

ARTICLE VIII. - FLOODPLAIN MANAGEMENT AND FLOOD DAMAGE PREVENTION⁵

Footnotes:

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Editor's note—Ord. No. 5068, adopted May 23, 1995, repealed and replaced flood damage control provisions formerly set herein as Ch. 6, Art. VIII, §§ 6-90—6-102, derived from Ord. No. 2099, §§ 1—13, adopted Nov. 1, 1979; and Ord. No. 2203, § 1, adopted April 15, 1982.

Sec. 6-90. - Statutory authorization.

The Legislature of the State of Alabama has in title 11, chapter 52, sections 1 through 84; and title 41, chapter 9, section 166 of the Code of Alabama, 1975, authorized local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry.

(Ord. No. 5068, 5-23-95)

Sec. 6-91. - Findings of fact.

- (a) The flood hazard areas of Tuscaloosa are subject to periodic inundation which results in hazards to property, health and safety, and may disrupt commerce and governmental services. Also, this inundation can result in extraordinary public expenditures for flood protection and relief and impairment of the tax base which adversely affect the public health, safety and general welfare.
- (b) These potential 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 properties which are inadequately elevated, floodproofed or otherwise protected from flood damage.

(Ord. No. 5068, 5-23-95)

Sec. 6-92. - Statement of purpose.

It is the purpose of this article 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;
- (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; and
- (5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

(Ord. No. 5068, 5-23-95)

Sec. 6-93. - Objectives.

The objectives of this article are:

- (1) To protect human life and health;
- (2) To minimize expenditure of public money for costly flood-control projects;
- (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) To minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
- (6) To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood-blight areas; and
- (7) To ensure that potential home buyers are notified that property is in a flood area.

(Ord. No. 5068, 5-23-95)

Sec. 6-94. - Definitions.

Unless specifically defined below, words or phrases used in this article shall be interpreted so as to give them the meaning they have in common usage and to give this article its most reasonable application.

Addition (to an existing building) 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 fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

Appeal: A request for a review of the local administrator's interpretation of any provision of this article or a request for a variance.

Area of shallow flooding: A designated AO Zone on Tuscaloosa's Flood Insurance Rate Map (FIRM) with base flood depths from one to three (3) feet, where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard: The land in the floodplain within a community subject to a one per cent or greater chance of flooding in any given year.

Base flood: The flood having a one per cent chance of being equaled or exceeded in any given year.

Base flood elevation: The elevation of surface water resulting from a flood that has a one-percent chance of equaling or exceeding that level in any given year. The BFE is shown on the flood insurance rate map (FIRM) for zones AE, AH, A1-A30, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO, VI-V30, AND VE.

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

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

Development: 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, and storage of materials or equipment.

Elevated building: A nonbasement 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), shear walls, or breakaway walls.

Existing construction: Any structure for which the "start of construction" commenced before (the effective date of the first floodplain management code, ordinance, or standard based upon specific technical base flood elevation data which established the area of special flood hazard) or (specific date).

Existing manufactured home park or subdivision: 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 effective date of the floodplain management regulations adopted by a community (before the effective date of the first floodplain management code, ordinance, or standard based upon specific technical base flood elevation data which established the area of special flood hazard) or (specific date).

Expansion to an existing manufactured home park or subdivision: 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: 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): An official map of the City of Tuscaloosa, 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): An official map of the City of Tuscaloosa on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the City of Tuscaloosa.

Flood insurance study: 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: 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: The top surface of an enclosed area in a building (including basement); i.e., 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: A facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facilities 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: The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a building.

Historic structure: 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.

Increased cost of compliance: Provides for the payment of a claim to help pay for the cost to comply with state or community floodplain management laws or ordinances from a flood event in which a building has been declared substantially damaged or repetitively damaged. When an insured building is damaged by a flood and the state or community declares the building to be substantially damaged or repetitively damaged, ICC coverage will help pay for the cost to elevate, floodproof, demolish, or relocate the building up to a maximum benefit of thirty thousand dollars (\$30,000.00). This coverage is in addition to the building coverage for the repair of actual physical damages from flood under the SFIP.

Levee: A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

Levee system: A flood protection system which consists of a levee, or levees, and associated structures such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Local administrator: The person or office designated to administer this article and is the city engineer or his designated representative.

Lowest floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of other provisions of this Code.

Manufactured home: 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 one hundred eighty (180) consecutive days or longer and intended to be improved property.

Manufactured home park or subdivision: A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

Mean sea level: The average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the flood plain. For purposes of this ordinance 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 with the floodplain.

New construction: Structures for which the "start of construction" commenced on or after the effective date of this article.

New manufactured home park or subdivision home park or subdivision: 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: A vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred (400) 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;
- (4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use; and
- (5) Intended to be on site less than one hundred eighty (180) consecutive days.

Remedy a violation: To bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

Repetitive loss: Flood-related damages sustained by a structure on two (2) separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds twenty-five (25) percent of the market value of the structure before the damages occurred.

Start of construction includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within one hundred eighty (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 construction 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: A walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other man-made facilities or infrastructures.

Substantial damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty (50) per cent of the market value of the structure before the damage occurred.

Substantial improvement: Any combination of repairs, reconstruction, alteration, or improvements to a building, taking place during a five-year period, in which the cumulative cost equals or exceeds fifty (50) per cent of the market value of the building. The market value of the building should be the appraised value of the building prior to the start of the initial repair or improvement or in the case of damage, the value of the building prior to the damage occurring. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. For the purpose of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. The term does not, however, include any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions.

Substantially improved existing manufactured home parks or subdivision is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds fifty (50) per cent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

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

Violation: The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in the Code of Federal Regulations (CFR) Sections 44, 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) and corresponding parts of this chapter is presumed to be in violation until such time as that documentation is provided.

(Ord. No. 5068, 5-23-95; Ord. No. 6683, § 1, 11-30-04; Ord. No. 7549, § 1, 6-1-10; Ord. No. 8168, §§ 1, 2, 1-6-15)

Sec. 6-95. - General provisions.

- (a) Lands to which this article applies. This article shall apply to all areas of special flood hazard within the Corporate Limits of the City of Tuscaloosa.
- (b) Basis for establishing the areas of special flood standard [hazard]. The areas of special flood hazard identified by the Federal Emergency Management Agency in its flood insurance rate map dated February 1, 1979, with accompanying maps and other supporting data, and any revision thereto, are adopted by reference and declared to be a part of this article.
- (c) Establishment of development permit. A development permit shall be required in conformance with the provisions of this article prior to the commencement of any development activities in areas of special flood hazards.
- (d) Compliance. No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this article and other applicable regulations.
- (e) Abrogation and greater restrictions. This article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- (f) Interpretation. In the interpretation and application of this article 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.
- (g) Warnings and disclaimer of liability. The degree of flood protection required by this article 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 article 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 article shall not create liability on the part of the City of Tuscaloosa or by any officer or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.
- (h) Penalties for violation. Violation of the provision of this article 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 article or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than five hundred dollars (\$500.00) or imprisoned for not more than six (6) months, or both, 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 City of Tuscaloosa from taking such other lawful action as is necessary to prevent or remedy any violation (see section 1-8, City Code of Tuscaloosa).

(Ord. No. 5068, 5-23-95)

Sec. 6-96. - Administration.

- (a) Designation of local administrator. Except as otherwise specified herein, the provisions of this article shall be administered by the city engineer or his designated representative. The director of planning and development services, the director of the Tuscaloosa Department of Transportation, the chief of inspection services and all other appropriate officials of the city shall, within the limits of their competence and jurisdictional responsibilities, aid in the enforcement hereof.
- (b) Permit procedures. No property owner, contractor, or other person shall carry out any development activities within an area of special flood hazards without having first submitted, and received approval of, a site development plan, as required by Ordinance No. 7075 creating article XII of the Code of Tuscaloosa regarding land development activities (referred to hereafter in this article as an application for a development permit). Application shall be made to the city engineer, on forms furnished by him, 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, 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) of all buildings:
 - b. Elevation in relation to mean sea level to which any nonresidential building will be flood-proofed;
 - c. Certificate from a registered professional engineer or architect that the nonresidential flood-proofed building will meet the flood-proofing criteria in article 5, section B (2) [section 6-97(b)]; and
 - d. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
 - (2) Construction stage. Provide a floor elevation or flood-proofing certification after the lowest floor is completed. Upon placement of the lowest floor, or flood-proofing by whatever construction means, it shall be the duty of the permit holder to submit to the local administrator a certification of the elevation of the lowest floor, flood-proofed elevation, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When floodproofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The local administrator shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.
- (c) Duties and responsibilities of the local administrator. Duties of the local administrator shall include, but not be limited to:
 - (1) Review all development permits to assure that the permit requirements of this article 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 Alabama Department of Economic and Community Affairs prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
 - (4) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

- (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 6-96(b)(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 6-96(b)(2).
 - (7) When flood-proofing is utilized for a particular building, the local administrator shall obtain certification from a registered professional engineer or architect, in accordance with section 6-97(b)(2).
 - (8) 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 actual field conditions), the local administrator shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
 - (9) When base flood elevation data or floodway date have not been provided in accordance with section 6-95(b), then the local 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 section 6-97.
 - (10) All records pertaining to the provisions of this ordinance shall be maintained in the office of the local administrator and shall be open for public inspection.
- (d) Variance procedures:
- (1) City council, sitting as the floodplain management board of adjustment, shall hear and decide appeals and requests for variances from the requirements of this article.
 - (2) The floodplain management board of adjustment shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the local administrator in the enforcement or administration of this ordinance.
 - (3) 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 continued designation as a historic structure and the variance is the minimum to preserve the historic character and design of the structure.
 - (4) In passing upon such applications, the floodplain management board of adjustment shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this article, and:
 - a. The danger that materials may be swept onto other lands to the injury of others;
 - b. The danger to life and property due to flooding or erosion damage;
 - c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d. The importance of the services provided by the proposed facility to the community;
 - e. The necessity of the facility to a waterfront location, in the case of a functionally dependent facility;
 - f. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - g. The compatibility of the proposed use with existing and anticipated development;
 - h. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - i. The safety of access to the property in times of flood for ordinary and emergency vehicles;

- j. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
 - k. 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 streets and bridges.
- (5) Upon consideration of the factors listed above, and the purposes of this article, the board of adjustment may attach such conditions to the granting of variances as it deems necessary to further the purposes of this article.
- (6) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (7) Conditions for variances:
- a. 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 a historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
 - b. Variances shall only be issued upon: (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship, and; (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - c. 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 structure 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.
 - d. The local administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.
- (8) Any person seeking a variance as hereinabove provided shall make application in writing to the city engineer or his designated representative stating the variance requested and the reasons and justifications therefore. The city engineer or his designated representative shall promptly review the application for completeness and, when complete, shall request the City Council of Tuscaloosa to set a date for hearing. The applicant shall be notified of the hearing date by the city engineer or his designated representative, which hearing date shall be set as soon as practicable and within ten (10) days from receipt of the completed application unless good cause is shown for delay. The council, sitting as the floodplain management board of adjustment, shall rule on the request as promptly as practicable after having heard and considered all facts bearing on the justification therefore. The city engineer or his designated representative shall notify the applicant in writing of the decision of the floodplain management board of adjustment. Such written notification shall also advise the applicant that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as twenty-five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage and such construction below the base flood level increases risks to life and property. The city engineer or his designated representative shall maintain a record of all variance actions taken and notifications issued pursuant to the provisions of this section.

(Ord. No. 5068, 5-23-95; Ord. No. 7078, 5-29-07; Ord. No. 7549, §§ 2, 3, 6-1-10)

Sec. 6-97. - Provisions for flood hazard reduction.

- (a) General standards. 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, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within components during conditions for flooding.
 - (6) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters 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 waste 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 ordinance or shall meet the requirements of "new construction" as contained in this article.
 - (10) Any alteration, repair, construction or improvements to a building which is not in compliance with the provisions of this ordinance, shall be undertaken only if said nonconformity is not furthered, extended, or replaced.
- (b) Specific standards. In all areas of special flood hazard where base flood elevation data have been provided, as set forth in section 6-95(b), the following provisions are required:
- (1) Residential construction. New construction or substantial improvement of any residential building or manufactured home shall have the lowest floor, including basement, elevated no lower than one foot above base flood elevation. 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) below.
 - (2) Nonresidential construction. New construction or substantial improvement of any commercial, industrial, or nonresidential building (or manufactured home) shall have the lowest floor including basement, elevated no lower than one foot above the base flood elevation. Buildings located in all A zones may be floodproofed in lieu of being elevated provided that all areas of the building below the required elevation are watertight, 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 6-96(c)(7).
 - (3) Elevated building. 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 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 (2) openings having a total net area of not less than one square inch for every square foot 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 floodwaters 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 connection with the premises (standard exterior door) or entry to the living area (stairways or elevator); and
- c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
- (4) Standards for manufactured homes and recreational vehicles:
- a. All manufactured homes placed, or substantially improved, on individual lots or parcels, in expansions to existing manufactured home parks or subdivisions, in substantially improved manufactured home parks or subdivisions, or in new manufactured home parks or subdivisions must meet all the requirements for new construction, including elevation and anchoring.
 - 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 no lower than one foot above the level of the base flood elevation; or
 2. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength of no more than a maximum of sixty (60) inches in height above grade to meet the state standard required by the Alabama Manufactured Housing Commission (five-foot rule).
 3. The manufactured home 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 (b)(4)b.1. and 3. above.
 - 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 subsections (4)a. or b. 1. and 3. above.
- (5) Floodways. Located within areas of special flood hazard established in section 6-95(b) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and has erosion potential, the following provisions shall apply:
- a. Prohibit encroachments, including fill, new construction, substantial improvements and other developments unless certification (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;
 - b. If subsection (b)(5)a. above is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provision of this section 6-97; and

(Ord. No. 5068, 5-23-95; Ord. No. 6683, §§ 2, 3, 11-30-04; Ord. No. 7174, 11-27-07)

Secs. 6-98—6-107. - Reserved.