

ORDINANCE NO. 7597**AN ORDINANCE OF THE CITY OF LAWRENCE, KANSAS, ENACTING ZONING TEXT AMENDMENTS CONCERNING FLOODPLAIN MANAGEMENT REGULATIONS, AMENDING CHAPTER 20, ARTICLE 9A OF THE CODE OF THE CITY OF LAWRENCE, KANSAS, SEPTEMBER 1, 2001 EDITION AND AMENDMENTS THERETO.**

WHEREAS, the Legislature of the State of Kansas has in K.S.A. 12-741 *et seq*, and specifically in K.S.A. 12-766, delegated the responsibility to local governmental units to adopt floodplain management regulations designed to protect the health, safety, and general welfare.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF LAWRENCE, KANSAS:

SECTION I. This ordinance hereby repeals Chapter 20, Article 9A of the "Code of the City of Lawrence, Kansas, September 1, 2001 edition" and replaces it with the following:

Article 20-9A Flood Protection Standards

20-9A01	General
20-9A02	Application
20-9A03	Administration
20-9A04	Provisions for FLOOD Hazard Reduction
20-9A05	Definitions

20-9A01 General**(a) Findings of Fact**

- (1) The AREAS OF SPECIAL FLOOD HAZARD of Lawrence, Kansas, are subject to inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for FLOOD protection and relief, and impairment of the tax base; all of which adversely affect the public health, safety, and general welfare.
- (2) These FLOOD losses are caused by:
 - (i) the cumulative effect of DEVELOPMENT in any delineated FLOODPLAIN causing increases in FLOOD heights and velocities;
 - (ii) urbanization of upstream areas, resulting in increased impervious surface and increased stormwater runoff;
 - (iii) the occupancy of FLOOD hazard areas by uses vulnerable to FLOODS, hazardous to others, inadequately elevated, or otherwise unprotected from FLOOD damages; and,
 - (iv) the modification of the FLOODPLAIN by earth moving.

- (3)** The FLOOD INSURANCE STUDY (FIS) that is the basis of the National Flood Insurance Program (NFIP) uses a standard engineering method of analyzing FLOOD hazards, which consists of a series of interrelated steps:
- (i)** Selection of a BASE FLOOD that is based upon engineering calculations, which permit a consideration of such FLOOD factors at its expected frequency of occurrence, the area inundated, and the depth of inundation. The BASE FLOOD selected for this ordinance is representative of large FLOODS, which are characteristic of what can be expected to occur on the particular streams subject to this ordinance. It is in the general order of a FLOOD which could be expected to have a one percent chance of occurrence in any one year as delineated in the Federal Insurance Administrator's FIS, and illustrative materials dated November 7, 2001, as amended, and any future revisions thereto;
 - (ii)** Calculation of water surface profiles are based on a standard hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood;
 - (iii)** Computation of a FLOODWAY required to convey this FLOOD without increasing FLOOD heights more than one (1) foot at any point;
 - (iv)** Delineation of FLOODWAY ENCROACHMENT LINES within which no DEVELOPMENT is permitted that would cause any increase in FLOOD height; and,
 - (v)** Delineation of FLOODWAY FRINGE, i.e., that area outside the FLOODWAY ENCROACHMENT LINES, but still subject to inundation by the BASE FLOOD.

(b) Floodplain Overlay District - Property within the City of Lawrence Corporate Limits as of 03/01/03

The Floodplain Overlay District boundaries for properties within the City of Lawrence Corporate Limits as of **March 1, 2003** shall be consistent with the BASE FLOOD ELEVATIONS and FLOODPLAIN widths identified by the by the FIS and FLOOD INSURANCE RATE MAP (FIRM) for "Douglas County Kansas and Incorporated Areas dated November 7, 2001".

(c) Floodplain Overlay District - Property Annexed into the City of Lawrence Corporate Limits after 03/01/03

- (1)** The BASE FLOOD ELEVATIONS and FLOODPLAIN widths identified by the FIS and FLOOD INSURANCE RATE MAP (FIRM) for "Douglas County Kansas and Incorporated Areas dated November 7, 2001", may increase over time as a result of additional watershed DEVELOPMENT; therefore the City has identified the Floodplain (FP) OVERLAY DISTRICT for property annexed into the City of Lawrence corporate limits after March 01, 2003, as the area that includes:
- (i)** All ZONES A on the current FIRM;

- (ii) All ZONES AE and AH on the current FIRM and all adjacent areas inundated by a FLOOD having an elevation of the FIS BASE FLOOD ELEVATION plus an additional two feet of FREEBOARD. If an approved HYDROLOGIC AND HYDRAULIC STUDY has been completed, the boundary information provided in that study will be utilized to amend the Floodplain OVERLAY DISTRICT boundaries;
- (iii) All ZONES AO on the current FIRM and all adjacent areas inundated by a FLOOD having an elevation of the FIS average depth of FLOODING plus an additional two feet of FREEBOARD. If an approved HYDROLOGIC AND HYDRAULIC STUDY has been completed, the boundary information provided in that study will be utilized to amend the Floodplain OVERLAY DISTRICT boundaries; and,
- (iv) All stream tributaries having a drainage area of 240 acres or more regardless of the limits of the FIS. Upstream of the limits of the FIS, the width of the Floodplain OVERLAY DISTRICT shall be determined by the City using recognized engineering practices.

(d) Zoning Map

The Floodplain OVERLAY DISTRICT will be shown and identified on the Official Zoning Map of the City of Lawrence.

(e) Floodway

- (1) FLOODWAYS are located within the Floodplain OVERLAY DISTRICT established in 20-9A01(b) and 20-9A01(c). as designated on the FIRM. Since the FLOODWAY is an extremely hazardous area due to the velocity of floodwaters that carry debris and potential projectiles, the City hereby adopts a REGULATORY FLOODWAY based on the principle that the area identified for the REGULATORY FLOODWAY must be designed to carry the waters of the BASE FLOOD without increasing the WATER SURFACE ELEVATION of that FLOOD more than one (1) foot at any point.
- (2) The REGULATORY FLOODWAY includes:
 - (i) FLOODWAY areas shown within Zone AE on the current FIRM or as modified by a Letter of Map Revision (LOMR); and,
 - (ii) FLOODWAY areas outside Zone AE as defined by an approved HYDROLOGIC AND HYDRAULIC STUDY.

(f) Statement of Purpose

It is the purpose of this ordinance to promote the public health, safety, and general welfare; to minimize those losses described in 20-9A01(a)(2); to establish or maintain the community's eligibility for participation in the National Flood Insurance Program (NFIP) as defined in 44 Code of Federal Regulations (CFR) 59.22(a)(3); and to meet the requirements of 44 CFR 60.3(d) and K.A.R. 5-44-4 by applying the provisions of this ordinance to:

- (1) Restrict or prohibit uses that are dangerous to health, safety, or property in times of FLOODING or cause undue increases in FLOOD heights or velocities;

- (2) Require uses vulnerable to FLOODS, including public facilities that serve such uses, be provided with FLOOD protection at the time of initial construction;
- (3) Protect individuals from unknowingly buying land that is unsuited for the intended DEVELOPMENT purposes due to the potential FLOOD hazard;
- (4) Protect individuals from unknowingly buying or leasing property that is prone to FLOODING;
- (5) With the exception of certain previously platted properties, allow DEVELOPMENT in the FLOODPLAIN only when the DEVELOPMENT will not increase the BASE FLOOD ELEVATION or FLOOD velocities; and,
- (6) Promote conservation and restoration of natural vegetation in riparian areas.

20-9A02 Application

(a) Lands to Which the Ordinance Applies

This article shall apply to all lands within the Floodplain OVERLAY DISTRICT.

(b) Compliance

No DEVELOPMENT shall be located, extended, converted, or structurally altered within the Floodplain OVERLAY DISTRICT without full compliance with the terms of this article and all other applicable regulations.

(c) Abrogation and Greater Restrictions

It is not intended by this article to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article imposes greater restrictions, the provisions of this article shall prevail. All other articles inconsistent with this article are hereby repealed to the extent of the inconsistency only.

(d) Interpretation

In their interpretation and application, the provisions of this article shall be held to be minimum requirements, shall be liberally construed in favor of the City Commission, and shall not be deemed a limitation or repeal of any other powers granted by Kansas statutes.

(e) Warning and Disclaimer of Liability

The degree of FLOOD protection required by this article is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger FLOODS may occur on rare occasions or the FLOOD heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This article does not imply that areas outside the Floodplain OVERLAY DISTRICT, FLOODWAY and FLOODWAY FRINGE or land uses permitted within such areas will be free from FLOODING or FLOOD damage. This ordinance shall not create a liability on the part of the City of Lawrence, Kansas, or any officer or employee thereof, for any FLOOD damages that may result from reliance on this article or any administrative decision lawfully made thereunder.

(f) Severability

If any section, clause, provision, or portion of this article is adjudged unconstitutional or invalid by a court of appropriate jurisdiction, the remainder of this article shall not be affected thereby.

20-9A03 Administration**(a) Floodplain Development Permit**

A floodplain development permit shall be required for all proposed construction or other DEVELOPMENT, including the placement of MOBILE HOMES or MANUFACTURED HOMES, in the Floodplain OVERLAY DISTRICT. No PERSON, firm, corporation, or unit of government shall initiate any DEVELOPMENT or SUBSTANTIAL-IMPROVEMENT or cause the same to be done without first obtaining a separate FLOODPLAIN DEVELOPMENT permit for each STRUCTURE or other DEVELOPMENT.

(b) Designation of Floodplain Administrator

The Director of Planning is hereby appointed as the Floodplain Administrator to administer and implement the provisions of this article.

(c) Duties and Responsibilities of Floodplain Administrator

Duties of the Floodplain Administrator shall include, but not be limited to:

- (1) Review of all applications for floodplain development permits to assure that the requirements of this article have been satisfied;
- (2) When an application for a floodplain development permit requires the submittal of a HYDROLOGIC AND HYDRAULIC STUDY, coordinate the review and approval of the study by the City Stormwater Engineer to assure that the requirements of this ordinance have been satisfied;
- (3) Issue floodplain development permits for all approved applications;
- (4) Notify adjacent communities, impacted Drainage Districts, and the Division of Water Resources, Kansas Department of Agriculture, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA);
- (5) Verify through an "Elevation Certificate" and maintain a record of the actual elevation (in relation to MEAN SEA LEVEL) of the LOWEST FLOOR, of all new or substantially improved residential STRUCTURES;
- (6) Verify through an "Elevation Certificate" the actual elevation (in relation to MEAN SEA LEVEL) that the new or substantially improved non-residential STRUCTURES have been FLOODPROOFED;
- (7) Maintain a record of the actual elevation (in relation to MEAN SEA LEVEL) that the new or substantially improved non-residential STRUCTURES have been FLOODPROOFED; and,
- (8) When FLOODPROOFING techniques are utilized for a particular non-residential STRUCTURE, the Floodplain Administrator shall require certification from a registered professional engineer or architect.

(d) Floodplain Development Permit

- (1)** To obtain a floodplain development permit, the applicant shall first file an application in writing, on a form furnished for that purpose, with the Floodplain Administrator. Every floodplain development permit application shall:
- (i)** When required pursuant to 20-9A04, provide two copies of the HYDROLOGIC AND HYDRAULIC STUDY for the proposed DEVELOPMENT;
 - (ii)** Identify the BASE FLOOD ELEVATION;
 - a** When required pursuant to 20-9A04(a), identify the WATER SURFACE ELEVATION of the BASE FLOOD as determined by both the Flood Insurance Study and the HYDROLOGIC AND HYDRAULIC STUDY. The higher of these elevations shall be the BASE FLOOD ELEVATION for compliance with the provisions of this article; or,
 - b** When a HYDROLOGIC AND HYDRAULIC STUDY is not required, identify the WATER SURFACE ELEVATION of the BASE FLOOD as determined by the Flood Insurance Study; or,
 - c.** When a the WATER SURFACE ELEVATION of the BASE FLOOD is not provided by the Flood Insurance Study or an approved HYDROLOGIC AND HYDRAULIC STUDY, the applicant shall provide a signed study by a licensed engineer that states the WATER SURFACE ELEVATION of the BASE FLOOD for the property.
 - (iii)** Provide a legal description of the land on which the proposed work is to be done by lot, block and tract, street address, and description of STRUCTURES or provide a similar description that will readily identify and specifically locate the proposed STRUCTURE or work;
 - (iv)** Identify and describe the work to be covered by the floodplain development permit;
 - (v)** Provide verification that all necessary permits from federal, state, and local government agencies have been obtained;
 - (vi)** Indicate the use or occupancy for which the proposed work is intended;
 - (vii)** Indicate the assessed value of the existing STRUCTURE(s) and the MARKET VALUE of the improvement;
 - (viii)** Specify whether DEVELOPMENT is located in designated FLOODWAY FRINGE, FLOODWAY, adjacent to the FLOODWAY FRINGE or an UNMAPPED FLOODPLAIN AREA;
 - (ix)** Show existing contours lines and proposed contours;
 - (x)** Give such other information as reasonably may be required by the Floodplain Administrator;

- (xi) Be accompanied by scaled plans and engineering specifications for proposed construction; and,
 - (xii) Be signed by the permittee or his authorized agent who may be required to submit evidence to indicate such authority.
- (2) Before a final inspection; the Floodplain Administrator must be provided with a completed FEMA "Elevation Certificate" certifying the finished construction elevation of the LOWEST FLOOR in relation to MEAN SEA LEVEL sealed by a licensed land surveyor.

(e) Expiration of Floodplain Development Permits

Floodplain development permits expire 18 months from the date of issuance if a certificate of elevation has not been received. If requested, the Floodplain Administrator may grant a 6-month extension.

20-9A04 Provisions for Flood Hazard Reduction

(a) Development of Property in the Floodplain Overlay District

DEVELOPMENT of land or subdivision of property (including lot splits) into a BUILDABLE LOT(S) within the Floodplain OVERLAY DISTRICT shall be permitted only where an approved HYDROLOGIC AND HYDRAULIC STUDY demonstrates that there will be no rise in the BASE FLOOD ELEVATION and no increase in FLOOD velocities at any point resulting from the proposed DEVELOPMENT.

- (1) Property platted prior to December 31, 2003, may DEVELOP and/or re-plat or subdivide (including lot splits) for non-residential uses without conducting a HYDROLOGIC AND HYDRAULIC STUDY. Such DEVELOPMENT is still subject to the remaining sections of this Article.
- (2) DEVELOPMENT of undeveloped-residential property that was platted prior to December 31, 2003, may occur without conducting a HYDROLOGIC AND HYDRAULIC STUDY until December 31, 2003. Such DEVELOPMENT is still subject to the remaining sections of this Article. After December 31, 2005, DEVELOPMENT of the property is subject to all sections contained within this Article.

(b) Floodway Restrictions

Any encroachment, including fill, NEW CONSTRUCTION, substantial improvements, or other DEVELOPMENT is prohibited within the REGULATORY FLOODWAY, except for the following structures:

- (1) Flood control and stormwater management structures;
- (2) Road improvements and repair;
- (3) Utility easements/Rights-of-Way; and,
- (4) Public improvements or public structures for bridging the floodway.

(c) Hydrologic and Hydraulic Study

- (1) Hydrologic and hydraulic studies shall comply with the following standards:

- (i) The study shall be signed and sealed by a professional engineer, licensed in the State of Kansas;
 - (ii) The study shall be submitted for approval by the City Stormwater Engineer concurrent with the initial submittal of a floodplain development permit application, preliminary plat, development plan or site plan;
 - (iii) Hydrologic and hydraulic methods of analysis shall be consistent with those used in the current FLOOD INSURANCE STUDY for Douglas County, and shall comply with the City “Stormwater Management Criteria”;
 - (iv) The study shall extend an adequate distance upstream and downstream of the proposed DEVELOPMENT to encompass the hydraulic effects of the proposed development;
 - (v) The study shall assume full DEVELOPMENT of the watershed based on the current comprehensive land use plan or other reasonable assumptions of impervious cover. Full DEVELOPMENT of the watershed shall be assumed in all calculations, for either existing conditions or proposed modifications;
 - (vi) The study shall determine the WATER SURFACE ELEVATIONS of the BASE FLOOD for the existing stream and for any proposed DEVELOPMENT. Based on the assumption of full watershed development and other factors, the findings of the HYDROLOGIC AND HYDRAULIC STUDY may differ from the Flood Insurance Study. At a given location, the higher WATER SURFACE ELEVATION shall be the BASE FLOOD ELEVATION for compliance with the provisions of this article;
 - (vii) The study shall identify the velocities of the BASE FLOOD for the existing stream and for any proposed DEVELOPMENT;
 - (viii) The study shall determine the areas of inundation of the BASE FLOOD for the existing stream and for any proposed DEVELOPMENT. The area of inundation shall be dimensioned to the property corners for use in revising the Floodplain OVERLAY DISTRICT on all property within the extent of the study; and,
 - (ix) In areas outside ZONE AE, the study shall also identify the FLOODWAY for the proposed DEVELOPMENT.
- (2) Once a study is approved, the City shall initiate the rezoning of any property in and around the Floodplain OVERLAY DISTRICT to reflect the limits of FLOODING determined by the study based on full DEVELOPMENT of the watershed.
 - (3) For a hydrologic and hydraulic study that proposes an alteration of FEMA’s designated FLOODPLAIN or FLOODWAY, a letter of map revision (LOMR) must be obtained before a building permit will be issued for any lot containing a ZONE A, AE, AH or AO of the current FIRM.

(d) Land Disturbance

Land disturbance or removal of vegetation within the Floodplain OVERLAY DISTRICT shall be minimized to the extent possible. When excavation, grading, removal of vegetation or other modifications to the cross-sectional geometry of the floodplain are proposed in order to meet the requirements set forth in 20-9A04(a), those modifications shall comply with the following:

- (1) Construction plans shall be prepared for the proposed modifications and shall be submitted for review and approval by the City Engineer. Design and plan preparation shall comply with the “City of Lawrence Design Guidelines and Standard Specifications” and the City “Stormwater Management Criteria”.
- (2) As approved by the City Engineer, pursuant to the “Stormwater Management Criteria”:
 - (i) Channel lining materials shall be limited to native vegetation, stabilized as necessary to prevent erosion. The use of concrete lining, pipe or other structural materials shall be minimized;
 - (ii) Within the area of inundation, all disturbed areas above the channel lining shall be restored with native vegetation, including trees, to promote wildlife habitat; and,
 - (iii) Channel designs shall preserve existing low-flow channels to the extent possible.

(e) General Development Standards

The following standards apply to any and all DEVELOPMENT that is proposed within the Floodplain OVERLAY DISTRICT.

- (1) All DEVELOPMENT shall comply with the following standards:
 - (i) Fill shall not be placed in the setback areas except at approved access points;
 - (ii) STRUCTURES must be designed and constructed with adequate anchorage to prevent flotation, collapse, or lateral movement of the STRUCTURE resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
 - (iii) STRUCTURES must be designed and constructed with materials resistant to FLOOD damage using methods and practices that minimize FLOOD damages;
 - (iv) All electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities must be designed and/or located to prevent water from entering or accumulating within the mechanical components during conditions of FLOODING;
 - (v) New or replacement water supply systems and/or sanitary sewage systems must be designed to eliminate infiltration of FLOOD waters into the systems and discharges from the systems into FLOOD waters, and on-site waste disposal systems must be located so as to avoid impairment or contamination;
 - (vi) All public utilities and facilities, such as sewer, gas, electrical, and water systems must be located and constructed to eliminate FLOOD damage;
 - (vii) Fully enclosed areas below the LOWEST FLOOR that are used solely for parking of vehicles, building access, or storage in an area other than a BASEMENT and that are subject to FLOODING must be designed to automatically equalize hydrostatic FLOOD forces on exterior walls by allowing for the entry and exit of FLOOD waters. Designs for meeting this requirement must either be certified

by a registered professional engineer or architect or meet or exceed the following minimum criteria; and,

- a** 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; and
- b** The bottom of all opening shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(viii) Storage of Material and Equipment;

- a** The storage or processing of materials within the Floodplain OVERLAY DISTRICT area that are in time of FLOODING buoyant, flammable, explosive, or potentially injurious to human, animal, or plant life is prohibited; and,
- b** Storage of other material or equipment may be allowed if not subject to major damage by FLOODS, if firmly anchored to prevent flotation, or if readily removable from the area within the time available after a FLOOD warning.

(2) Additional Standards for Residential Construction

- (i)** Proposed DEVELOPMENT or SUBSTANTIAL-IMPROVEMENT of any residential STRUCTURES, including MOBILE HOMES or MANUFACTURED HOMES, shall have the LOWEST FLOOR elevated a minimum of two (2) feet above the BASE FLOOD ELEVATION. A licensed land surveyor shall provide written certification of the LOWEST FLOOR elevation to the Floodplain Administrator as set forth in 20-9A03(c)(7).
- (ii)** Impervious surface cover shall be no more than 30 percent of the property within the Floodplain OVERLAY DISTRICT.
- (iii)** Fill on individual lots shall meet the following requirements:
 - a** No fill dirt shall be placed closer than five (5) feet to perimeter lot line(s) of the property;
 - b** No fill dirt shall be placed greater than twenty (20) feet from the STRUCTURE;
 - c** Fill dirt shall be placed on a lot so that it does not exceed a 3:1 slope; and,
 - d** Where additional elevation over the height that can be achieved from a 3:1 slope is needed to meet the requirements of this article, the additional elevation shall be met through the use of vertical walls and the construction of non-residential areas e.g. garages, crawl spaces

with gravel floors, or similar structurally sound designs, as part of the residential STRUCTURE.

(3) Additional Standards for Non-Residential Construction

(i) Any proposed DEVELOPMENT or SUBSTANTIAL-IMPROVEMENT of any non-residential STRUCTURES, shall meet either of the following standards:

- a** The LOWEST FLOOR, including BASEMENT, elevated a minimum of one (1) foot above the BASE FLOOD ELEVATION. A licensed land surveyor shall certify the elevation of the LOWEST FLOOR. Such certifications shall be provided to the Floodplain Administrator as set forth in 20-9A03(c)(7), or;
- b** Together with attendant utility and sanitary facilities, the STRUCTURE must be FLOODPROOFED so that the portion of the STRUCTURE below the BASE FLOOD ELEVATION 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 certify that the standards of this subsection are satisfied.

(ii) Impervious surface cover shall be no more than 60 percent of the property within the Floodplain OVERLAY DISTRICT.

(f) Duties of a Landlord

A landlord, or any person authorized to enter a rental agreement on the landlord's behalf, of rental property that is located within the Floodplain OVERLAY DISTRICT shall, before the signing of a lease agreement, provide the prospective tenant(s) the following information in writing:

- (1)** The property is within City's Floodplain OVERLAY DISTRICT;
- (2)** There is the possibility that STRUCTURES within the Floodplain OVERLAY DISTRICT may be inundated by water during a FLOOD;
- (3)** There is the possibility of the loss of life and/or the loss of personal property as a result of a FLOOD; and;
- (4)** Insurance against the loss of personal property due to a FLOOD may be available and is typically the responsibility of the tenant to obtain, and,
- (5)** Such notice shall be in 12-point bold type, signed by all parties to the rental agreement, and retained by the landlord as long as the rental agreement is in full force and effect.

(g) Duties of a Seller

A seller, or any person authorized to represent the seller in the sales transaction of property that is located within the Floodplain OVERLAY DISTRICT shall, before the sale of the property, provide the prospective buyer(s) the following information in writing:

- (1)** The property is within City's Floodplain OVERLAY DISTRICT;

- (2) There is the possibility that STRUCTURES within the Floodplain OVERLAY DISTRICT may be inundated by water during a FLOOD;
- (3) There is the possibility of the loss of life and/or the loss of personal property as a result of a FLOOD;
- (4) Insurance against the loss of personal property or structural damage due to a FLOOD may be available and is typically the responsibility of the property owner to obtain; and,
- (5) Such notice shall be in 12-point bold type, signed by all buyers, and retained by the seller for five years following the closing of the sale.

(h) Mobile Homes or Manufactured Homes

- (1) All MOBILE HOMES or MANUFACTURED HOMES to be placed within the Floodplain OVERLAY DISTRICT shall be required to be installed using methods and practices that minimize FLOOD damage. For the purposes of this requirement, MOBILE HOMES or 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.
- (2) MOBILE HOMES or MANUFACTURED HOMES to be placed or substantially improved on sites in an EXISTING MOBILE HOME or MANUFACTURED HOME PARK or SUBDIVISION within the Floodplain OVERLAY DISTRICT must be elevated so that either:
 - (i) The LOWEST FLOOR of the MOBILE HOME or MANUFACTURED HOME is a minimum of two (2) feet above the BASE FLOOD ELEVATION and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. A licensed land surveyor shall certify the elevation of the LOWEST FLOOR; or
 - (ii) The MOBILE HOME or MANUFACTURED HOMES chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six (36) inches in height above grade and be securely attached to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. A licensed land surveyor shall certify the elevation of the LOWEST FLOOR.

(i) Areas of Shallow Flooding (Zones AO and AH)

The following provisions apply to areas designated as ZONE AO and ZONE AH:

- (1) ZONE AO
 - (i) All DEVELOPMENT and SUBSTANTIAL-IMPROVEMENTS of residential STRUCTURES, including MOBILE HOMES or MANUFACTURED HOMES, shall have the LOWEST FLOOR, including BASEMENT, elevated above the HIGHEST ADJACENT GRADE 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);

(ii) All DEVELOPMENT and SUBSTANTIAL-IMPROVEMENTS of any commercial, industrial, or other non-residential STRUCTURES shall have the LOWEST FLOOR, including BASEMENT, elevated above the HIGHEST ADJACENT GRADE at least as high as the depth number specified in feet on the community FIRM (at least two feet if no depth number is specified) or together with attendant utilities and sanitary facilities be completely FLOODPROOFED to that so that 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; and

(iii) Drainage paths must be provided to adequately guide floodwaters STRUCTURES.

(2) ZONE AH

(i) The DEVELOPMENT standards for all AREAS OF SPECIAL FLOOD HAZARD where BASE FLOOD ELEVATION has been provided shall be required as set forth in 20-9A04(e) et al; and,

(ii) Drainage paths must be provided to adequately guide floodwaters STRUCTURES.

(j) Recreational Vehicles

RECREATIONAL VEHICLES placed on sites the Floodplain OVERLAY DISTRICT shall either:

(1) Be on the site for fewer than 180 consecutive days; or

(2) Be fully licensed and ready for highway use; or,

(3) Meet the permitting, elevation, and anchoring requirements for MOBILE HOMES or MANUFACTURED HOMES of this ordinance.

20-9A05 Definitions

The following definitions are applicable to only the terms found in this article.

Term	Definition
100-year Flood	see "base flood."
Agency	means the Federal Emergency Management Agency (FEMA)
Appeal	means a request for review of the Floodplain Administrator's interpretation of any provision of this ordinance or a request for a variance
Areas of Special Flood Hazard	is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year
Base Flood	means the flood having a one percent chance of being equaled or exceeded in any given year
Base Flood Elevation	means the water surface elevation of the base flood as determined by the Flood Insurance Study or by an approved Hydrologic and Hydraulic Study, whichever is higher
Basement	means any area of the structure having its floor subgrade (below ground level) on all sides
Buildable Lot	a lot for which a building permit can be obtained. Property that is designated as a "Tract" of land is not a buildable lot.
Community	means any State or area or political subdivision thereof, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction
Development	means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, levees, levee systems, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials
"Eligible Community" or "Participating Community"	means a community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program (NFIP)
Existing Construction	means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. "existing construction" may also be referred to as "existing structures"
Existing Mobile Home or Manufactured Home Park or Subdivision	means a mobile home park or subdivision for which the construction of facilities for servicing the lots on which the mobile 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
"Flood" or "Flooding"	means a general and temporary condition of partial or complete inundation of normally dry land areas from: (1) the overflow of inland waters; (2) the unusual and rapid accumulation or runoff of surface waters from any source; and (3) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood, or by some similarly unusual and unforeseeable event which results in flooding as defined above in item (1)
Flood Insurance Rate Map (FIRM)	means an official map of a community, on which the Administrator has delineated both the special flood hazard areas and the risk premium zones applicable to the community
Flood Insurance Study (FIS)	means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations
Floodplain	means the land area inundated by a flood of a given magnitude as determined by the Flood Insurance Study or by an approved Hydrologic and Hydraulic Study

Term	Definition
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 ordinances (such as floodplain and grading ordinances) and other applications of police power. The term describes such state or local regulations, in any combination thereof, that provide standards for the purpose of flood damage prevention and reduction
Floodproofing	means any combination of structural and nonstructural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents
"Floodway" or "Regulatory Floodway"	means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot
Floodway Encroachment Lines	means the lines marking the limits of floodways on Federal, State and local floodplain maps
Floodway Fringe	means the area outside the floodway encroachment lines, but still subject to inundation by the regulatory flood
Freeboard	means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as bridge openings and the hydrological effect of urbanization of the watershed
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 the Interior; or (d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either (1) by an approved state program as determined by the Secretary of the Interior or (2) directly by the Secretary of the Interior in states without approved programs
Hydrologic and Hydraulic Study	means an engineering study that is done in accordance with 20-9A04(c) et al.
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 floodproofing design requirements of this ordinance
Market Value	means an estimate of what is fair, economic, just and equitable value under normal local market conditions. If market value cannot be determined, the construction estimate can be used
Mobile Home or Manufactured Home	means a structure, transportable in one or more sections, that is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The terms "mobile home" or "manufactured home" does not include a "recreational vehicle"

Term	Definition
Mobile Home Park, Manufactured Home Park or Subdivision	means a parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale
Mean Sea Level	means, for purposes of the National Flood Insurance Program (NFIP), the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map (FIRM) are referenced
New Construction	means, for the purposes of determining insurance rates, structures for 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 the floodplain management regulations adopted by a community and includes any subsequent improvements to such structures
Overlay District	means a special zoning district that has been "overlaid" on a base zoning classification to add to or alter some or all the base district zoning regulations
Participating Community	also known as an "eligible community," means a community in which the Administrator has authorized the sale of flood insurance
Person	includes any individual or group of individuals, corporation, partnership, association, or any other entity, including Federal, State, and local governments and agencies
Principally Above Ground	means that at least 51 percent of the actual cash value of the structure, less land value, is above ground
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 able to be towed by a light-duty truck; and (d) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use. 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.
Special Flood Hazard Area (SPHA)	See "area of special flood hazard"
Start of Construction	includes substantial-improvements, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvements were 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 slabs or footings, the installation of piles, the construction of columns, any work beyond the stage of excavation, or the placement of a mobile home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, the installation of streets and/or walkways, excavation for a basement, footings, piers, foundations, the erection of temporary forms, nor installation on the property of accessory structures, 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
State Coordinating Agency	means the Division of Water Resources, Kansas Department of Agriculture, or other office designated by the governor of the state or by state statute at the request of the Administrator to assist in the implementation of the National Flood Insurance Program (NFIP) in that state

Term	Definition
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 or mobile home. "Structure" for insurance purposes, means a walled and roofed building, other than a gas or liquid storage tank that is principally above ground and affixed to a permanent site, as well as a mobile home on a permanent foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises
Substantial-Damage	means damage of any origin sustained by a structure whereby the cost of restoring the structure to pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred
Substantial-Improvement	means any 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 the actual repair work performed. The term does not, however, include either (1) any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or (2) any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure"
Unmapped Floodplain Area	means all stream tributaries having a drainage area of 240 acres or more regardless of the limits of the FIS
Water Surface Elevation	means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum where specified) of floods of various magnitudes and frequencies in the floodplain
Zone A	means special flood hazard areas inundated by 100-year flood where no base flood elevations have been determined
Zone AE	means special flood hazard areas inundated by 100-year flood where base flood elevations have been determined
Zone AH	means special flood hazard areas inundated by 100-year flood with flood depths of 1 to 3 feet (usually areas of ponding); where base flood elevations have been determined
Zone AO	means special flood hazard areas inundated by 100-year flood with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); where average depths have been determined. For areas of alluvial fan flooding velocities have also been determined

SECTION III. This ordinance shall be known as the Floodplain Management Ordinance of the community of the City of Lawrence, Kansas.

ADOPTED AND APPROVED by the Governing Body of the City of Lawrence.

This _____ day of [insert date].

Sue Hack, Mayor

ATTEST:

Frank S. Reeb, City Clerk

APPROVED AS TO FORM AND LEGALITY:

David L. Corliss, Assistant City Manager &
Director of Legal Services