

## ARTICLE X

### FLOODPLAIN REGULATIONS

#### PART 1. PURPOSE AND GENERAL PROVISIONS

##### 10-101. Statutory Authorization, Findings of Fact, and Statement of Purpose

###### (A) Statutory Authorization.

- (1) Approval of Draft Ordinance by Kansas Chief Engineer Prior to Adoption.

The following floodplain management regulations, as written, were approved in draft form by the Chief Engineer of the Division of Water Resources of the Kansas Department of Agriculture on December 23, 2014.

- (2) Kansas Statutory Authorization.

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 government units to adopt floodplain management regulations designed to protect the health, safety, and general welfare.

###### (B) Findings of Fact.

- (1) Flood Losses Resulting from Periodic Inundation.

The special flood hazard areas of Manhattan, 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) General Causes of the Flood Losses.

These flood losses are caused by (1) the cumulative effect of development in any delineated floodplain causing increases in flood heights and velocities; and (2) the occupancy of flood hazard areas by uses vulnerable to floods, hazardous to others, inadequately elevated, or otherwise unprotected from flood damages.

- (3) Methods Used To Analyze Flood Hazards.

The FEMA and Community Special Flood Hazard Areas are those identified in the effective Flood Insurance Study (FIS) for Riley County and Pottawatomie County, dated March 16, 2015, and its accompanying Flood Insurance Rate Maps (FIRM), and local or FEMA approved revisions to the FIRM and/or FIS which are adopted by reference and declared to be a part of this Article.

In areas where a Preliminary FIRM and Preliminary FIS exist, Community Base Flood Elevations shown on the Preliminary FIRM and Preliminary FIS shall be used for local regulatory purposes, if they are higher than those shown on the effective FIRM and FIS.

The initial Flood Insurance Rate Maps are as follows for the jurisdictional areas at the initial date:

City of Manhattan dated April 1, 1982.

Riley County Unincorporated Areas dated October 1, 1981.

Pottawatomie County Unincorporated Areas dated February 17, 1988.

The Flood Insurance Study (FIS) is the basis of this ordinance and uses a standard engineering method of analyzing flood hazards, which consist of a series of interrelated steps.

- (a) Selection of a base flood that is based upon engineering calculations, which permit a consideration of such flood factors as 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 (1%) percent chance of occurrence in any one (1) year as delineated on the Federal Insurance Administrator's FIS, and illustrative materials dated March 16, 2015 as amended, and any future revisions thereto.
- (b) Calculation of water surface profiles that are based on a standard hydraulic engineering analysis of the capacity of the stream channel and overbank areas to convey the regulatory flood.
- (c) Computation of a floodway required to convey this flood without increasing flood heights more than one (1) foot at any point.
- (d) Delineation of floodway encroachment lines within which no development is permitted that would cause any increase in flood height.

- (e) Delineation of floodway fringe; i.e., that area outside the floodway encroachment lines, but still subject to inundation by the base flood.

(C) Statement of Purpose.

- (1) It is the purpose of this Article to promote the public health, safety and general welfare and to minimize flood losses resulting from periodic inundation of the base flood by applying provisions designed to:
  - (a) Restrict or prohibit uses which are dangerous to health, safety or property in times of flood or cause undue increases in flood heights or velocities.
  - (b) Require that uses vulnerable to floods, including public facilities, which serve such uses, be provided with flood protection at the time of initial construction.
  - (c) Protect individuals from buying or leasing lands which are unsuited for intended purposes because of flood hazard.
  - (d) Minimize the need for rescue and relief efforts associated with flooding, generally undertaken at the expense of the general public.
  - (e) Assure that eligibility is maintained for property owners in the community to purchase flood insurance in the National Flood Insurance Program.

10-102. General Provisions.

(A) Official Floodplain Map.

- (1) The Official Floodplain Map shall consist of the FIRM, Flood Insurance Rate Map for Riley County, Kansas; Pottawatomie County, Kansas; and Incorporated Areas, consisting of the Map Panels listed on Map Index Sheet dated March 16, 2015, and any future revisions thereto, and the Federal Emergency Management Agency (FEMA) Flood Insurance Study for Riley County, Kansas; Pottawatomie County, Kansas; and Incorporated Areas, dated March 16, 2015. The Official Floodplain Map consists of the FEMA flood model and the community flood model. The Official Floodplain Map shall also consist of all modifications or changes to the above by the Federal Emergency Management Agency.
- (2) The Official Floodplain Map shall apply to all land within the jurisdiction of the City of Manhattan subject to the base flood.

(B) Floodplain Overlay Districts.

- (1) The Official Floodplain Map shall be applied as two (2) overlay districts for the purposes set forth in 10-101(C)(1)(a-e). Land uses not meeting the development standards of this Article and those Articles of the underlying zoning districts are prohibited.

(a) Floodway Overlay District (FW):

- (1) The FW District boundaries are identified on the FIRM of as the FEMA Floodway and shall be consistent with those boundaries.

(b) Floodway Fringe Overlay District (FF):

- (1) The FF District boundaries are identified on the FIRM as numbered and unnumbered A Zones (including A, AE, AO and AH Zones), and Zone X (FUTURE CONDITIONS 1% ANNUAL FLOOD HAZARD) and shall be consistent with those boundaries.

(C) Rules for Interpretation of District Boundaries.

- (1) The boundaries of the Floodway and Floodway Fringe Overlay Districts shall be determined by scaling distances on the Official Zoning Map and on the Flood Insurance Rate Map (FIRM). Where interpretation is needed as to the exact location of the boundaries of the districts as shown on the Official Zoning Map or FIRM, for example where there appears to be a conflict between a mapped boundary and actual field conditions, the Floodplain Administrator shall make the necessary interpretations. The base flood elevation for the point in question shall be the governing factor in locating the district boundary on the land. Any person contesting the location of the district boundary shall be given a reasonable opportunity to present their case to FEMA for an amendment or revision of the boundary.

(D) Compliance.

- (1) No development located within a FW or FF District shall be located, extended, converted or structurally altered without full compliance with the terms of this Article.

(E) Abrogation and Greater Restrictions.

- (1) 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 inconsistency only.

(F) Public Hearings Required By Regulatory Agencies.

(1) In the event FEMA, the Kansas Department of Agriculture, or any other regulatory agency having jurisdiction over matters covered by this Article requires the City to conduct a public hearing related to such matters, and the method by which such public hearing is to be conducted is not prescribed by such agency or elsewhere in these regulations, such method shall be as follows:

(a) Written notice of such hearing shall be mailed at least 20 days before the hearing to all affected property owners. The Floodplain Administrator may require any applicant to provide the City with a list of the names and addresses of all affected property owners.

(b) Notice of such hearing shall be published once in the official City newspaper at least 20 days prior to the hearing.

(c) The Floodplain Administrator may request the Manhattan Urban Area Planning Board to review the matter prior to the public hearing if the public hearing is to be conducted by the Governing Body.

(G) Use of Other Base Flood Data in Identified Floodplains Where Base Flood Elevations Have Not Been Established.

(1) When base flood elevation data has not been provided in accordance with Section 10-102(A)(1), the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from federal, state or other sources as criteria for requiring that new construction, substantial improvements, or other development shall comply with the requirements of this Article.

(2) If a floodway has not been designated, no development, including sanitary landfills, shall be permitted within the Floodplain, unless it is demonstrated by the developer that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, as shown in the Future Land Use Map of the Comprehensive Plan, other area planning studies or approved development plan, will not increase the base flood elevation by more than one (1) foot on the average cross section of the reach in which the development is located as shown on the Flood Insurance Study.

(3) Any use of data required in this section which would alter the location of the Floodplain, FW District or FF District shall be subject to the

additional requirements of Section 10-102(E).

10-103. Administration.

- (A) The Zoning Administrator, or his/her designee, shall serve as the Floodplain Administrator and shall administer, enforce and implement the provisions of this Article.
- (B) Duties of the Floodplain Administrator shall include, but are not limited to, the following:
  - (1) Review all Floodplain Development Permits for proposed development to assure that sites are reasonably safe from flooding and that the floodplain development requirements of this Article have been satisfied.
  - (2) Review Floodplain Development Permits for proposed development to assure that all necessary permits have been obtained from federal, state, or local governmental agencies from which prior approval is required.
  - (3) Notify adjacent communities and the Kansas Department of Agriculture Division of Water Resources prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.
  - (4) Assure that maintenance is provided within the altered or relocated portion of the watercourse so that the flood carrying capacity is not diminished.
  - (5) Verify the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures through the permit applicant's submission of Elevation Certificates applicant and record and maintain records of these certificates.
  - (6) When floodproofing is utilized for a particular structure the Floodplain Administrator shall require certification of floodproofing submitted by a permit applicant from a registered professional engineer or architect.
  - (7) Verify the actual elevations (in relation to mean sea level) to which the new or substantially improved structures have been floodproofed through the permit applicant's submission of Floodproofing Certificates, and record and maintain records of these certificates.
  - (8) If a violation of this Article is found, the Floodplain Administrator shall notify the person responsible for creating or maintaining such violation, indicate the nature of the violation and order the action necessary to

correct it.

- (9) Review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. Determine date of start of construction when necessary.
- (10) Issue Floodplain Development Permits for all approved applications.
- (11) Adopt and issue the Floodplain Regulation Technical Guidance documents for this article, which can be amended administratively, as needed.

10-104. 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 height may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. These regulations do not imply that areas outside floodway and floodway fringe district boundaries or land uses permitted within such districts will be free from flooding or flood damage. This Article shall not create liability on the part of the City of Manhattan 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.

10-105. Definitions.

For the purposes of this Article, the following definitions shall apply. Unless specifically defined below, words or phrases used in this Article shall be interpreted so as to give them the meaning they have in common usage and to give this Article its most reasonable application.

**100-YEAR FLOOD** means a flood having a one percent (1%) chance of being equaled or exceeded in any given year.

**AREA OF SHALLOW FLOODING** means a designated Zone AO or AH on a community's Flood Insurance Rate Map (FIRM) with a one (1%) percent or greater annual chance of flooding to an average depth of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

**BASEMENT** means any area of the building having its floor subgrade (below ground level) on all sides.

COMMUNITY BASE FLOOD means the flood, determined using future land use conditions, having a one (1%) percent chance of being equaled or exceeded in any given year. This area is represented on the FIRM(s) as Zone X (Future Base Flood).

COMMUNITY BASE FLOOD ELEVATION means the water surface elevation shown on the FIRM and in the Flood Insurance Study, having a one (1%) percent chance of being equaled or exceeded in any given year, determined using the future land use conditions.

COMMUNITY FLOOD FRINGE AREA is the land area located between the Floodway and the outer edge of Zone X (Future Base Flood), as shown on the FIRMs.

COMMUNITY SPECIAL FLOOD HAZARD AREA represents the community initiated flood study that has different parameters than the standard FEMA Flood Insurance Study. The Community Special Flood Hazard Area is the land subject to a one (1%) percent or greater chance of flooding in any given year from a Community Base Flood, as created by the community initiated flood study. It includes the FEMA Floodway, Zones A, AE, AH, AO and Zone X (Future Base Flood).

COMPENSATORY STORAGE means an excavated, hydraulically equivalent volume of storage used to offset the loss of existing flood storage volume when fill, materials or structures are placed within a Community Special Flood Hazard Area.

CRITICAL FACILITY means a structure used to house a function that is vulnerable or is deemed essential to the community by the Floodplain Administrator, including but not limited to child and adult daycare facilities, nursing homes, schools, hospitals, fire, police and medic facilities and other uses as deemed by the Floodplain Administrator.

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.

DRYLAND ACCESS means a vehicular access route that is gravel, paved or concrete, at least 12 feet wide, which is above the Community Base Flood Elevation and connects a habitable structure to a public street that is elevated above the Community Base Flood Elevation.

ELEVATED STRUCTURE means a non-basement structure built to have the lowest floor elevated above the ground level by solid foundation perimeter walls, pilings, columns (posts and piers), or shear walls.

EQUAL DEGREE OF ENCROACHMENT means a standard applied in determining the location of encroachment limits so that floodplain lands on both sides of a stream are capable of conveying a proportionate share of flood flows. This is determined by considering the effect of encroachment on the hydraulic efficiency of the floodplain along both sides of a stream for a significant reach.



EXCEPTION, for the purposes of this Article, an exception shall mean a grant of relief by the City of Manhattan from the terms of a floodplain management regulation.

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the Floodplain Regulations adopted by a community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FAIR MARKET VALUE OR MARKET VALUE means an estimate of what is a fair, economic, just and equitable value under normal local market conditions.

FEMA means the Federal Emergency Management Agency.

FEMA BASE FLOOD means the flood, determined using land use conditions at the time of the Flood Insurance Study, having a one percent (1%) chance of being equaled or exceeded in any given year. This area is represented on the FIRMs as Zones A, AE, AH and AO.

FEMA BASE FLOOD ELEVATION (BFE) means the water surface elevation shown on the Flood Insurance Rate Map and in the Flood Insurance Study, having a one (1%) percent chance of being equaled or exceeded in any given year, determined using land use conditions present at the time of the study.

FEMA FLOOD FRINGE is the land area located between the FEMA Floodway and the outer lines edges of Zone A, AE, AH and AO, as shown on the FIRMs.

FEMA FLOODWAY means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the FEMA Base Flood, without cumulatively increasing the water surface elevation more than 1.0 foot. FEMA Floodway Lines are the lateral limits of the FEMA Floodway.

FEMA SPECIAL FLOOD HAZARD AREA is the land subject to a one (1%) percent or greater chance of flooding in any given year from a FEMA Base Flood. It includes the FEMA Floodway, and the FEMA Zones A, AE, AH and AO.

FLOOD OR FLOODING means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of waters normally confined between the banks of a stream or other watercourse, or;
- (2) The unusual and rapid accumulation or runoff of surface waters from any source, or;
- (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 paragraph one (1) above.

FLOOD FREQUENCY means the average frequency, statistically determined, for which it is expected that a specific flood level or discharge may be equaled or exceeded.

FLOOD INSURANCE RATE MAP (FIRM) means the official map on which the Federal Emergency Management Agency has delineated both the area of special flood hazard and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

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.

FLOODPROOFING means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODPLAIN ADMINISTRATOR means the person, agent, or his or her designees, that administers, implements and enforces the provisions of this Article.

FLOODPLAIN DEVELOPMENT PERMIT means a signed document from the Floodplain Administrator, the City Engineer and Building Official, when applicable, authorizing development in a floodplain, including all necessary supporting documentation as required by permit application.

FLOOD PROTECTION ELEVATION means the elevation to which all structures located within the Community Special Flood Hazard Area or FEMA Special Flood

Hazard Area must be elevated or floodproofed, if non-residential. Where the Community Base Flood Elevation is provided, the elevation shall be that elevation plus one (1) foot of freeboard. Where the Community Base Flood Elevation is not provided, the Flood Protection Elevation shall be the FEMA Base Flood Elevation plus two (2) foot of freeboard.

FLOOD RESISTANT MATERIALS means any building product capable of withstanding direct and prolonged contact with floodwaters without sustaining significant damage. "Prolonged contact" means at least 72 hours and "significant damage" is any damage requiring more than low-cost cosmetic repair (such as paint). Examples of flood resistant materials include, but are not limited to, concrete, stone, galvanized or stainless steel or pressure treated lumber.

FREEBOARD means the height added to the Community or FEMA Base Flood Elevation (BFE) to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, blockage of 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:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the United States Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or,
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - (a) By an approved state program as determined by the Secretary of the Interior; or,
  - (b) Directly by the Secretary of the Interior in states without approved programs.

LETTER OF MAP AMENDMENT (LOMA) means a letter from FEMA that officially removes a property or building from the FEMA Special Flood Hazard Area (SFHA) that was inadvertently shown in the SFHA on the FIRM.

LETTER OF MAP REVISION (LOMR) means an official amendment to the current effective FEMA FIRM based on as-built conditions and/or more accurate data. It is issued by FEMA and may change FEMA Base Flood Elevations, the location of the FEMA Floodway Lines and/or the location of the FEMA Flood Fringe line.

LETTER OF MAP REVISION BASED ON FILL (LOMR-F) means a letter from FEMA that officially removes a property from the FEMA Special Flood Hazard Area (SFHA) as a result of placing fill on the property.

LOWEST ADJACENT GRADE (LAG) means the elevation of the ground, sidewalk or patio slab at the lowest point, immediately next to the structure, or deck support, after completion of the building.

LEVEE means a manmade structure, usually an earthen embankment, floodwall or a combination of both that is designed and constructed to contain, control or divert the flow of water so as to provide protection from temporary flooding.

LOWEST ADJACENT GRADE (LAG) means the elevation of the ground, or concrete immediately next to the building, after completion of the building. This elevation is required for the finished construction elevation certificate and other floodplain permitting documents.

LOWEST FLOOR means the lowest floor of the lowest enclosed area which includes a basement or cellar. 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 Article.

MANUFACTURED HOME means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle". This definition incorporates both Manufactured Home and Mobile Homes as defined in Article XVI of the City of Manhattan Zoning Regulations.

MANUFACTURED HOME PARK OR SUBDIVISION means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

MEAN SEA LEVEL means, for purposes of the National Flood Insurance Program (NFIP), the North American Vertical Datum (NAVD) of 1988 or other datum, to

which base flood elevations shown on a community's Flood Insurance Rate Map (FIRM) are referenced.

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) means a federal program that provides insurance coverage for flood damage to qualified buildings in participating NFIP communities.

NEW CONSTRUCTION means, for the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after April 1, 1982 the effective date of an initial Flood Insurance Rate Map and include any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after February 3, 2015 and includes any subsequent improvements to such structures.

NEW MANUFACTURED HOME PARK OR SUBDIVISION means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after February 3, 2015.

NFIP means the National Flood Insurance Program.

OBSTRUCTION means any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel rectification, bridge conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure or matter in, along, across, or projecting into any channel, watercourse or special flood hazard area which may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water, or that is placed where the flow of water might carry the same downstream to the damage of life or property.

NON- RIVERINE REGULATORY FLOODPLAIN means the mapped floodplain in areas without a defined river channel or course, usually due to stormwater ponding effects. Flood Zones associated with Non-Riverine Regulatory Floodplains include Zones AO and AH, as designated on the FEMA Flood Insurance Rate Maps.

PERMIT means the Flood Development Permit required by this Article

PERSON includes any individual, or group of individuals, firm, partnership, association, corporation, or any other entity, including Federal, State, and local governments and agencies.

REACH means a hydraulic engineering term to describe longitudinal segments of a stream or river. A reach will generally include the segment of the flood hazard area where flood heights are influenced by a man-made or natural obstruction. In an urban area, the segment of a stream or river between two consecutive bridge

crossings would typically constitute a reach.

**REASONABLY SAFE FROM FLOODING** means base flood waters will not inundate the land or damage structures to be removed from the Special Flood Hazard Area (SFHA) and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

**RECREATIONAL VEHICLE** means a vehicle which is:

- (1) Built on a single chassis;
- (2) 400 square feet or less when measured at the largest horizontal projections;
- (3) Designed to be self-propelled or permanently towable by a light duty truck; and,
- (4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

**RIVERINE REGULATORY FLOODPLAIN** means the mapped floodplains adjacent to a defined river channel or course. Flood Zones associated with Riverine Regulatory Floodplains include A, AE, AR and A99.

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

**STRUCTURE** means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. "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 manufactured 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 its before-damaged condition would equal or exceed fifty (50%) percent of the market value of the structure before the damage occurred. *Substantial Damage* also means flood-related damage sustained by a structure on 2 separate occasions during a 10-year period for which the cost of repairs at the time of each flood event, on the average, equals or exceeds 25 percent of the Fair Market Value of the structure before the damage occurred. The Fair Market Value will be determined at the time of the individual flood events.

SUBSTANTIAL IMPROVEMENT means any reconstruction, rehabilitation, addition, or improvement of a structure, the cost of which equals or exceeds fifty (50%) percent of the fair market value of the structure before the "start of construction" of the improvement. When the combined total of all improvements that alters the exterior perimeter of the structure after February 3, 2015 equals or exceeds fifty (50%) of a structure's Fair Market Value, that structure is considered a substantial improvement. Substantial Improvements shall not include repairs related to damages to a structure as defined as Substantial Damage.

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 which 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."

VARIANCE see "Exception."

VIOLATION means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required by this Article is presumed to be in violation until such time as that documentation is provided.

WATER SURFACE ELEVATION means the height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum where specified) of floods of various magnitudes and frequencies in the floodplain.

ZONE A means an area subject to flooding by the 1% Annual Chance Flood, as shown on the Flood Insurance Rate Maps, but no Base Flood Elevation has been determined.

ZONE AE means an area subject to flooding by the 1% Annual Chance Flood, as shown on the Flood Insurance Rate Maps, where the Base Flood Elevation has been determined.

ZONE AH means an area subject to flooding by the 1% Annual Chance Flood, as shown on the Flood Insurance Rate Maps, where the depth of flooding is between 1 to 3 feet (usually areas of ponding); and Base Flood Elevation has been determined.

ZONE AO means an area subject to flooding by the 1% Annual Chance Flood, as shown on the Flood Insurance Rate Maps, where the depth of flooding is between 1 to 3 feet (usually sheet flood on sloping terrain), where the average depths of flooding and velocities has been determined. This flood zone is usually associated with flooding from alluvial fans.

ZONE X means areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas with less than 1 square mile.

ZONE X (FUTURE BASE FLOOD) means the flood risk zone that corresponds to the 1% annual chance flood that are determined based on future-conditions hydrology. No Base Flood Elevations or depths are shown on the FIRMs within this zone. The Base Flood Elevations are presented in the Flood Insurance Study.

ZONE X Protected by Levee means an area protected by a levee from the 1% annual chance flood.

## PART 2. DEVELOPMENT STANDARDS

### 10-201. Floodplain Development Permit.

- (A) No person shall initiate or continue any development or substantial improvement, or cause the same to be done, within a Floodplain as shown on the Official Floodplain Map, without first obtaining a Floodplain Development Permit.
- (B) A Floodplain Development Permit application shall be filed with the Floodplain Administrator on a form provided by the Floodplain Administrator, and shall include the following:
  - (1) Identification and description of the proposed work to be covered by the floodplain development permit; and,
  - (2) Description of the land on which the proposed work is to be done by lot, block, tract and house and street address, or similar description that



- will readily identify and specifically locate the proposed building or work; and,
- (3) The use or occupancy for which the proposed work is intended;
  - (4) Specification of whether the proposed work is located in a designated floodway fringe or floodway; and,
  - (5) When required, the fair market of the structure and the cost of the improvement;
  - (6) The existing base flood elevation and the elevation of the proposed development;
  - (7) The location and elevation of the structure's private utilities (i.e. electrical and heating and air conditions);
  - (8) A site plan, drawn to scale, which shall include, but is not limited to, the following details of the proposed floodplain development:
    - (a) The location of the Community Special Flood Hazard Area, and the FEMA Special Flood Hazard Area as shown on the effective FIRMs or a statement that the entire site is located within a Special Flood Hazard Area.
    - (b) Location of new and existing structures on the site.
    - (c) Location of fill areas (if applicable).
    - (d) Location of compensatory storage areas (if applicable).
    - (e) Location of utility infrastructure.
    - (f) Location and slope of fill around the structure's foundation.
  - (9) A Foundation Plan that is drawn to scale, which shall include but is not limited to the following:
    - (a) The proposed method of elevation, if applicable (i.e. fill, solid foundation, perimeter wall, solid backfill foundation, open foundation (crawl space) on piers or shear walls).
    - (b) If applicable, the details of the openings to facilitate the automatic equalization of hydrostatic forces from flood, as required by Section 10-205(C)(5).

- (c) If applicable, the usage of the enclosed area below the lowest enclosed floor.
  - (d) If applicable, the details of the protection of public utilities and facilities, such as sewer, gas, electrical and water systems to be located and/or constructed to minimize flood damage.
- (10) If floodproofing, a Floodproofing Certificate on the appropriate FEMA form, with supporting information, including inspection and operational plans that include, but not limited to, installation, exercise and maintenance of Floodproofing measures.
  - (11) For manufactured homes to be located in the Community Special Flood Hazard Areas, details pertaining to 10-205(C)(6) shall be provided.
  - (12) Signature of the property owner or the owner's authorized agent who may be required to submit evidence to indicate such authority; and,
  - (13) Other information as reasonably may be required for the Floodplain Administrator to determine compliance with this Article.

10-202. Subdivision Requirements.

- (A) If a subdivision proposal or other proposed new development is in the Community Special Flood Hazard Area, any such proposals shall be reviewed to assure that:
  - (1) All such proposals are consistent with the need to minimize flood damage within the flood-prone area;
  - (2) All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and,
  - (3) Adequate drainage easements are provided to reduce exposure to flood hazards.
  - (4) Assure that base flood elevation data shall be provided by the applicant for subdivision proposals and other proposed development. Such data shall be clearly indicated on the subdivision plat and shall be subject to the requirements of Section 10-102(F), where applicable.

10-203. General Standards for Floodplain Development.

- (A) No Floodplain Development Permit or building permit for new construction, subdivision proposals, substantial improvements, or repair of substantial damages, prefabricated buildings, placement of manufactured homes, and

other developments within the Community Special Flood Hazard Area (CSFHA) shall be granted, unless the conditions of this Section are satisfied.

- (B) New construction, subdivision proposals, substantial improvements, repair of substantial damage, prefabricated buildings, placement of manufactured homes and other developments shall meet the following requirements:
- (1) Design or anchorage to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effect of buoyancy.
  - (2) New or replacement water supply systems and/or sanitary sewage systems be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and on-site waste disposal systems be located so as to avoid impairment or contamination.
  - (3) Construction with flood resistant materials, utilizing methods and practices that minimize flood damages, and so that electrical, heating ventilation, plumbing, and air conditioning equipment and other service facilities are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
  - (4) That until a floodway has been designated, no development, including fill, may be permitted within any numbered or unnumbered Zones A or AE on the FIRM, unless the applicant for the land use has demonstrated, through the opinion of a licensed professional engineer, that the proposed use, when combined with all other existing and reasonably anticipated uses, will not increase the water surface elevation of the 100-year flood more than one (1) foot on the average cross section of the reach in which the development is located as shown on the Flood Insurance Rate Study.
  - (5) Storage of Material and Equipment.
    - (a) The storage or processing of materials that are, in time of flooding, buoyant, flammable, explosive, or could be injurious to human, animal or plant life is prohibited, unless the storage of material and equipment is not subject to major damage by floods and firmly anchored to prevent flotation or if readily removable from the area within the time available after flood warning.
  - (6) Notwithstanding any provision of this Article, sanitary landfills shall be prohibited in any Floodplain regulated by this Article.

(C) Dryland Access: Contiguous Dryland Access shall be provided from a structure to land outside of the floodplain, except as exempted in 10-203(C)(1).

(1) In developments where the Floodplain Administrator determines that existing street elevations, as of February 3, 2015, make compliance with 10-203(C) impractical, Contiguous Dryland Access is not required.

#### 10-204. Floodway District (FW).

(A) Permitted Uses.

(1) Agricultural uses such as general farming, pasture grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, forestry, sod farming, and wild crop harvesting.

(2) Industrial-commercial uses such as loading area, parking areas, and airport landing strips.

(3) Private and public recreational uses such as golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launching ramps, swimming area, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails.

(4) Accessory residential uses such as lawns, gardens, parking areas and play areas, but not including structures.

(5) Railroads, streets, bridges, utility transmission lines, and pipelines.

(6) Notwithstanding the above listed permitted uses, no use shall be permitted in this district unless it is also permitted in the underlying zoning district.

(B) Use Limitations.

(1) All development, including fill, new construction, substantial improvements, and other developments shall be prohibited unless certification by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in the base flood elevation.

(2) Any fill or other material proposed to be deposited in the floodway must be essential to carry out the permitted uses within the floodway and must not impede the hydraulic capacity of the floodway or increase

the velocity of any potential flood. The amount thereof must not exceed that necessary to achieve the intended purpose, and it shall be protected against erosion by rip-rap, vegetative cover, or bulkheading.

- (3) The storage or processing of materials that are, in time of flooding, buoyant, flammable, explosive, or could be injurious to human, animal or plant life is prohibited.
- (4) Structures (temporary or permanent) as permitted in 10-204(A).
  - (a) Structures shall not be designed for human habitation.
  - (b) Structures shall have a low flood damage potential.
  - (c) Whenever permitted and possible, as determined by the Floodplain Administrator, structures shall be constructed with the longitudinal axis parallel to the direction of flood flow.
  - (d) Whenever permitted and practicable, as determined by the Floodplain Administrator, structures shall be placed approximately on the same flood flow lines as those of adjoining structures.
  - (e) Structures shall be firmly anchored to prevent flotation, which may result in damage to other structures, restriction of bridge openings and other narrow sections of the stream or river.
  - (f) Service facilities such as electrical and heating equipment shall be constructed at or above the Flood Protection Elevation for the particular area or shall be floodproofed.

10-205. Floodway Fringe District (FF).

- (A) Permitted Uses.
  - (1) Any use permitted in the underlying zoning district.
- (B) Conditional Uses. Any conditional use allowed in the underlying zoning district.
- (C) Use Limitations.
  - (1) In all Community and FEMA Special Flood Hazard Areas where Community and FEMA Base Flood Elevation data have been provided, as set forth in Section 10-101(B)(3), the following requirements must be met:

- (a) Residential construction: New construction shall have the lowest floor elevated above the Flood Protection Elevation. Substantial improvement, repair of substantial damages or other improvements or additions to any existing residential structure shall comply with Section 10-205(C)(2).
  - (b) New construction, substantial improvements or repair of substantial damages for all manufactured homes shall be constructed or repaired according to Section 10-205 (C)(6).
  - (c) Nonresidential construction. New construction shall have the lowest floor elevated above the Flood Protection Elevation or the structure may be floodproofed in lieu of elevation, provided that all areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Substantial improvement, or repair of substantial damages or other improvements or additions to any existing nonresidential structure shall comply with Section 10-205(C)(2).
  - (d) Service facilities, such as electrical and heating equipment, shall be constructed at or above the Flood Protection Elevation for the particular area or flood proofed, where applicable.
- (2) Improvements/Additions.
- (a) Improvements to the existing structure that do not alter or affect the external footprint of the structure are permitted, as follows:
    - (1) Non-substantial improvements shall:
      - i. Be designed to minimize flood damage;
      - ii. Be constructed of flood resistant materials; and,
      - iii. Not have any new enclosed area lower than that of the existing structure.
    - (2) Substantial improvements to existing residential structures shall have the lowest floor elevated above the Flood Protection Elevation.
    - (3) Substantial improvements to existing nonresidential structures shall have the lowest floor elevated above the Flood Protection Elevation or the structure may be floodproofed in lieu of elevation, provided that all areas of the structure below the required elevation are watertight with walls substantially

impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied.

- (b) Additions or improvements to the existing structure that alters or affects the external footprint of the structure are permitted, as follows:
- (1) Non-Substantial Improvement, only the addition and/or improvement shall have the lowest enclosed floor elevated above the Flood Protection Elevation.
  - (2) A Substantial Improvement to the existing structure and the addition and/or improvement; all improvements shall have the lowest floor elevated above the Flood Protection Elevation.
  - (3) Additions to the existing structure where only a standard door (no greater than 36 inches wide and 80 inches tall) is provided in the common wall between the existing structure and the addition and/or improvement; only the addition and/or improvement shall have the lowest floor elevated above the Flood Protection Elevation.
  - (4) Customary maintenance and/or repair shall not be considered additions and/or improvements.
  - (5) Community Base Flood Elevation Exemption to Existing Buildings. Substantial improvement or substantial damage to existing buildings having the lowest enclosed floor located at least one (1) foot above the FEMA Base Flood Elevation, but less than the Flood Protection Elevation, are exempt from the requirement to elevate the lowest enclosed floor to or above the Flood Protection Elevation, subject to the property owner signing and recording an *Affidavit of Floodplain Construction Below Community Base Flood Elevation* (“Affidavit”), in a form approved by the City, with the County Register of Deeds Office prior to the issuance of a building permit. The signed Affidavit will acknowledge that the property owner elected to proceed with the renovations/rehabilitations, and was made aware of the Community Base Flood Elevations and that in the future there may be:
    - (a) Potential for flood losses,
    - (b) Potential for mandatory purchase of flood insurance,
    - (c) Potential for FEMA substantial improvement rules to apply, and

- (d) No local funds may be available for flood mitigation assistance (buyouts, elevation, etc).
- (3) Land accessory to commercial or industrial uses such as yards, railroad tracks and parking areas which are below the Community Base Flood Elevation shall not be designed for, designated for, or used by the general public if the area is subject to inundation to a depth greater than four (4) feet or subject to flood velocities greater than four (4) cubic feet per second upon the occurrence of the base flood.
  - (4) Public or private utility facilities, roads, railroad tracks, and bridges shall be designed to minimize increases in the Community Base Flood Elevation. Protection to or above the Community Base Flood Elevation shall be provided where failure or interruption of these public or private facilities would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area. Where failure or interruption of service would not endanger life or health, a lesser degree of protection may be provided for minor or auxiliary roads, railroads or utilities.
  - (5) Elevated Buildings. All new construction, substantial improvements or repair of substantial damages, with fully enclosed areas below the lowest enclosed floor that are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must be certified by a registered professional engineer or architect and must meet or exceed the following minimum criteria:
    - (a) Enclosed areas shall not be designed for human habitation and shall only be used for parking of vehicles, building access or limited storage. The walls shall be designed to allow for the entry and exit of floodwaters to automatically equalized hydrostatic flood forces on exterior walls.
    - (b) Designs for complying with this requirement must meet the following minimum criteria and be certified by a professional engineer or architect that:
      - (1) A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;
      - (2) The bottom of all openings shall be no higher than one (1) foot above grade;
      - (3) Openings may be equipped with screens, louvers, or other



coverings or devices provided that they permit the automatic entry or exit of floodwaters; and,

- (4) Openings must be on different sides of the enclosed area, if possible.
  - (c) For enclosed spaces that are six (6) feet or higher, an *Enclosed Space Restrictive Covenant* (“Covenant”) shall be completed on a form approved by the City and filed with the County Register of Deeds Office prior to the issuance of a building permit. The Covenant will declare that the property owner will comply with Section 10-205(5).
- (6) Manufactured Homes.
- (a) All manufactured homes shall be anchored to resist flotation, collapse, or lateral movement. Manufactured homes must be anchored in accordance with local building codes and/or FEMA guidelines, and approved by the City of Manhattan. In the event that over-the-top frame ties to ground anchors are used, the following specific requirements (or their equivalent) shall be met:
    - (1) Over-the-top ties be provided at each of the four corners of the manufactured home, with two additional ties per side at intermediate locations and manufactured homes less than fifty (50) feet long requiring only one (1) additional tie per side;
    - (2) Frame ties be provided at each corner of the home with five (5) additional ties per side at intermediate points and manufactured homes less than fifty (50) feet long requiring four (4) additional ties per side;
    - (3) All components of the anchoring system be capable of carrying a force of 4,800 pounds; and
    - (4) Any additions to manufactured homes be similarly anchored.
  - (b) Prior to the installation of a manufactured home within the Community Special Flood Hazard Area on the Community’s FIRM, a plan for all anchoring, over-the-top frame ties to ground anchor and foundation plans shall be submitted to, and approved by, the Floodplain Administrator, City Engineer and Building Official. Plans shall be designed and certified by a registered professional engineer that is licensed in the State of Kansas, or a registered professional architect that is licensed in the State of Kansas. The plans shall be designed to take into account the

specific flood characteristics of the site on which the manufactured home will be placed.

- (c) All manufactured homes to be placed within the Community Special Flood Hazard Area on the Community's FIRM shall be securely anchored to an adequately anchored foundation system in accordance with the provisions of Sections 10-205(C)(6)(a) and (b) and shall be constructed according to Section 10-205(C)(1) when located:
  - (1) Outside of a manufactured home park or subdivision;
  - (2) In a new manufactured home park or subdivision; or,
  - (3) In an expansion to an existing manufactured home park or subdivision.
- (d) All manufactured homes to be placed within the Community Special Flood Hazard Area on the Community's FIRM shall be securely anchored to an adequately anchored foundation system in accordance with the provisions of Section 10-5C)(6)(a) and (b) and shall either be constructed according to Section 10-205(C)(1), or shall be elevated on a permanent foundation in accordance with Section 10-205(C)(6)(b), and so that the lowest enclosed floor is at least Flood Protection Elevation when located as certified by a licensed land surveyor or professional engineer.
  - (1) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage.
- (e) All manufactured homes that are not subject to the provisions of Section 10-205(C)(6)(c) and (d), and to be placed or substantially improved on sites in an existing manufactured home park or subdivision within the Community Special Flood Hazard Area on the community's FIRM shall be elevated so that either:
  - (1) The lowest floor of the manufactured home is at least one (1) foot above the Flood Protection Elevation, as certified by a licensed land surveyor or professional engineer, and in accordance with the provisions of Section 10-205(C)(6)(a) and (b); or,
  - (2) The manufactured home 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 anchored to an adequately

anchored foundation system in accordance with the provisions of Section 10-205(C)(6)(a) and (b).

- (7) Critical Facilities and accessory uses in all Community Special Flood Hazard Areas shall be a minimum of 2 feet above the 0.2% annual chance flood elevation and that elevation shall be used as the basis for access (ingress-egress).
- (8) Areas of Shallow Flooding (AO and AH zones).
  - (a) Located within the areas of special flood hazard as described in Section 10-102(A) and (B) are areas designated as AO and AH zones. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. The following provisions apply:
    - (1) All new construction and substantial improvements of residential structures, including 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 (2) feet if no depth number is specified).
    - (2) All new construction and substantial improvements of any commercial, industrial, or other non-residential structures, including 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 FIRM (at least two (2) feet if no depth number is specified) or together with attendant utilities and sanitary facilities be completely floodproofed to that level 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.
    - (3) Adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.
  - (b) AO Zones.
    - (1) All new construction and substantial improvements of residential structures, including 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 (2) feet if no depth number is specified).
    - (2) All new construction and substantial improvements of any commercial, industrial, or other non-residential structures, including 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 FIRM (at least two (2) feet if no depth number is specified) or together with attendant utilities and sanitary facilities be completely floodproofed to that level 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.
    - (3) Adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.
  - (c) AH Zones.

- (1) The specific standards for all areas of special flood hazard where base flood elevation has been provided shall be required as set forth in Section 10-203.
  - (2) Adequate drainage paths shall be required around structures on slopes, in order to guide floodwaters around and away from proposed structures.
- (9) Recreational Vehicles.
- (a) Recreational vehicles placed on sites within the FEMA Special Flood Hazard Area, on the community's FIRM shall:
    - (1) Be on the site for fewer than 180 consecutive days; or,
    - (2) Be fully licensed and ready for highway use, which is defined as the vehicle being on 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
    - (3) Meet this Article's permitting, elevation, and anchoring requirements for manufactured homes.
- (10) Compensatory Storage: Any development, including fill, new construction, substantial improvement, or other encroachment within the Community Special Flood Hazard Area shall not result in an increase in the FEMA 1% Annual Chance Flood elevation that is greater than one-tenth of a foot (0.10'), unless compensatory storage is provided. The rise of the flood elevation shall be documented and certified by a registered professional engineer. Compensatory storage must meet the following requirements:
- (a) For developments in a Riverine Regulatory Floodplain: Hydraulically equivalent compensatory storage shall be at least equal to 1.2 times the volume of floodplain storage lost or displaced.
  - (b) For developments in a Non-Riverine Community Special Flood Hazard Area: Hydraulically equivalent compensatory storage shall be at least equal to the volume of floodplain storage lost or displaced.
  - (c) The floodplain storage displaced below the existing 10-year storm flood elevation shall be replaced below the existing 10-year storm flood elevation.

- (d) Areas devoted to compensatory storage shall be designed to drain freely and openly to the channel and located opposite or adjacent to fill areas.
  - (e) A drainage easement and restrictive covenant on a form provided by the City shall be filed with the Register of Deeds office to provide for continued maintenance and prohibit any modification of the compensatory storage areas.
  - (f) An as-built survey by a licensed surveyor and verification that the compensatory storage constructed meets these requirements shall be provided to the City following the completion of the development or fill project.
  - (g) Compensatory storage shall avoid disruption of wetlands and natural wetland buffers, unless permitted by applicable State and Federal agencies.
  - (h) These compensatory storage regulations shall not supercede the requirements of Section 10-204.
- (11) Exceptions to the Compensatory Requirement
- (a) New development or redevelopment projects that disturb less than one (1) acre shall be exempt from the regulations in Section 10-205(C)(10)
    - (1) Except that new development or redevelopment projects that are less than one (1) acre, but is part of a larger common plan of development or sale shall not be exempt from the regulations of this section.
  - (b) Top dressing of not more than four (4) inches of topsoil within the FEMA Special Flood Hazard Area on private property shall be permitted to stabilize existing erosion control problems, establish vegetative cover, minor post-construction best management practice structures or to restore the grade of an existing development following a documented flood event.
    - (1) Top dressing shall be permitted on a per-parcel basis and not impact adjoining property drainage patterns.
    - (2) Top dressing shall comply with all soil erosion and sedimentation requirements (Code of Ordinance Sec. 32-194).
    - (3) Repeat top dressing application for restoring the grade following a documented flood event shall be limited to

documented flood events with topographic or photographic evidence of erosion.

- (4) Top dressing to restore the grade following a flood event shall be limited to the pre-erosion elevation within the FEMA Special Flood Hazard Area.
  - (5) Upon approval from the Floodplain Administrator, compensatory storage shall not be required.
  - (6) This provision shall not be applicable for new developments.
- (c) Minor public or private utility projects such as street resurfacing and rehabilitation, certain utility infrastructure and accessories (e.g. hydrants, poles, manholes and underground pipes), bridge/culvert rehabilitation projects, landscaping, stream rehabilitations and minor water quality features are deemed negligible impacts and are not required to provide compensatory storage, unless specifically required by the Director of Public Works or his/her designee.

### PART 3 EXCEPTIONS

#### 10-301. Authorization.

- (A) The Board of Zoning Appeals may grant exceptions from the Floodplain Regulations subject to the following requirements and following the application and hearing and notification process outlined in Article XIV:
- (1) Exceptions shall not be issued by the Board of Zoning Appeals within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result. The determination of whether or not any increase in flood levels during the base flood discharge shall be made by a professional engineer and said determination shall be provided at the time of the application to the Board of Zoning Appeals.
  - (2) The Board may authorize issuance of an exception for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the Register of Historic Kansas Places without regard to the requirements set out in this Article.
  - (3) No exception shall be issued in connection with new construction or substantial improvements except upon:
    - (a) A lot of 1/2 acre or less in size contiguous to and surrounded by

lots with existing structures constructed below the base flood level; or,

- (b) A lot of any size, which because of physical limitations, legal restrictions enforceable by the City or these regulations is incapable of being subdivided and which is contiguous to and surrounded by lots with existing structures constructed below the base flood level; or,
- (c) A lot of any size which contains a condition unique to the property in question, not ordinarily found in the same Zoning District, not created by an action or actions of the property owner or applicant, and requiring the requested exceptions.

(4) Exceptions shall only be issued upon:

- (a) A showing of good and sufficient cause; and,
- (b) A determination that failure to grant the exception would result in exceptional hardship to the applicant; and
- (c) A determination that the granting of an exception will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- (d) An exception shall only be issued upon a determination that the exception is the minimum necessary, considering the flood hazard, to afford relief.

10-302 Notice to Applicant. Upon approval of an exception, the Floodplain Administrator shall notify the applicant in writing that:

- (A) Flood insurance requirements remain in place for any excepted use or structure and cannot be excepted by the City of Manhattan,
- (B) The issuance of an exception to construct a structure below the base flood level could result in increased premium rates for flood insurance, and
- (C) Such construction below the base flood level increases risks to life and property.

10-303 Records. The Floodplain Administrator shall maintain a copy of the written findings of fact, written decisions and notices issued by the Board of Zoning Appeals for any exception granted under this section. The Floodplain Administrator shall report such

exceptions issued in its annual or biennial report submitted to FEMA.

10-304. Nonconformities.

- (A) Uses determined to be nonconforming to the Floodway Overlay District shall be regulated by this Article.
- (B) Uses of land determined to be nonconforming to the zoning district to which they are located, but that are not determined to be nonconforming to this Article, shall be subject by Article VIII, Nonconformities.
- (C) Structures determined to be nonconforming to the provisions of this article shall not be added to, enlarged, maintained, repaired or remodeled, if such addition, enlargement, maintenance, repair, or remodeling shall constitute a substantial improvement.