

**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ALLEN, COLLIN COUNTY, TEXAS, AMENDING THE ALLEN LAND DEVELOPMENT CODE, BY AMENDING IN ITS ENTIRETY ARTICLE V “SPECIAL ZONES”; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000) FOR EACH OFFENSE; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, the Federal Emergency Management Agency (“FEMA”) has determined there exists within the incorporated limits of the City of Allen certain flood prone areas where damages to property or injury to people may occur during periodic rain events of certain length and intensity; and,

**WHEREAS**, in order for property owners within a community to be eligible to purchase federally-guaranteed flood insurance for the protection of property located in flood prone areas, a community must be a participant in the National Flood Insurance Program which participation requires, among other things, the adoption of regulations regarding the development of property within such flood prone areas; and,

**WHEREAS**, financial institutions that make federally guaranteed loans to finance the purchase and/or development of real estate are generally forbidden from making such loans with respect to properties located in flood prone areas if the community is not a participant in the National Flood Insurance Program; and,

**WHEREAS**, the City Council of the City of Allen is presently a participant in the National Flood Insurance Program and finds it to be in the public interest to continue such participation; and,

**WHEREAS**, the City has been advised that the FEMA Administrator has adopted new flood insurance rate maps to be effective on June 7, 2017; and,

**WHEREAS**, to remain a participant in the National Flood Insurance Program, a community must adopt FEMA’s new flood insurance rate maps and amendments to the community’s floodplain management regulations prior to the effective date of said maps; and,

**WHEREAS**, the City Planning and Zoning Commission and the governing body of the City of Allen, Texas, in compliance with the laws of the State of Texas and the ordinances of the City of Allen, have given requisite notice by publication and otherwise, and after holding due hearings and affording a full and fair hearing to the public, and in the exercise of its legislative discretion have concluded that the Allen Land Development Code should be amended.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ALLEN, COLLIN COUNTY, TEXAS, THAT:**

**SECTION 1.** The Allen Land Development Code is hereby amended by amending Article V “Special Zones” to read in its entirety as set forth in Exhibit “A,” attached hereto and incorporated herein by reference.

**SECTION 2.** All ordinances of the City of Allen in conflict with the provisions of this Ordinance shall be, and the same are hereby, repealed; provided, however, that all other provisions of said ordinances not in conflict herewith shall remain in full force and effect.

**SECTION 3.** An offense committed before the effective date of this Ordinance is governed by prior law and the provisions of the Ordinances of the City, as amended, in effect when the offense was committed and the former law is continued in effect for this purpose.

**SECTION 4.** Should any word, sentence, paragraph, subdivision, clause, phrase or section of this Ordinance, or of the Allen Land Development Code, be adjudged or held to be void or unconstitutional, the same shall not affect the validity of the remaining portions of said ordinance or the Allen Land Development Code, as amended hereby, which shall remain in full force and effect.

**SECTION 5.** Any person, firm or corporation violating any of the provisions or terms of this Ordinance shall be subject to the same penalty as provided for in the Allen Land Development Code Zoning Regulations, as previously amended, and upon conviction shall be punished by a fine not to exceed the sum of two thousand dollars (\$2,000) for each offense.

**SECTION 6.** This Ordinance shall take effect immediately from and after its passage and publication of the caption in accordance with the provisions of the Charter of the City of Allen, and it is accordingly so ordained.

**DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF ALLEN, COLLIN COUNTY, TEXAS, ON THIS THE 27<sup>TH</sup> DAY OF JUNE 2017.**

**APPROVED:**

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**Stephen Terrell, MAYOR**

**APPROVED AS TO FORM:**

**ATTEST:**

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**Peter G. Smith, CITY ATTORNEY**  
(kbl:6/15/17:87144)

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**Shelley B. George, TRMC, CITY SECRETARY**

## **EXHIBIT “A”**

### **ARTICLE V. SPECIAL ZONES**

#### **Sec. 5.01. Floodplain hazard.**

##### **Sec. 5.01.1. Purpose**

V.T.C.A., Water Code, ch. 16, subch. I, as amended, also known as the Flood Control and Insurance Act, requires the governing body of each city to adopt ordinances necessary for the city to be eligible to participate in the National Flood Insurance Program and authorizes cities and other political subdivisions in the state to take all necessary and reasonable actions that are not less stringent than the requirements and criteria of the National Flood Insurance Program. In enacting the provisions of this article, the city council finds that (i) flood hazard areas are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare and (ii) these flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, flood-proofed or otherwise protected from flood damage. 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. Protect human life and health;
2. Minimize expenditure 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 water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
6. Assist in maintaining a stable tax base by providing for the sound use and development of flood prone areas;
7. Ensure potential purchasers have adequate notification that property is in a flood area;
8. Establish floodplain limits based on proposed fully developed watershed conditions;
9. Preserve the existing conveyance capacity of the floodplain;
10. Allow no rise in the base flood elevation;
11. Prevent the alteration or channelization of Rowlett Creek and all tributaries draining 160 acres or more except where required for safety and public welfare;
12. Limit the maximum average channel velocities to prevent excessive erosion which are dependent on specific channel, bed, and bank treatments; and

13. Preserve stands of trees and other environmental features within the floodplain.

### **Sec. 5.01.2. Methods of reducing flood losses.**

In order to accomplish its purposes, this article uses the following methods:

1. Restricts or prohibits uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;
2. Requires that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. Controls the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
4. Controls filling, grading, dredging and other development which may increase flood damage;
5. Prevents or regulates the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands;
6. Prevents the construction of new private dwellings and regulates public and private facilities within the flood hazard area;
7. Requires the platting and dedication of all land located within the ultimate 100-year floodplain.

### **Sec. 5.01.3. Definitions.**

For purposes of this article, the following words and phrases shall have the meaning ascribed to such words or phrases unless the context indicates otherwise.

Alluvial fan flooding means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport and deposition; and unpredictable flow paths.

Apex means point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

Appurtenant Structure means a structure which is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.

Area of shallow flooding means a designated AO, AH, AR/AO, AR/AH, or VO zone on a community's flood insurance rate map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of Special Flood Hazard means the land in the floodplain within a community subject to a one percent (1.0%) or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed rate making has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE or V.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE) means the elevation shown on the Flood Insurance Rate Map (FIRM) and found in the accompanying Flood Insurance Study (FIS) for Zones A, AE, AH, A1-A30, AR, V1-V30, or VE that indicates the water surface elevation resulting from the flood that has a one percent (1.0%) chance of equaling or exceeding that level in any given year - also called the *Base Flood*.

Base flood-ultimate development means the flood having a one percent chance of being equaled or exceeded in any given year, based on a fully developed watershed. The data to be used for design and planning should be from the City of Allen Linear Greenbelt Study.

Basement means and area of the building having its floor subgrade (below ground level) on all sides.

Critical feature means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

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

Elevated building means a building without a basement:

- a. With a finished floor elevation or the lowest horizontal structural member elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the floor of the water; and
- b. Adequately anchored to maintain the structural integrity of the building during a 100-year flood event; and
- c. Includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters; or

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 effective date of the floodplain management regulations adopted by a community.

Expansion to and 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).

Existing structures means structures commenced before the effective date of the FIRM or before June 1, 1978.

FEMA means the Federal Emergency Management Agency.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters or the unusual and rapid accumulation or runoff of surface waters from any source.

Flood insurance rate map or FIRM means an official map of a community, on which the FEMA administrator has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood insurance study means an examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Floodplain administrator means the director of engineering or his/her designee.

Floodplain or Flood-Prone Area means any land area susceptible to being inundated by water from any source (see definition of *flooding*).

Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain management regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose state or local regulations, and other applications of police powers which provide standards for the purpose of flood damage prevention and reduction.

Flood Proofing means any combination of structural and nonstructural additions, changes, or adjustments that reduce or eliminate flood damage to property.

Floodway (regulatory) means the channel of a river or 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 a designated height.

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

Historic structure means any structure that is:

- a. 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;
- b. 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;
- c. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
- d. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

- i. By an approved state program as determined by the Secretary of the Interior; or
- ii. Directly by the Secretary of the Interior in states without approved programs.

Lowest Adjacent Grade means the lowest point of the ground level immediately next to a building.

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 non-elevation design requirements of 44 C.F.R. Sec. 60.3 of the National Flood Insurance Program regulations.

Manufactured Home means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

Manufactured Home Park or Subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Mean sea level means, for purposes of the National Flood Insurance Program, the North American Vertical Datum (NAVD) of 1988 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction means, for the purpose of determining insurance rates, structures of which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

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:

- a. Built on a single chassis;
- b. 400 square feet or less when measured at the largest horizontal projections;
- c. Designed to be self-propelled or permanently towable by a light duty truck; and
- d. Not designed as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special Flood Hazard Area - see Area of Special Flood Hazard

Start Construction means (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), includes substantial improvement and means the date the



building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the 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 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 structure. 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, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

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 reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of actual work performed but does not include:

- a. Improvements to correct existing violations of state or local health, sanitary, or safety code specifications; or
- b. Any alteration of a "historic structure," provided the alteration does not preclude continued designation as a "historic structure."

Variance means a grant of relief to a person from the requirement of this article when specific enforcement would result in unnecessary hardship.

Violation means 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 Section 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Water Surface Elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

#### **Sec. 5.01.4. General provisions.**

1. The requirements of this article apply to all areas of special flood hazard within the city.
2. If any portion of a development of a drainage course lies within 100 feet from the top of a high bank or is identified as located within the 100-year floodplain on any FIRM, a detailed study of the area is required. If the drainage area is 160 acres or greater, then the ultimate floodplain must be established. The floodplain administrator may require additional technical information prior to accepting the results of any study.

3. Floodplain areas will be platted and dedicated to the city either separately or together with the adjacent property. The city may decline any dedication of floodplain land but may require the area to be maintained as private open space.
4. The areas of special flood hazard identified by FEMA in the current scientific and engineering report entitled, The Flood Insurance Study (FIS) for Collin County, Texas and Incorporated Areas, dated June 7, 2017 or latest adopted date, with accompanying flood insurance rate maps and flood boundary-floodway maps (FIRM and FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this Code.
5. The planning and design of structures adjacent to the base flood elevation should be based on ultimate development.
6. No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the provisions of this article or without securing a development permit.
7. In the interpretation and application of this article, all provisions shall be:
  - a. Considered as minimum requirements;
  - b. Liberally construed in favor of the governing body; and
  - c. Deemed neither to limit nor repeal any other powers granted under state statutes.
8. The degree of flood protection required by the regulations set forth in this article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions, greater floods can and will occur, and flood heights may be increased by man-made or natural causes. The enactment of this article does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. The enactment and enforcement of this article shall not create liability on the part of the city or any city official or employee for any flood damages that result from reliance on this article or any administrative decision lawfully made hereunder.
9. This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

#### **Section 5.01.5. Administration.**

1. The director of engineering is hereby appointed the floodplain administrator to administer and implement the provisions of this article and appropriate sections of Title 44 of the Code of Federal Regulations relating to the local administration and enforcement of the National Flood Insurance Program regulations relating to floodplain management.
2. The duties and responsibilities of the floodplain administrator include, but are not limited to, the following:
  - a. Maintaining and making available for public inspection all records pertaining to the enforcement of this article.

- b. Reviewing all development permit applications to determine whether any proposed building site, including the placement of a manufactured home, will be reasonably safe from flooding.
- c. Reviewing, approving or denying applications for development permits required herein.
- d. Reviewing permits for proposed development to assure that all necessary permits have been obtained from federal, state or local governmental agencies.
- e. Interpreting the exact location of the boundaries of the areas of special flood hazards.
- f. Notify, in riverine situations, adjacent communities and the State Coordinating Agency which is the Texas Water Development Board (TWBD), and the Texas Commission on Environmental Quality (TCEQ), prior to any proposed alteration or relocation of a watercourse, and submit evidence of such notification to the FEMA.
- g. Requiring that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained.
- h. When base flood elevation data has not been provided, obtaining, reviewing and utilizing data from any reasonable source to administer the provisions of this article.
- i. When a regulatory floodway has not been designated, prohibiting new construction, substantial improvements, or other development, including fill, within the special flood hazard area shown on the city's FIRM, unless it is demonstrated 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 city.
- j. Ensuring that the developer of any development which increases the water surface elevation of the base flood by more than one foot or encroaches into an established floodway apply to the Federal Insurance Administrator for conditional approval of such action prior to permitting the encroachments and shall submit all documents required in 44 CFR 65.12.

**Section 5.01.6. Permit procedures; appeals; variances.**

1. Permit Applications. Application for a development permit required by this article shall be presented to the floodplain administrator on forms furnished by the city and may include, but not be limited to, plans in duplicate drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures (including the placement of manufactured homes), and the location of the foregoing in relation to areas of special flood hazard. Additionally, the following information is required:
  - a. Elevation in relation to mean sea level of the lowest adjacent grade or lowest floor (including basement), whichever value lower, of all new and substantially improved structures;
  - b. Elevation in relation to mean sea level to which any nonresidential structure shall be flood proofed;
  - c. Elevation in relation to mean sea level of the lowest horizontal structural member, of all new and substantially improved structures;

- d. A certificate from a registered professional engineer or architect that the nonresidential flood proofed structure shall meet the flood proofing criteria of section 5.01.7.2.b.
  - e. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.
2. Decision of the Floodplain Administrator. Approval or denial of a development permit by the floodplain administrator shall be based on all of the provisions of this article and the following relevant factors:
- a. The danger to life and property due to flooding or erosion damage;
  - b. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
  - c. The potential for materials to be swept onto other land to the injury of others;
  - d. The compatibility of the proposed use with existing and anticipated development;
  - e. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;
  - f. 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;
  - g. The necessity of the facility to have a waterfront location, where applicable;
  - h. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
  - i. The relationship of the proposed use to the comprehensive plan for that area, and the guidelines contained in the Linear Greenbelt Study (Oct.1986).
  - j. Compliance with the Allen Drainage Criteria Manual;
  - k. Reasonable protection of flora and fauna, as otherwise provided in this Code.
  - l. The safety of access to the property in times of flood for ordinary and emergency vehicles.
3. Appeals.
- a. The planning and zoning commission shall hear and render judgment on an appeal of the denial of a development permit required by this article only when it is alleged there is an error in any requirement, decision, or determination made by the floodplain administrator in the enforcement or administration of this article.
  - b. Any person or persons aggrieved by the decision of the planning and zoning commission may appeal such decision in the courts of competent jurisdiction.
  - c. The floodplain administrator shall maintain a record of all actions involving an appeal.

4. Variances.

- a. The planning and zoning commission shall have the authority to grant variances from the regulations set forth in this article as follows:
  - i. Variances may be issued by for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this Code.
  - ii. The planning and zoning commission may attach such conditions to the granting of variances, as it deems necessary to further the purpose and objectives of this article.
  - iii. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
  - iv. Variances may be issued for the repair or rehabilitation of historic structures 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 necessary to preserve the historic character and design of the structure.
- b. In order to grant a variance to this article, the planning and zoning commission must make the following findings with respect to the application:
  - i. The requested variance is the minimum necessary, considering the flood hazard, to afford relief being sought;
  - ii. The granting of the requested variance is for a good and sufficient cause;
  - iii. The failure to grant the requested variance would result in exceptional hardship to the applicant; and
  - iv. The granting of the requested variance will not result in increased flood elevation, additional threats to public safety, extraordinary public expense, nuisances, fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- c. Any application for which a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor and/or lowest adjacent grade elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor or lowest adjacent grade elevation, which ever value is lower.

**Sec. 5.01.7. Provisions for flood hazard reduction.**

- 1. *General standards.* All new construction and substantial improvement of structures and other improvements located in areas of special flood hazards, must comply with the following
  - a. Improvements will be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

- b. Improvements will be constructed by methods and practices that minimize flood damage;
  - c. Improvements will be constructed with materials resistant to flood damage;
  - d. Improvements will be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities designed and/or located to prevent water from entering or accumulating within the components during conditions of flooding;
  - e. All new and replacement water supply systems will be designed to minimize or eliminate infiltration of floodwaters into the system;
  - f. New and replacement wastewater collection systems will be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from the systems into floodwaters; and
  - g. On-site waste disposal systems shall be located to avoid impairment or contamination during flooding.
2. *Specific standards.* In all areas of special flood hazards where base flood elevation data has been provided, the following is required:
- a. *Residential construction (At Grade).* New construction and substantial improvement of any residential structure shall have the lowest adjacent grade or lowest floor (including the basement), which ever value is lower to 24 inches above the base flood elevation. A registered professional engineer, architect or surveyor shall certify to the base slab.
  - b. *Residential construction (Elevated).* New construction and substantial improvement of any elevated building shall have the lowest horizontal structural member to 24 inches above the base flood elevation. A registered professional engineer, architect or surveyor shall certify to the lowest horizontal structural member.
  - c. *Nonresidential construction.* New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest adjacent grade or lowest floor (including basement), which ever value is lower elevated to 18 inches above the base flood elevation together with attendant utility and sanitary facilities and be designed so that below the base flood elevation the structure 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. A registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are flood proofed shall be maintained by the floodplain administrator.
  - d. *Enclosures.* New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of

floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

- i. A minimum of two separate openings on different walls having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
- ii. The bottom of all openings shall be no higher than one foot above grade;
- iii. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

e. *Manufactured homes.*

- i. Require that all manufactured homes to be placed within zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist 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 requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
- ii. Require that manufactured homes that are placed or substantially improved within zones A1-30, AH, and AE on the community's FIRM on sites (a) outside of a manufactured home park or subdivision, (b) in a new manufactured home park or subdivision, (c) in an expansion to an existing manufactured home park or subdivision, or (d) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest horizontal structural member of the manufactured home is elevated to 24 inches above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
- iii. Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision with[in] zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of paragraph (4) of this section be elevated so that either:
  - (a) The lowest horizontal structural member of the manufactured home is elevated 24 inches above the base flood elevation, or
  - (b) The manufactured home lowest horizontal structural member is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above adjacent grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

e. *Recreational vehicles.* Require that recreational vehicles placed on sites within zones A1-30, AH, and AE on the community's FIRM either:

- i. Be on the site for fewer than 180 consecutive days, or

- ii. Be fully licensed and ready for highway use; or
  - iii. Meet the permit requirements of section 5.01.6.1 and the elevation and anchoring requirements for manufactured homes in subparagraph (d) of this section 5.01.7. 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 additions.
- 3. *Standards for Subdivision Proposals.* The following provisions apply:
  - a. All subdivision proposals including the placement of manufactured home parks and subdivisions shall be consistent with 5.01.1 and 5.01.2 of this ordinance.
  - b. All proposals for the development of the subdivisions including the placement of manufactured home parks and subdivisions shall meet Floodplain Development Permit requirements of 5.01.4, 5.01.5, and the provisions of 5.01.7 of this ordinance.
  - c. Base flood elevation data shall be generated for subdivision proposals and other proposed development including the placement of manufactured home parks and subdivisions which is greater than 50 lots or 5 acres, whichever is lesser, if not otherwise provided pursuant to Section 5.01.4 or Section 5.01.5 of this ordinance.
  - d. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.
  - e. All subdivision proposals including the placement of manufactured home parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.
- 4. *Floodways.* The following provisions apply to floodways:
  - a. Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the city during the occurrence of the base flood discharge and applicant has applied to the Federal Flood Insurance Administrator for conditional approval of such action prior to permitting the encroachments and shall submit all documents required in 44 CFR 65.12.
  - b. Any new construction or substantial improvements will comply with the flood hazard reduction provisions of this article.
- 5. *Penalties for Non-compliance.* No structure or land shall hereafter be construed, located, extended, converted, or altered without full compliance with the terms of this article and other applicable regulations. Violation of the provisions of this article by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this article or fails to comply with any of its requirements shall upon conviction be punished by a fine not to exceed \$2,000.00 for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation.