

EXHIBIT NO. 1

13  
5-15-04

Docket Item #21  
TEXT AMENDMENT #2004-0002

Planning Commission Meeting  
May 4, 2004

**CASE:** TEXT AMENDMENT #2004-0002  
FLOODPLAIN DISTRICT

**ISSUE:** Consideration of amendments to Section 6-300 (Floodplain District) of the Zoning Ordinance for changes to the floodplain regulations.

**STAFF:** Department of Planning and Zoning  
Department of Transportation and Environmental Services

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**PLANNING COMMISSION ACTION, MAY 4, 2004:** On a motion by Mr. Komoroske, seconded by Ms. Fossum, the Planning Commission voted to recommend approval of the text amendment. The motion carried on a vote of 7 to 0.

**Reason:** The Planning Commission agreed with staff's analysis.

**Speakers:** None

STAFF RECOMMENDATION: Staff recommends that the Planning Commission recommend approval of the following text amendment:

ARTICLE VI: SPECIAL AND OVERLAY ZONES  
[Excerpts; Full text with changes begins on page 7]

Sec. 6-300 Floodplain district.

6-301 Floodplain districts created.

- (A) There are hereby established floodplain districts throughout the city as shown on a map entitled "Floodplain Map, The City of Alexandria, Alexandria, Virginia," dated May 15, 1991, signed by the mayor, the chairman of the planning commission and the director of transportation and environmental services, which map is on file in the offices of the director of transportation and environmental services. Said floodplain district map is hereby made a part of this ordinance, and such map and all notations, references and other data shown thereon are by this reference made a part hereof as if fully described herein. The basis for the Floodplain Map is the Flood Insurance Rate Map (FIRM) dated May 15, 1991, and any subsequent revisions thereto. Any changes in said map are subject to approval by the Federal Insurance Administration of the Federal Emergency Management Agency (FEMA) prior to becoming effective and such approval shall be evidenced by notice in writing from the federal insurance administrator or an authorized representative.

6-302 Regulations required.

- (C) For purposes of this ordinance, the 100-year-flood level, as defined in section 6-303 shall be used as the basis for regulation.
- (1) Within Zone A, when available, information from federal, state and other acceptable sources shall be used to determine the 100-year-flood level and, if possible, the floodway. When no other information is available, the 100-year-flood level shall be determined by using a point on the boundary of the floodplain which is nearest the construction site in question and base flood elevation data shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).
- (2) Notwithstanding the provisions of section 6-302(C)(1), the director of transportation and environmental services may require an applicant for a building permit to determine the 100-year-flood level with hydrologic and hydraulic engineering techniques.

6-303 Definitions. For the purposes of this section 6-300 the following terms and words are defined as follows:

- (A) A Zone. An area of 100-year-flood as shown on the floodplain district map.
- (B) AE Zone. An area shown on the floodplain district map for which base flood levels have been provided.
- (F) Development. Any man made change to improved or unimproved real estate, including, but not limited to, the construction of buildings or other structures, the placement of manufactured homes, the construction of streets, the installation of utilities and other activities or operations involving paving, filling, grading, excavating, mining, dredging or drilling, the storage of equipment or materials.

6-304 Floodproofing. Wherever floodproofing is utilized within the scope of this section 6-300, such floodproofing shall be done by approved methods. A registered professional engineer or architect shall certify the adequacy of the floodproofing design to withstand the stresses of the base flood and such plan shall cite the elevation to which the structure is floodproofed. Such certification shall be provided on Federal Emergency Management Agency, National Flood Insurance Program, Elevation Certificate and/or Floodproofing Certificate forms as applicable. Designs meeting the requirements of the W-1 and W-2 without human intervention technique as outlined in floodproofing regulations of the Office of the Chief of Engineers, U.S. Army, ~~June 1972~~ December 15, 1995, shall be deemed to comply with this requirement. The building or code official shall maintain a file of such certifications, including the elevation of the lowest floor for structures that are elevated in lieu of watertight floodproofing.

6-305 Director's review.

- (A) Permit required for development. A permit must be obtained prior to the start of any development within the 100 year floodplain district.
- (B) The director of transportation and environmental services shall review all site plans submitted pursuant to section 11-400 of this ordinance, all plats of subdivision submitted pursuant to section 11-1700 of this ordinance ~~chapter 5, title 7, of the city code~~ and all applications for building permits which plans, plats or applications propose to construct or make substantial improvements within any floodplain district. No such site plan, subdivision plat or building permit application for property within any floodplain district

plat or building permit application for property within any floodplain district shall be approved by any agency of the city without certification by the director of transportation and environmental services that the plan, plat or permit application meets the requirements of this section 6-300. The director shall insure that all other required permits from state or federal governmental agencies have been obtained.

6-307 Special regulations. Within the boundaries of any A or AE zones in any floodplain district as shown on the floodplain district map, buildings or structures and their extensions and accessory buildings or structures may be constructed or substantially improved only in accordance with the following requirements and all other applicable provisions of law:

- (A) The elevation of the lowest floor, including the basement, for any new residential building or any extension to a residential building shall be at or above the 100-year-flood level as noted on said map.
- (B) The elevation of the lowest floor, including the basement, for any new nonresidential building or structure and any extension or accessory to a nonresidential building shall be at or above the 100-year-flood level as noted on said map, unless all floors below the 100-year-flood level, together with their attendant utility and sanitary facilities, are adequately watertight floodproofed up to the 100-year-flood level, and the building or structure or the extension or accessory is designed to resist uplift and/or horizontal water pressure; provided, that in no event shall any floor below the 100-year-flood level be used for human or animal habitation, food storage or food preparation.

## DISCUSSION

This text amendment is designed to accomplish several technical corrections and revisions to the City's floodplain regulations, consistent with the Federal Emergency Management Agency (FEMA) requirements.

The floodplain regulations have long been a part of the zoning ordinance. Providing information about floodplain zones within the City, and the requirements for building and other activities in floodplain areas, the regulations create added protections for persons and property within those areas prone to flooding.

Section 6-300 of the ordinance creates an overlay zone incorporating all floodplain districts, and those districts are mapped consistent with acknowledged FEMA standards as an overlay zone for the City. Within the floodplain districts, there are a series of prohibitions, and increased review and requirements for new and upgraded developments and activities. The regulations are administered by the Department of Transportation and Environmental Services.

The City participates in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP) which allows the residents of Alexandria to purchase flood insurance. As a part of its regular review of municipal ordinances for municipalities who participate in the NFIP, FEMA as well as relevant state agencies, have required changes to the City's regulations to bring it up to date. FEMA can sanction communities from the National Flood Insurance Program for failure to maintain a floodplain management ordinance that meets or exceeds the minimum requirements of the program. The proposed changes are a direct response to FEMA's review comments. (See attached correspondence and review checklist from FEMA.)

The amendments provide clarity but not substantive change to the regulations. None imposes any requirements that are not already part of the City's floodplain review system. The entire zoning ordinance section with changes highlighted is attached; the provisions included above were selected to give an example of the type and level of change being made. The changes include the following:

1. The floodplain district regulations refer to two zones. Zone A and Zone AE are the areas of 100-year flooding, as shown on the floodplain map. Zone AE is an area on the floodplain map for which base flood elevations have been determined. The proposed change to section 602 (C)(1) makes clear that it is only within Zone A that methods are required to establish the actual 100 year flood level.
2. Section 6-303 (F) defines the word "development" for purposes of the floodplain regulations, and it is for development that certain requirements attach, such as a requirement for special T&ES review of permits. The proposed change here would add to the definition of development the storage of equipment or materials, consistent with FEMA's definition.

3. When the floodplain regulations require it, buildings or certain elements of them must be “floodproofed” to protect occupants and systems from flooding. Section 6-304 states that any required floodproofing must be done to certain standards and methods. The proposed new language simply requires that the evidence of such floodproofing be given on FEMA forms, specifically floodproofing or elevation certificates.

4. A specific change recommended by FEMA is to state clearly that a permit is required prior to any development within a 100 year floodplain in order to show compliance with the floodplain regulations. Section 6-305 of the provisions already states that substantial improvement requires review and certification by the Director of T&ES within any floodplain district. In addition, the specific floodplain requirements outlined in Sections 6-307 and 6-308 require specific floodproofing for nonresidential development in any floodplain district. The proposed new language in Section 6-305 would simply clarify the need for a permit for development within the 100 year floodplain areas.

5. Section 6-307 (B) is an example of a specific floodproofing requirement within the ordinance. It requires that any new commercial structure be located at or above the 100 year flood levels, unless all space below that level, including utilities and bathrooms are floodproofed. The change proposed here would delete the word “adequately” in the description of the level of floodproofing required, and substitute “watertight.” The word “adequately” is superfluous and leaves open to question the authority of the city to determine that floodproofing is adequate. “Watertight” is the word required by FEMA.

6. Finally, several small changes throughout the text codify existing practice and requirements by FEMA.

The above changes do not create new substantive requirements and are attempts to clarify the provisions of the floodplain regulations. FEMA has asked for them in order that the City remain included in the National Flood Insurance Program. Staff recommends approval of the text amendment.

STAFF: Eileen P. Fogarty, Director, Planning and Zoning;  
Barbara Ross, Deputy Director, P&Z  
Emily Baker, Deputy Director, Transportation and Environmental Services  
Allen Martin, Surveys, T&ES

Attachments: 1) Section 6-300 of zoning ordinance, with all proposed changes  
2) FEMA correspondence and check list for compliance

**FULL TEXT OF FLOODPLAIN REGULATIONS WITH PROPOSED CHANGES**

Sec. 6-300 Floodplain district.

6-301 Floodplain districts created.

- (A) There are hereby established floodplain districts throughout the city as shown on a map entitled "Floodplain Map, The City of Alexandria, Alexandria, Virginia," dated May 15, 1991, signed by the mayor, the chairman of the planning commission and the director of transportation and environmental services, which map is on file in the offices of the director of transportation and environmental services. Said floodplain district map is hereby made a part of this ordinance, and such map and all notations, references and other data shown thereon are by this reference made a part hereof as if fully described herein. The basis for the Floodplain Map is the Flood Insurance Rate Map (FIRM) dated May 15, 1991, and any subsequent revisions thereto. Any changes in said map are subject to approval by the Federal Insurance Administration of the Federal Emergency Management Agency (FEMA) prior to becoming effective and such approval shall be evidenced by notice in writing from the federal insurance administrator or an authorized representative.
- (B) Any uncertainty on the floodplain district map with respect to the boundary of any floodplain district, either A or AE zone as hereinafter defined, shall be determined by the director of transportation and environmental services by scaling and computation from the map.

6-302 Regulations required.

- (A) The floodplain management regulations in this section 6-300 are adopted in compliance with floodplain management criteria set forth in regulations promulgated by the Federal Insurance Administration of FEMA.
- (B) Should any uncertainty occur with respect to the definition of any word, term or phrase used in this section 6-300, the applicable definitions set out in 44 C.F.R. 59.1, as amended, shall apply.
- (C) For purposes of this ordinance, the 100-year-flood level, as defined in section 6-303 shall be used as the basis for regulation.

- (1) Within Zone A, when available, information from federal, state and other acceptable sources shall be used to determine the 100-year-flood level and, if possible, the floodway. When no other information is available, the 100-year-flood level shall be determined by using a point on the boundary of the floodplain which is nearest the construction site in question and base flood elevation data shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).
- (2) Notwithstanding the provisions of section 6-302(C)(1), the director of transportation and environmental services may require an applicant for a building permit to determine the 100-year-flood level with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations and other information relied on shall be submitted in sufficient detail to allow a thorough technical review by the director of transportation and environmental services.

6-303 Definitions. For the purposes of this section 6-300 the following terms and words are defined as follows:

- (A) A Zone. An area of 100-year-flood as shown on the floodplain district map.
- (B) AE Zone. An area shown on the floodplain district map for which base flood levels have been provided.
- (C) Base flood/100-year-flood. A flood that, on the average, is likely to occur once every 100 years (i.e., that has a one percent chance of occurring each year, although the flood may occur in any year).
- (D) Base flood level/100-year-flood level. The elevation to which the water associated with a base, or 100-year, flood will rise.
- (E) Basement. Any area of a building having its floor subgrade, or below ground level, on all sides.



- (F) Development. Any man made change to improved or unimproved real estate, including, but not limited to, the construction of buildings or other structures, the placement of manufactured homes, the construction of streets, the installation of utilities and other activities or operations involving paving, filling, grading, excavating, mining, dredging or drilling, the storage of equipment or materials.
- (G) Flood. A general and temporary inundation by water of normally dry land areas.
- (H) Floodplain. A relatively flat or low land area adjoining a river, stream or other watercourse which is subject to partial or complete inundation by water from such watercourse, or a land area which is subject to the unusual and rapid accumulation or runoff of surface waters from any source.
- (I) Floodplain district map. The map referenced in and adopted pursuant to section 6-301 of this ordinance.
- (J) Flood-prone area. Any land area susceptible to being inundated by water from any source more often than once in a 100-year period.
- (K) Floodway. The designated area of a floodplain required to carry and discharge flood waters of a given magnitude. For purposes of this section 6-300, a floodway must be capable of accommodating a flood of the 100-year magnitude.
- (L) Lowest floor. 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 ~~flood water~~ floodproofing non-elevation design requirements of this section 6-300.
- (M) Manufactured home. A structure, transportable in one or more sections, which is eight body feet or more in width and 40 body feet or more in length in the traveling mode, or 320 or more square feet when erected on site, which is built on a permanent chassis and is designed to be used as a single-family dwelling, with or without permanent foundation, when connected to the required facilities, and which includes the plumbing, heating, air conditioning and electrical systems contained in the structure. A manufactured home shall

include park trailers and other similar vehicles when placed on a site for greater than 180 days.

- (N) Nonresidential building. Any building or structure which is not a residential building.
- (O) Residential building. Any single-family dwelling, two-family dwelling, row or townhouse dwelling or multifamily dwelling and any accessory building or structure.
- (P) Substantial damage. Damage of any origin sustained by a building or structure whereby the cost of restoring the building or structure to its before damaged condition would equal or exceed 50 percent of the market value of the building or structure before the damage occurred.
- (Q) Substantial improvement. Any repair, reconstruction, rehabilitation, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure immediately before construction of the improvement is commenced, or any restoration of a building or structure which has incurred substantial damage; provided, that the term does not include (i) any improvement of a building or structure that is necessary to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by appropriate officials of the state or city and which are the minimum necessary to assure safe living conditions, or (ii) any improvement of a "historic structure," as defined in 44 C.F.R. 59.1, so long as the improvement does not preclude the structure's continued designation as a "historic structure."
- (R) Start of construction. The date a building permit is issued, provided that the actual start of construction begins within 180 days of the permit issuance date. For new construction, the actual start of construction means the initial placement of permanent construction of a structure on the site, such as the pouring of footings or a slab, the installation of piles, the construction of columns or any work beyond the state 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, or the installation of streets or walkways, or excavation for a basement or for footings, piers or foundations, or the erection of temporary forms, or the installation of accessory buildings, such as garages or sheds not occupied as dwelling units and not part of the main structure. For substantial improvements, the actual start of construction means the first alteration of

any wall, ceiling, floor or other structural part of a building, whether or not the alteration affects the external dimensions of the buildings.

- (S) New construction. Buildings and structures as to which the start of construction occurred on or after May 24, 1977, including any subsequent improvements to such buildings or structures.

6-304 Floodproofing. Wherever floodproofing is utilized within the scope of this section 6-300, such floodproofing shall be done by approved methods. A registered professional engineer or architect shall certify the adequacy of the floodproofing design to withstand the stresses of the base flood and such plan shall cite the elevation to which the structure is floodproofed. Such certification shall be provided on Federal Emergency Management Agency, National Flood Insurance Program, Elevation Certificate and/or Floodproofing Certificate as applicable. Designs meeting the requirements of the W-1 and W-2 without human intervention technique as outlined in floodproofing regulations of the Office of the Chief of Engineers, U.S. Army, ~~June 1972~~ December 15, 1995, shall be deemed to comply with this requirement. The building or code official shall maintain a file of such certifications, including the elevation of the lowest floor for structures that are elevated in lieu of watertight floodproofing.

6-305 Director's review.

- (A) Permit Required for development. A permit must be obtained prior to the start of any development within the 100 year floodplain district.
- (B) The director of transportation and environmental services shall review all site plans submitted pursuant to section 11-400 of this ordinance, all plats of subdivision submitted pursuant to section 11-1700 of this ordinance ~~chapter 5, title 7, of the city code~~ and all applications for building permits which plans, plats or applications propose to construct or make substantial improvements within any floodplain district. No such site plan, subdivision plat or building permit application for property within any floodplain district shall be approved by any agency of the city without certification by the director of transportation and environmental services that the plan, plat or permit application meets the requirements of this section 6-300. The director shall insure that all other required permits from state or federal governmental agencies have been obtained.

- 6-306 Prohibitions for trailer camps, manufactured homes, mobile homes and septic tank systems.
- (A) Trailer camps, manufactured homes and mobile homes are not permitted in any floodplain district shown on the map adopted pursuant to section 6-301. For purposes of this section 6-306(A), "mobile home" means a structure, 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.
  - (B) Installations of septic tank systems in any floodplain district shown on the map adopted pursuant to section 6-301 are prohibited.
- 6-307 Special regulations. Within the boundaries of any A or AE zones in any floodplain district as shown on the floodplain district map, buildings or structures and their extensions and accessory buildings or structures may be constructed or substantially improved only in accordance with the following requirements and all other applicable provisions of law:
- (A) The elevation of the lowest floor, including the basement, for any new residential building or any extension to a residential building shall be at or above the 100-year-flood level as noted on said map.
  - (B) The elevation of the lowest floor, including the basement, for any new nonresidential building or structure and any extension or accessory to a nonresidential building shall be at or above the 100-year-flood level as noted on said map, unless all floors below the 100-year-flood level, together with their attendant utility and sanitary facilities, are adequately watertight floodproofed up to the 100-year-flood level, and the building or structure or the extension or accessory is designed to resist uplift and/or horizontal water pressure; provided, that in no event shall any floor below the 100-year-flood level be used for human or animal habitation, food storage or food preparation.
  - (C) All new and replacement public utilities, water mains and sanitary sewers shall be designed to minimize or eliminate infiltration and exfiltration and to insure their structural integrity under flood conditions to the satisfaction of the director.

- (D) Water heaters, furnaces, electrical distribution panels and other critical mechanical or electrical installations shall not be installed below the 100-year-flood level. Separate electrical circuits shall serve areas below the 100-year-flood level and shall be dropped from above.
- (E) Any proposed use of land, development and any new construction or substantial improvement of a building or structure within an AE zone where no floodway is delineated, in conjunction with all other uses, existing or possessing a valid permit for construction, shall not increase the water surface elevation of the 100-year-flood more than one-half foot. Any person proposing a land use or development or such construction or improvement within an AE zone where no floodway is delineated, shall furnish specific engineering data and information as to the effect of the proposed action on future flood heights and obtain approval from the director of transportation and environmental services prior to undertaking the action.
- (F) Any proposed use of land, development and any new construction or substantial improvement within a floodway, in conjunction with all other uses, existing or possessing a valid permit for construction, shall not increase the water surface elevation of the 100-year-flood in the floodway. Any person proposing a land use or development or such construction or improvement within a floodway shall furnish specific engineering data and information as to the effect of the proposed action on future flood heights and obtain approval from the director of transportation and environmental services prior to undertaking the action.
- (G) No building permit shall be issued for the construction or substantial improvement of a building or structure unless the applicant submits to the code enforcement bureau a certification from a duly registered architect or engineer that the proposed construction (including prefabricated homes) or improvement meets the following requirements:
- (1) The construction shall be protected against flood damage;
  - (2) The construction shall be designed (or modified) and anchored to prevent flotation, collapse or lateral movement of the building and structure;
  - (3) The construction shall be built using materials and utility equipment that are resistant to flood damage; and

- (4) The construction shall be built using methods and practices that will minimize flood damage.

The certification required by sections 6-307(G)(1) and (2) shall be based on the 100-year-flood level as noted on the floodplain district map.

- (H) No building permit for the substantial improvement of an existing nonresidential building shall be issued unless the building, together with attendant utility and sanitary facilities, has the lowest floor (including the basement) elevated to or above the 100-year-flood level. Should this not be feasible, no such permit shall be issued unless the existing structure is watertight floodproofed in all areas below the 100-year-flood level to the classification designated by the director of transportation and environmental services.
- (I) No building permit for the substantial improvement of an existing residential building shall be issued unless the building has the lowest floor (including the basement) elevated to or above the 100-year-flood level.

6-308 Other conditions.

- (A) No filling of any kind shall be allowed within the boundaries of any AE zone floodplain district except where such filling, when considered in conjunction with all other uses, existing and proposed, will not increase the water surface elevation of the 100 year-flood more than one-half foot. No filling of any kind shall be allowed within the floodway except where such filling will not increase that water surface elevation of the 100-year flood. Persons proposing such filling shall furnish specific engineering data and information as to the effect of their proposed action on future flood heights and shall obtain approval from the director of transportation and environmental services prior to any filling.
- (B) No wall, fence or other outdoor obstruction shall be constructed in any floodplain district unless such structure is approved by the director of transportation and environmental services; provided that open mesh wire fences of not less than No. 9 wire, with mesh openings of not less than six inches times six inches, whose supports shall be securely anchored in concrete and whose wire shall be securely fastened to the supports, may be erected without any review by or approval of the director of transportation and environmental services under this section 6-300.

- (C) The provisions of this section 6-300 shall not be construed to prevent the remodeling (not amounting to substantial improvement), maintenance or floodproofing of buildings and structures now existing, or prevent the surfacing or resurfacing of existing streets or parking lots within two inches of the existing grade.
- 6-309 Flood prevention projects; conditions. Nothing in section 6-304 through section 6-308 inclusive shall be construed to prohibit the city or any person from undertaking lawful filling, draining, construction, realignment or relocation of stream channels or any other improvement that is intended to eliminate or reduce the danger of flooding, provided:
- (A) The improvement is in accord with the city flood improvement plan for the district involved, and the director of transportation and environmental services of the city has issued a certificate to that effect.
- (B) The improvement is under the general supervision of the director of transportation and environmental services.
- (C) The realignment or relocation of any stream channel is designed and constructed so that there will be no reduction in the natural valley storage capacity of the area with respect to the 100 year-flood, unless such relocation or realignment is designed to contain the 100 year-flood within the banks of the channel.
- (D) *The requirements of Section 6-307(E) and (F) and Section 308(A) must be met.*
- 6-310 Same; notification of other jurisdictions. The director of transportation and environmental services shall for any flood prevention project undertaken or approved after June 1, 1977, involving the alteration or relocation of a watercourse, notify the Federal Insurance Administrator of FEMA and the counties of Arlington and Fairfax of such project at least 15 days prior to commencing work. A copy of such notification shall be provided to the Division of *Dam Safety and Floodplain Management, Department of Conservation & Recreation* ~~Soil and Water Conservation in the Virginia Department of Conservation and Historic Resources.~~ Prior to any such alteration or relocation, any required approval shall be obtained from the Virginia Department of *Conservation & Recreation* ~~and Historic Resources~~, the U.S. Corps of Engineers, the Marine Resources Commission and the Virginia State Water Control Board. The director of transportation and environmental services shall assure that the flood-carrying capacity within any such altered or relocated watercourse is maintained.

6-311 Variance or waiver.

- (A) The city council may, for good and sufficient cause shown, permit less than full compliance with or waive the provisions of section 6-304 through section 6-308, provided:
  - (1) Written application is made stating the hardship which will occur if the variance or waiver is not granted;
  - (2) A public hearing is held;
  - (3) The decision is made by a majority vote of the entire membership of city council upon a finding that the variance or waiver is the minimum necessary, considering the flood hazard, to afford relief;
  - (4) The director of transportation and environmental services states in writing that the variance or waiver will not result in increased danger to life, limb or property, will not violate the general principles of good floodplain management and control, and will not increase the water surface elevation of the 100-year flood more than one-half foot; and
  - (5) The director of transportation and environmental services notifies the applicant in writing that the issuance of a variance to construct a structure below the base flood level will result in increased insurance premium rates for flood insurance and that such construction will increase the risks to life and property;
- (B) Notwithstanding the provisions of section 6-311(A), no variance or waiver shall be granted for any construction, development, use or activity within any floodway that will cause any increase in the 100-year-flood level.
- (C) The director of transportation and environmental services shall maintain a record of all variance or waiver actions taken by city council, including their justifications. Such information shall be reported to the Federal Insurance Administration of FEMA, the clearing house established by the United States Office of Management and Budget Circular No. A-95, and the Virginia State Water Control Board.

6-312 Annual report. It shall be the city manager's duty to submit any reports that may be required regarding the city's compliance with flood management regulations.



6-313 Applicability As to transition period construction, etc., generally. Notwithstanding the provisions of section 6-304 through section 6-308 inclusive:

- (A) All buildings for which a building permit shall have been duly and regularly issued by the director of building and mechanical inspections on or before May 24, 1977, which permit has not expired, may be completed without the necessity of complying with section 6-304 through section 6-308 inclusive, but after completion, any such building or structure and the land on which it is situated shall be subject to all the provisions of said sections.
- (B) All preliminary site plans which have been duly and regularly approved on or before May 24, 1977, and which have not expired, may be completed without the necessity of complying with section 6-304 through 6-308 inclusive, but after completion, any building or structure on said site plan together with the land included in said site plan shall be subject to all the provisions of said sections.
- (C) All final site plans which have been duly and regularly approved and released on or before May 24, 1977, and which have not expired may be completed without the necessity of complying with section 6-304 through section 6-308 inclusive, but after completion, any building or structure on said site plan together with the land included in said site plan shall be subject to all the provisions of said sections.
- (D) Any building or structure which is in existence on May 28, 1991, or for which a preliminary or combination site plan, building permit or subdivision approved on or before May 28, 1991, continues in force and effect shall not be deemed a nonconforming use by virtue of any amendment to article D, chapter 6, title 7 of the city code enacted on May 28, 1991, and may be completed in accordance with the provisions of sections 7-6-54 through 7-6-58 in effect prior to May 28, 1991; provided, that any such building or structure which, following May 28, 1991, is the subject of substantial improvement shall comply with the floodplain regulations in effect at the time of such improvement.

6-314 Appeals. Any person aggrieved by a decision of the director of transportation and environmental services under this section 6-300 may appeal that decision to city council; provided, that the appeal shall be filed in writing with the city clerk within 15 days of the decision being appealed and shall describe the decision being appealed and the reasons why the person believes the decision to be invalid.

## Ordinance Evaluation: 44 Code of Federal Regulations

**Community:** Alexandria  
**Ordinance Number:** Sec. 6-300  
**Ordinance Date:** Proposed

**Reviewer:** Mills  
**Date of Review:** 12-03-03  
**Ordinance Level:** C

CRITERIA AS STATED IN 44 CODE OF FEDERAL REGULATIONS (OCTOBER, 2002)		a	b	c	d	e	Compliance with 44 CFR
1	<p><b>BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD (SFHA)</b></p> <ul style="list-style-type: none"> <li>The Administrator (FIA) will provide the data upon which floodplain management regulations shall be based. If sufficient information has not been provided, the community shall obtain, review and reasonably utilize data from other federal, state or other sources pending receipt of data from the Administrator (FIA).</li> <li>However, when SFHA designations and water surface elevations have been furnished by the Administrator [e.g., Flood Insurance Studies, Flood Insurance Rate Maps] they shall apply. <b>The symbols defining the SFHAs are set forth in 44 CFR 64.3. [60.3]</b></li> </ul>			Y			<ul style="list-style-type: none"> <li>6-302 [C] (1)</li> <li>2000 IBC: G103.3</li> </ul>
2	<p><b>DEVELOPMENT PERMIT REQUIRED</b></p> <ul style="list-style-type: none"> <li>A development permit shall be obtained before construction or development begins within any area of special flood hazard (i.e., SFHA).</li> <li>The permit shall be for all structures including manufactured homes. [60.3(a)(1)]; 60.3(b)(1)]</li> </ul>			Y			<ul style="list-style-type: none"> <li>6-305 (A)</li> <li>6-306</li> </ul>
3	<p><b>PERMIT REVIEW</b></p> <ul style="list-style-type: none"> <li>Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required. [60.3(a)(2)]</li> </ul>			Y			<ul style="list-style-type: none"> <li>6-305 (B)</li> </ul>
4	<p><b>INFORMATION TO BE OBTAINED AND MAINTAINED</b></p> <ul style="list-style-type: none"> <li>Where base flood elevation data is provided through the Flood Insurance Study, FIRM, obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement <b>60.3(b)(5)(i)]</b></li> </ul>			Y			<ul style="list-style-type: none"> <li>6-307</li> <li>USBC 3107.12.1</li> <li>2000 IBC: G103.8</li> <li>No mention of basement</li> <li>Codes do not address elevation certificates for <u>flood-proofed</u> structures</li> </ul>

a = Flood Hazard Boundary Map  
 b = Flood Insurance Rate Map without elevation  
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Yes...(Y) No...(N) Other...(X) and explain

18

	<ul style="list-style-type: none"> <li>Obtain and record the actual elevation (in relation to mean sea level) to which the structure was flood-proofed <b>[60.3(b)(5)(ii)]</b></li> <li>Maintain for public inspection all records pertaining to the provision of this ordinance <b>[60.3(b)(5)(iii)]</b></li> </ul>			Y		<ul style="list-style-type: none"> <li>6-304</li> <li>2000 IBC: G103.8</li> <li>USBC 109.4</li> </ul>
5	<b>ALTERATION OF WATERCOURSES</b> <ul style="list-style-type: none"> <li>Notify adjacent communities and pertinent state and federal agencies /offices prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration <b>[60.3(b)(6)]</b></li> <li>Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished <b>[60.3(b)(7)]</b></li> </ul>			Y		<ul style="list-style-type: none"> <li>6-310 Change to Division of Dam Safety and Floodplain Management, Department of Conservation &amp; Recreation</li> <li>6-309 [C]</li> <li>2000 IBC: G103.6</li> <li>2000 IBC: G103.6.1</li> </ul>
6	<b>ANCHORING</b> <ul style="list-style-type: none"> <li>All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure <b>[60.3(a)(3)(i)]</b></li> <li>Manufactured homes to be placed within the SFHA shall be installed using methods and practices which minimize flood damage. They must be elevated and anchored to resist flotation, collapse, or lateral movement.</li> </ul>			Y		<ul style="list-style-type: none"> <li>6-307 (G) 2</li> <li>USBC 3107.4.2</li> <li>2000 IBC: 1612.1</li> </ul>
				Y		<ul style="list-style-type: none"> <li>6-306 (A) prohibits mfhs</li> <li>USBC 3107.4.2</li> </ul>
7	<b>AH AND AO ZONE DRAINAGE</b> <ul style="list-style-type: none"> <li>Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures <b>[60.3(c) 11]</b></li> </ul>			N/A		<ul style="list-style-type: none"> <li>USBC 302.2</li> </ul>
8	<b>CONSTRUCTION MATERIALS AND METHODS</b> <ul style="list-style-type: none"> <li>All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage <b>[60.3(a)(3)(ii)]</b></li> <li>All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage <b>[60.3(a)(3)(iii)]</b></li> </ul>			Y		<ul style="list-style-type: none"> <li>6-307</li> <li>USBC 3107.6</li> <li>USBC 3107.7</li> <li>2000 IBC: 1403.6</li> </ul>
				Y		<ul style="list-style-type: none"> <li>6-307 (E)</li> <li>USBC 302.2</li> <li>USBC 3107.7</li> <li>2000 IBC: 1612.1</li> </ul>
	<ul style="list-style-type: none"> <li>Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities</li> </ul>			Y		<ul style="list-style-type: none"> <li>6-307 (D)</li> <li>USBC 3107.6</li> </ul>

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Yes...(Y)

No...(N)

Other...(X) and explain

	shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding [ 60.3(a)(3)(iv)]					
9	<b>UTILITIES</b> <ul style="list-style-type: none"> <li>All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems [60.3(a)(5)]</li> <li>New and replacement sanitary sewerage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters [60.3(a)(6)(i)]</li> <li>Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding [60.3(a)(6)(ii)]</li> </ul>			Y		<ul style="list-style-type: none"> <li>6-307 [C]</li> <li>USBC 3107.9</li> <li>2000 IBC: G401.4</li> </ul>
10	<b>SUBDIVISION PROPOSALS</b> <ul style="list-style-type: none"> <li>All subdivision proposals shall be consistent with the need to minimize flood damage [60.3(a)(4)(i)]</li> <li>All subdivision proposals shall have public utilities and facilities, such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage [60.3(a)(4)(ii)]</li> <li>All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage [60.3(a)(4)(iii)]</li> <li>Where base flood elevation data has not been provided or is not available from another authorized source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less) [60.3(b)(3)]</li> </ul>			Y		<ul style="list-style-type: none"> <li>6-307 [E]</li> <li>2000 IBC, G301.1(1)</li> </ul>
				Y		<ul style="list-style-type: none"> <li>6-307</li> <li>2000 IBC, G301.1(2)</li> </ul>
				Y		<ul style="list-style-type: none"> <li>6-309 [C]</li> <li>2000 IBC: G301.1(3)</li> </ul>
				N		Add to 6-302 [C] 1: Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data.
12	<b>REVIEW OF BUILDING PERMITS</b> <ul style="list-style-type: none"> <li>Where elevation data are not available either through the Flood Insurance Study, FIRM, or from another authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding; [60.3(a)(3)]</li> </ul>			Y		<ul style="list-style-type: none"> <li>6-302 [C] (2)</li> </ul>

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20

Yes...(Y) No...(N) Other...(X) and explain

13	<p><b>RESIDENTIAL CONSTRUCTION</b> [A, A 1-30, AE, and AH Zones]</p> <ul style="list-style-type: none"> <li>• New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at or above the base flood elevation <b>[60.3(c)(2)]</b></li> <li>• Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or 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 must meet or exceed the following minimum criteria: <ul style="list-style-type: none"> <li>(i) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.</li> <li>(ii) The bottom of all openings shall be no higher than one foot above grade.</li> <li>(iii) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters <b>[60.3(c)(5)]</b></li> </ul> </li> </ul>			Y		<ul style="list-style-type: none"> <li>• 6-307 (A)</li> <li>• USBC: 3107.4.1]</li> <li>• 6-307 (B)</li> <li>• USBC: 3107.4.3</li> <li>• 2000 IBC: 1612.5(1.2)</li> </ul>
14	<p><b>NONRESIDENTIAL CONSTRUCTION</b> [A, A1-30, AE, and AH Zones]</p> <ul style="list-style-type: none"> <li>• New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to or above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall: <ul style="list-style-type: none"> <li>(i) be flood-proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water; <b>[60.3(c)(3)]</b></li> <li>(ii) have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy <b>[60.3(c)(3)]</b></li> <li>(iii) be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans.</li> <li>(iv) Nonresidential structures that are elevated, not flood-proofed, must meet the same standards for space below</li> </ul> </li> </ul>			Y	Y	<ul style="list-style-type: none"> <li>• 6-307 (H)</li> <li>• 6-207 (H)</li> <li>• USBC: 3107.4.4</li> <li>• 6-307 (B)</li> <li>• USBC: 3107.4.4(2)</li> <li>• USBC: 3107.4.3 &amp; 4.4</li> <li>• 2000 IBC: 1612.5</li> <li>• USBC: 3107.4.4</li> </ul>

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Yes...(Y) No...(N) Other...(X) and explain

	the lowest floor as described in 44 CFR 60.3(c)(5)					<ul style="list-style-type: none"> <li>• 2000 IBC: 1612.5 (1.3)</li> </ul>
15	<p><b>MANUFACTURED HOMES</b></p> <p>(1) All manufactured homes to be placed or substantially improved on sites:</p> <p>(i) Outside of a manufactured home park or subdivision,</p> <p>(ii) In a new manufactured home park or subdivision,</p> <p>(iii) In an expansion to an existing manufactured home park or subdivision, or</p> <p>(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;</p> <ul style="list-style-type: none"> <li>• shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. <b>[60.3(c)(6)]</b></li> </ul> <p>(2) Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the provisions of (1) above, be elevated so that either:</p> <ul style="list-style-type: none"> <li>• The lowest floor of the manufactured home is at or above the base flood elevation, or</li> <li>• The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement <b>[60.3(c)12(ii)]</b></li> </ul>			Y		<p>Section 6-306 (A) prevents placement of manufactured homes within the SFHA</p> <ul style="list-style-type: none"> <li>• USBC: 3107.8</li> <li>• 2000 IBC: G501</li> </ul>
17	<p><b>RECREATIONAL VEHICLES</b></p> <p>Recreational vehicles placed on sites within a Special Flood Hazard Area (SFHA) are required to either:</p> <ul style="list-style-type: none"> <li>• Be on the site for fewer than 180 consecutive days <b>[60.3(c)(14)(i)]</b></li> <li>• Be fully licensed and ready for highway use, 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 <b>[60.3(c)(14)(ii)]</b> or</li> <li>• Meet the requirements of 5.2-3 above and the</li> </ul>					<p>Section 6-306 (A) prevents placement of manufactured homes within the SFHA</p> <ul style="list-style-type: none"> <li>• 2000 IBC: G601.2</li> </ul>

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Yes...(Y)

No...(N)

Other...(X) and explain

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	elevation and anchoring requirements for manufactured homes <b>[60.3(c)(14)(iii)]</b>					<ul style="list-style-type: none"> <li>• 2000 IBC: G601.3</li> </ul>
18	<p><b>BEFORE REGULATORY FLOODWAY</b></p> <p>In areas where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that</p> <ul style="list-style-type: none"> <li>• 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 <b>[60.3(c)(10)]</b></li> </ul>			Y		<ul style="list-style-type: none"> <li>• 6-307 (E)</li> <li>• 2000 IBC: G103.4</li> </ul>
19	<p><b>FLOODWAYS</b></p> <ul style="list-style-type: none"> <li>• Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating 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 during the occurrence of the base flood discharge <b>[60.3(d)(3)]</b></li> </ul>					<ul style="list-style-type: none"> <li>• 2000 IBC: G103.5</li> <li>• 2000 IBC: G401.1</li> </ul>
20	<p><b>STANDARDS FOR SHALLOW FLOODING AREAS: AO ZONES</b></p> <ul style="list-style-type: none"> <li>• New construction and substantial improvements of residential structures within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the structure at least one (1) foot above the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified); <b>[60.3(c)(7)]</b></li> <li>• New construction and substantial improvements of nonresidential structures within AO zones shall either: <ul style="list-style-type: none"> <li>(i) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified) <b>[60.3(c)(i)]</b> or</li> <li>(ii) Together with attendant utility and sanitary facilities, be completely flood proofed 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 <b>[60.3(c)(8)(ii)]</b></li> </ul> </li> </ul>			Y		<ul style="list-style-type: none"> <li>• 6-307 (F)</li> <li>• USBC 3107.4.3 &amp; 4.4</li> <li>• USBC 302.2</li> </ul>
				N/A		

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23

Yes...(Y) No...(N) Other...(X) and explain

	<ul style="list-style-type: none"> <li>Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures [60.3(c)(11)]</li> <li>Recreational vehicles placed on sites within A1-30, AH, and AE Zones on the community's FIRM either: <ul style="list-style-type: none"> <li>(i) Be on the site for fewer than 180 consecutive days [60.3(c)(14)(i)] or</li> <li>(ii) Be fully licensed and ready for highway use, or</li> <li>(iii) Meet the permit requirements of 60.3(b)(1) and the elevation and anchoring requirements of 60.3(c)(6)</li> </ul> </li> </ul>					
21	<p><b>COASTAL HIGH HAZARD AREAS</b></p> <p>Located within areas of special flood hazard are Coastal high Hazard Areas, designated as Zones V1-V30, VE and/or V. These areas have special flood hazards associated with high velocity wave action and / or surges. The following provisions apply to these zones:</p> <p>(1) All new construction and substantial improvements in Zones V1-V30 and VE (V if base flood elevation data are available) shall be elevated on pilings and columns so that:</p> <ul style="list-style-type: none"> <li>The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to one (1) foot above the base flood level [60.3(e)(4)(i)], and</li> <li>The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components [60.3(e)(4)(ii)]</li> <li>Water loading values shall have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval) [60.3(e)(4)(ii)];</li> <li>Wind loading values used shall be those required by applicable State or local building standards [60.3(e)(4)(ii)].</li> <li>A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of (i) and (ii) above [60.3(e)(2)(i) &amp; (ii)]</li> <li>Obtain the elevation (in relation to mean sea level) of</li> </ul>			N/A		<ul style="list-style-type: none"> <li>USBC: 3107.5.3</li> <li>USBC 3107.5.1</li> <li>2000 IBC: 1612.4</li> <li>2000 IBC: 1612.4</li> <li>USBC: 3107.5.3</li> <li>USBC: 3107.5.2(4)</li> <li>USBC: 3107.12.3</li> <li>2000 IBC: 1625.5 (2 -2.3)</li> <li>USBC: 3107.12</li> <li>USBC: 3107.12.1</li> </ul>

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Yes...(Y)

No...(N)

Other...(X) and explain

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<p>the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1-30, VE, and V on the community's FIRM, and whether or not such structures contain a basement. The <u>(local administrator)</u> shall maintain a record of all such information.</p> <ul style="list-style-type: none"> <li>• All new construction shall be located landward of the reach of mean high tide <b>[60.3(e)(3)]</b></li> <li>• Provide that all new construction and substantial improvements within Zones V1-30, VE, and V on the community's FIRM, have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system <b>[60.3(e)(5)]</b></li> <li>• For the purposes of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or State codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions: <ul style="list-style-type: none"> <li>• Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and</li> <li>• The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Maximum water loading values to be used in this determination shall have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval). <b>[60.3(e)(5)]</b></li> </ul> </li> <li>• If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation. <b>[60.3(e)(5)(ii)]</b></li> <li>• Prohibit the use of fill for structural support of buildings <b>[60.3(e)(6)]</b></li> <li>• Prohibit man-made alteration of sand dunes which would increase potential flood damage <b>[60.3(e)(7)]</b></li> </ul> <p>(7) All manufactured homes to be place or substantially improved within Zones V1-V30, V, and VE on the</p>					<ul style="list-style-type: none"> <li>• 2000 IBC: 1625.5 (2.1)</li> <li>•</li> <li>• 2000 IBC: G401.2(1)</li> <li>•</li> <li>• USBC: 3107.5.2(4)</li> <li>•</li> <li>• 2000 IBC 1612.5(2.3)</li> <li>• USBC 3107.5.2(4)</li> <li>•</li> <li>•</li> <li>• USBC: 3107.5.3</li> <li>• 2000 IBC: 1612.5(2.2)</li> <li>•</li> <li>• USBC: 3107.5.2</li> <li>•</li> <li>• 2000 IBC: G401.2(2)</li> <li>•</li> <li>• 2000 IBC: G103.7</li> </ul>
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Yes...(Y) No...(N) Other...(X) and explain

	<p>communities FIRM on sites:</p> <p>(i) Outside of a manufactured home park or subdivision,</p> <p>(ii) In a new manufactured home park or subdivision,</p> <p>(iii) In an expansion to an existing manufactured home park or subdivision, or</p> <p>(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;</p> <ul style="list-style-type: none"> <li>• Meet the standards of <b>60.3(e)(2) through(7)</b> and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the FIRM meet the requirements of <b>60.3(c)(12)</b></li> <li>• Recreational vehicles placed on sites within Zones V1-30, V and VE on the communities FIRM either: <ul style="list-style-type: none"> <li>(i) Be on the site for fewer that 180 days,</li> <li>(ii) Be fully licensed and ready for highway use 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; or</li> <li>(iii) Meet the requirements of <b>60.3(b)(1) &amp; (e) (2) through (7).</b> [60.3(e)(9)]</li> </ul> </li> </ul>					
22	<p><b>VARIANCES</b></p> <p>There are no absolute criteria for granting a variance to regulations set forth in 44CFR 60.3, 60.4, and 60.5. Flood insurance rates are not affected; However, 44CFR 60.6(a)1 through 7, contains necessarily stringent <u>procedures</u> for granting variances. <b>60.6</b></p>			Y		<ul style="list-style-type: none"> <li>• 6-311</li> <li>• 2000 IBC: Sec. G105</li> </ul>

Note: Prohibitions on manufactured housing in the Special Flood Hazard Area may not be allowed. Rockingham County tried to put this in their ordinance in 1997 and found that the manufactured home industry had insured that manufactured homes could not be prohibited in any area where a traditionally built residential structure is allowed. It is recommended that the city attorney check on the restriction listed in 6-306 (A).

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Yes...(Y) No...(N) Other...(X) and explain



TRANSPORTATION & ENVIRONMENTAL SERVICES

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November 7, 2003

Mr. Robert E. Linck  
FEMA Region 111  
One Independence Mall, 6<sup>th</sup> Floor  
615 Chestnut Street  
Philadelphia, PA 19106-4404

RE: Revision of Ordinance 6-300 Floodplain District  
City of Alexandria, Virginia

Dear Mr. Linck:

Enclosed please find our most recent Floodplain Ordinance Draft Amendment with the previous changes you recommended highlighted lightly and your most recent changes highlighted darker. As before, we are interested in hearing from you as soon as time allows so we can go to Council for adoption.

We also would like to thank you for your immediate attention to our draft amendment before knowing how busy you must have been after Isabel.

If you have any questions, please call me at (703) 836-4327 or e-mail me at [emily.baker@ci.alexandria.va.us](mailto:emily.baker@ci.alexandria.va.us).

Sincerely,

Emily A. Baker, P.E.  
City Engineer  
Alexandria, Virginia

attachment: Ltr. from Robert E. Linck to Emily A. Baker dtd. Oct. 2, 2003.



"Linck, Robert"  
<Robert.Linck@dhs.gov

>  
11/19/2003 09:56 AM

To: "emily.baker@ci.alexandria.va.us"  
<emily.baker@ci.alexandria.va.us>,  
"richard.schick@ci.alexandria.va.us"  
<richard.schick@ci.alexandria.va.us>  
cc: "Garyotis, Corey" <Corey.Garyotis@associates.dhs.gov>, "Mills,  
Deborah" <Deborah.Mills@associates.dhs.gov>  
Subject: RE: Alexandria -- proposed floodplain regulations as revised

Good Morning,

The draft revision of Ordinance 6-300 that you sent November 7 addresses the requirements of the National Flood Insurance Program. I am looking forward to our meeting on December 4 in room 3500 of City Hall.

It is my understanding that Ms. Deborah Gordon Mills, the floodplain program planner with the VA Dept of Conservation and Recreation, will also be reviewing the draft revision since I sent her a copy on November 12. If you wish to discuss the proposal with her, she may be reached on 804/217-5641 or on 804/371-6135.

THANX!

R. E. Linck  
215/931-5514 (Voice)  
-5501 (FAX)

Docket Item #3  
INITIATION OF TEXT AMENDMENT  
#2004-0004-I

Planning Commission Meeting  
April 6, 2004

**CASE:** INITIATION OF TEXT AMENDMENT  
FLOODPLAIN REGULATIONS

**ISSUE:** Consideration of initiation of a text amendment to the Zoning Ordinance to update the City's floodplain regulations.

**STAFF:** Department of Planning and Zoning  
Department of Transportation and Environmental Services

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**PLANNING COMMISSION ACTION, APRIL 6, 2004:** By unanimous consent, the Planning Commission approved the request to initiate the text amendment.

**Reason:** The Planning Commission agreed with the staff analysis.

INITIATION OF TEXT AMENDMENT #2004-0004-I  
FLOODPLAIN REGULATIONS

STAFF RECOMMENDATION:

Staff recommends that the Planning Commission, pursuant to the attached motion, initiate a text amendment to the Zoning Ordinance, in order to update the floodplain regulations, finding that the consideration of such a text amendment is consistent with the public necessity, convenience, general welfare and good zoning practice.

INITIATION OF TEXT AMENDMENT #2004-0004-I  
FLOODPLAIN REGULATIONS

DISCUSSION

Background

The City's floodplain regulations are included in the Zoning Ordinance, at Section 6-300. Providing information about floodplain zones within the City and the requirements for building and other activities in floodplain areas, the regulations create added protection for persons and property within areas of the City prone to flooding.

The City participates in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP) which allows the residents of Alexandria to purchase flood insurance. As a part of its regular review of municipal ordinances for municipalities who participate in the NFIP, FEMA as well as relevant state agencies have required changes to the City's regulations to bring it up to date. The amendments provide clarity but not substantive change to the regulations. Staff intends to bring those changes forward for adoption as a text amendment.

Recommendation

Staff recommends that the Commission initiate a text amendment on its own motion to update the City's floodplain regulations, because consideration of changes is consistent with the public necessity, convenience, general welfare and good zoning practice.

Staff: Eileen Fogarty, Director, Planning and Zoning;  
Barbara Ross, Deputy Director, Planning and Zoning;  
Emily Baker, Deputy Director, Transportation and Environmental Services;  
Allen Martin, Chief, Surveys, Transportation and Environmental Services.

INITIATION OF TEXT AMENDMENT #2004-0004-I  
FLOODPLAIN REGULATIONS

INITIATION MOTION

*Whereas the Alexandria Planning Commission may initiate the amendment of the Alexandria Zoning Ordinance whenever it determines that the public necessity, convenience, general welfare or good zoning practice requires an amendment; and*

*Whereas the current provisions of the Alexandria Zoning Ordinance regarding floodplain regulations have not been updated since 1992; and*

*Whereas, consistent with requirements and review by the Federal Emergency Management Agent, as well as State agencies, the City has been directed to update its regulations as part of the City's participation in the National Flood Insurance Program.*

*Now, therefore, I move that the Alexandria Planning Commission find that the public necessity, convenience, general welfare or good zoning practice requires consideration of Text Amendment No.2004-02, Floodplain Regulations, to update the regulations consistent with FEMA and state regulations.*

*I further move that the Alexandria Planning Commission initiate such text amendment.*