use of such enclosed areas shall be limited to parking, storage, and building access.

(4) ***Manufactured homes and recreational vehicles.***

a. All manufactured homes placed or substantially improved, together with all mechanical and electrical equipment, on: (1) individual lots or parcels, (2) in expansion to existing manufactured home parks or subdivisions, (3) or in substantially improved manufactured home parks or subdivisions, must meet all the requirements for new residential construction contained in subsections (1) and (3), including installation on permanent foundation systems, elevation, and anchoring. At minimum, a "permanent foundation system" shall constitute reinforced piers placed on poured footings, or other foundation elements of equivalent strength. Any additions to manufactured homes subject to provisions of this subsection shall also be considered "new construction" since they must be supported by an independent foundation system. "Additions" must therefore comply with the provisions contained in subsection (2) and (3), including elevation. This may necessitate elevating of an existing manufactured home to match the required elevation of the "addition".

- b. All manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that:
 - 1. The lowest floor of the manufactured home is elevated on a permanent foundation no lower than two feet above the level of the base flood elevation, or two feet above the crown of the adjoining road, whichever is greater.
 - 2. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength, of no less than 36 inches in height above grade.
 - 3. The manufactured homes must be securely anchored to the adequately anchored foundation system to resist flotation, collapse and lateral movement.
 - 4. In an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as the result of a flood, any manufactured home placed or substantially improved must meet the standards of subsections (4)b.1. and 3. above.
 - 5. Any additions to manufactured home subject to provisions of this subsections shall be considered “new construction” subject to the provisions contained in subsection (1) and (3), including installation on permanent foundation systems, elevation and anchoring.
- c. All recreational vehicles placed on sites must either:
 - 1. Be fully licensed and ready for highway use, or
 - 2. The recreational vehicle must meet all the requirements for new construction, including anchoring and elevation requirements of subsection (4)a. or b.1. and 3. above.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached structures.

- (5) *Accessory structures.* Structures that represent a minimal investment and that are subordinate to and accessory to the primary structure or use on the property (e.g. storage sheds, detached garages, gazebos, and barns) may be exempted from the elevation requirement of subsection (2), provided the following criteria are met:
 - a. The structure is not used for human habitation, including occupancy as a workplace for extended periods of time.
 - b. The structure is designed and constructed so as to have a low potential for damage during a flood (e.g., using flood resistant materials as provided in FEMA technical bulletin #88-2, and any subsequent revisions thereto).
 - c. The structure shall be located on the building site so as to offer the minimum resistance to the flow of floodwater (e.g., parallel to a stream, perpendicular to the ocean).
 - d. The structure is firmly anchored to prevent flotation, per section 7-36(1).
 - e. All electrical service, heating/cooling equipment and other mechanical or electrical equipment is either elevated above the elevation required by

section 7-37(1), or is flood proofed. One electrical switch and outlet connected to a ground-fault interrupt breaker is allowed below BFE.

- (6) **Temporary structures.** Certain types of structures (e.g., fruit stands, construction site offices) may be sited temporarily on property without having to comply with the general standards of section 7-36, or the elevation standard of section 7-37(1), provided the following criteria are met:
- a. The structure is mobile, or can be made so, and is capable of being removed from the site with a minimum of four hours warning.
 - b. The structure does not remain on the property for 180 days or more.
 - c. The applicant submits a plan for the following documentation:
 1. The name, address, phone number and emergency contact point of the individual responsible for the removal of the temporary structure.
 2. The time at which the structure will be removed (i.e., a minimum of 72 hours in advance of the projected landfall of a hurricane).
 3. A copy of a contract or other suitable instrument with a trucking company to ensure the availability of removal of the structure when needed, together with the name, address, and emergency phone number of the responsible trucking company agent.
 4. Designation, accompanied by documentation (e.g., signed consent of the property owner), of a site outside the special flood hazard area to which the temporary structure will be moved.
 5. Signatures of the applicant, property owner on which the temporary structure will be placed and owner of the temporary structure, agreeing to abide by the terms of the removal plan.

A “temporary development permit” shall be issued when a temporary structure is approved, and the expiration date shall be clearly marked on the face of the permit. The original copy of the removal plan shall be attached to the permit, and the documentation shall be kept on file in the administrators office for a period of at least five years. A copy of the permit, together with the removal plan, shall be provided to the local emergency management coordinator.

- (7) **Substantially improved buildings.** “Substantial improvement” (see definition). Substantially improved buildings must be elevator and otherwise brought into conformance with requirements for new construction contained in Article II. In determining “substantial improvement,” the Building and Zoning Administrator shall utilize data for the market value of the structure and the value of the improvements that are justifiably comparable. Substantial improvement calculations shall include the cost of labor and mechanical, electrical and plumbing systems, cabinetry finishes, and any other improvements that will be permanently affixed to the structure, except for exterior decks and porches.

If the improvement project is conducted in phases, the total of all costs associated with each phase begun and /or completed within the cumulative period, shall be utilized to determine whether “substantial improvement” has occurred. Interpretation and determination of substantial improvements shall rely on applicable FEMA publications and policy guidance.

- a. **Rehabilitations, reconstructions, and renovations:** Reconstructed, or renovated, with no or only minimal additions, and the total improvement costs meet the definition of “substantial” (equal or exceed 50 percent of the value of the structure), the existing structure must be elevated and otherwise brought into conformance with Article II.
 - b. **Lateral additions:** When the substantial improvement is lateral addition to an existing structure, only the addition is required to be elevated and conform with the standards of Article II, unless the common wall between the existing building and the addition is substantially removed or improvements are being made to the existing structure which are more than minimal (e.g., equal or exceed ten percent of the value of the structure). In such cases, the lateral addition is deemed to constitute only one part of a reconstruction or renovation, and both the existing structure and the addition must be brought into conformance with Article II.
 - c. **Vertical additions:** When the substantial structure, the improvement is classified as a “renovation” or “reconstruction,” and the existing structure must be elevated and brought into conformance with Article II.
- (8) ***Improvements to “post-FIRM” structures:*** Any improvements made to buildings for which permits were issued on or after the effective date of the Flood Insurance Rate Map (“post-FIRM buildings,” shall conform to the standards of Article II).
 - (9) ***Historic buildings:*** Any improvements to historic buildings (see definitions) may be exempted from one or all of the standards contained in Article II, provided the request for an exemption is approved as a variance, as provided in article 7-17, and the proposed improvements are certified by a certified local government or the State Historic Preservation Officer as maintaining the historical integrity and classification of the building.
 - (10) ***Functionally-dependent structures:*** Functionally-dependent structures (see definition) may be exempted from one or all of the standards contained in Article II, provided that a request for an exemption is approved as a variance, as provided in section 7-17.
 - (11) ***Standards along stream with no flood ways.*** Where no “floodway” has been designated along a stream in an A-zone for which Base Flood Elevations have been provided on the Flood Insurance Rate Map, no encroachments, including fill material or structures shall be located within areas of special flood hazard, unless certification by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

At a minimum, in both A zones with Base Flood Elevations, and in unnumbered A Zones, no encroachments, including fill material or structures shall be located within a distance of the stream bank equal to five times the width of the stream at the top of bank or 20 feet each side from top of bank, whichever is greater.

Sec. 7-38. Specific standards for floodways.

Located within the A zone areas of special flood hazard established in section 7-7, are areas designated as floodways. The floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and create the potential for erosion. Protection of a floodway is critical for maintaining the ability of the stream to carry the 100-year flood. The following provisions shall apply:

- (1) Prohibit encroachments, including fill, new construction (including enclosed accessory structures), substantial improvements and other developments unless certifications (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge. This certification shall be based on an evaluation utilizing methodologies specified by the FEMA Region IV office. No development will be allowed that causes more than a 0.0000 ft. rise in the base flood elevation.
 - b. If subsection (1) above, is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this article.
 - c. Prohibit the placement of manufactured homes (mobile homes), except in an existing manufactured home (mobile home) park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring standards of section 7-36(2), the elevation standards of section 7-37(1), and the encroachment standards of subsection (1) of this section are met.

Sec. 7-39. Standards for unnumbered "A" zones.

Located within the A-zone areas of special flood hazard established in section 7-167, are areas denoted with the letter "A" with no suffix, referred to as "unnumbered A zones." These are areas where special flood hazards exist but where no base flood data has been provided. The following provisions apply:

- (1) No encroachments, including fill material or structures, shall be located within a distance of the stream bank equal to five times the width of the stream at the top of bank or 20 feet each side from top of bank, whichever is greater.
- (2) New construction or substantial improvements of buildings or manufactured homes shall be elevated or floodproofed in accordance with the design standards of Section 7-37, to:
 - a. Two feet above or elevations established in accordance with section 7-14(11), if available, or
 - b. At least three feet above highest adjacent natural grade.
- (3) For all development projects, including mobile home parks and subdivisions, greater than five acres or 50 lots, whichever is lesser, base flood elevation and floodway data shall be provided in accordance with section 7-14(13), as part of the development proposal.
- (4) Accessory or temporary structures shall be permitted per section 7-37(5) or (6), respectively.

Sec. 7-40. Standards for subdivision proposals (including nonresidential).

(a) All subdivision proposals, including industrial and commercial subdivisions, shall be consistent with the need to minimize flood damage.

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

(d) Base flood elevation and floodway data shall be provided in accordance with section 7-14(13) for subdivision proposals and other proposed development, (including shopping centers and manufactured home parks and subdivisions), which is greater than the lesser of 50 lots or acres.

(e) The base flood boundary, floodway and/or V-zone boundary if applicable, and the applicable base flood elevation for the building site on each lot shall be clearly marked on all recorded subdivision plats, be they for residential, commercial, or industrial use.

Sec. 7-41. Areas of shallow flooding (AO zones).

Located within the areas of special flood hazard established in section 7-7 are areas designated "AO" on the Flood Insurance Rate Maps as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of residential buildings shall conform to the design standards of section 7-37, and shall have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated, at least two feet above the highest adjacent grade.
- (2) All new construction and substantial improvements of nonresidential buildings shall conform to the design standards of section 7-37 and shall:
 - a. Have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least two feet above the highest adjacent grade, or
 - b. Together with attendant utility and sanitary facilities be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
- (3) Accessory or temporary structures shall be permitted per section 7-37(5) or (6), respectively.

- (4) No encroachments, including fill material or structures shall be located within a distance of the stream bank equal to five times the width of the stream at the top of bank or 20 feet each side from top of bank, whichever is greater.**