05-175 Introduce: 12-5-05
COZ 05070A

ORDINANCE NO. _____

AN ORDINANCE amending Chapter 27.53 of the Lincoln Municipal Code relating to Flood Regulations for New Growth Areas by amending Section 27.53.030 to provide development standards on property located in the floodway, floodplain or floodprone area; and repealing Section 27.53.030 of the Lincoln Municipal Code as hitherto existing.

BE IT ORDAINED by the City Council of the City of Lincoln, Nebraska:

Section 1. That Section 27.53.030 of the Lincoln Municipal Code be amended to read as follows:

27.53.030 Standards.

The following shall be the standards to be followed in connection with the Flood Regulations for New Growth Areas:

(a) General Standards:

(1) No development, substantial improvement or lateral addition may be permitted within the floodway as designated by the Federal Emergency Management Agency (FEMA) or as determined by hydrologic and hydraulic studies completed by the City or other government agency, or other acceptable source as approved by the City, unless the applicant has demonstrated that the proposed development or substantial improvement shall:

(i) Be accomplished in conformance with the Flood Design Criteria.

(ii) ~~Cause no increase in the water surface elevation of the 100-year flood~~ Be accomplished in conformance with Section 27.53.030(h) below.

(2) No development, substantial improvement or lateral addition may be permitted within the floodplain or floodprone area outside the floodway or where no floodway has been designated except as provided in Section 10.2 of the Flood Design Criteria unless the applicant has demonstrated that the proposed development or substantial improvement shall:

(i) Be accomplished in conformance with the Flood Design Criteria.

(ii) Cause no greater than five hundredths of a foot (0.05') of rise in the 100-year flood elevation.

(iii) Cause no greater than five hundredths of a foot (0.05') of rise in areas with a watershed master plan for the 2-, 10-, and 100-year flood elevations, as demonstrated using the hydraulic model from the watershed master plan.

(iv) Notwithstanding certain exceptions in the Flood Design Criteria allowing for greater than five hundredths of a foot (0.05') of rise in the flood elevation, the development shall not cause greater than one foot (1.0') of rise in the FEMA-mapped flood fringe where no floodway has been designated.

An exception to the above shall be permitted provided the applicant has acquired by land rights purchase, flowage easement, or other legal arrangement the right to increase the flood levels greater than one foot (1.0') on all affected lands, and provided that before any permit is issued the applicant submits a ~~Federal Emergency Management Agency (~~FEMA~~)~~ approved Conditional Letter of Map Revision to the Director of Building and Safety. When such encroachment is completed, a FEMA approved Letter of Map Revision must also be provided by the applicant.

(3) No development, substantial improvement or lateral addition may be permitted within the floodplain or floodprone area except as provided in Section 10.2 of the Flood Design Criteria unless the applicant has demonstrated that the proposed development or substantial improvement shall:

(i) Be accomplished in conformance with the Flood Design Criteria.

(ii) Compensate for any flood storage lost by providing a hydrologically equivalent volume of storage adjacent to the area of the encroachment.

(iii) Compensate for flood storage lost below the existing 10 year water surface elevation by providing storage below the proposed 10 year water surface elevation, and compensate for flood storage lost above the existing 10 year water surface elevation with flood storage above the proposed 10 year water surface elevation.

(iv) Cause no increase in peak flow rates in areas with a watershed master plan for the 2-, 10-, and 100-year flood events, as demonstrated using the hydrologic model from the watershed master plan.

(4) Along stream channels within the floodplain or floodprone area which have a defined bed and bank or which have drainage areas exceeding 150 acres, development shall preserve a Minimum Flood Corridor. Minimum corridor preservation and mitigation for allowed encroachments shall be in conformance with Section 10.3 of the Flood Design Criteria.

(5) Roadway bridges, and other drainage facilities, may have their superstructure submerged or partially submerged below the base flood level, provided that the facility has been designed to resist the hydrostatic and hydrodynamic loads as well as the effects of the buoyancy as certified by a registered professional engineer.

(6) Within the floodplain or floodprone area, all new construction, substantial improvements, and any lateral addition shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy; constructed with materials and utility equipment resistant to flood damage; and constructed by methods and practices that minimize flood damage. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities for all new construction, substantial improvements, and any lateral addition, shall be elevated at least one foot above the base flood elevation or designed so as to prevent water from entering or accumulating within the components during conditions of flooding. A registered professional engineer or architect shall certify that these provisions are satisfied.

(7) The location, grade, and floodproofing of all new and replacement water and sanitary sewer systems which are to be extended into or through any portion of the floodplain or floodprone area to serve the proposed development shall first be approved by the city prior to the extension of such utilities into the floodplain or floodprone area.

(8) New or replacement water supply systems and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters. Individual disposal systems shall be designed in accordance with the standards set forth in Chapter 24.38 of the Lincoln Municipal Code in order to minimize impairment to them or contamination from them during flooding.

(9) On-site waste disposal systems shall be located to avoid impairment to the system or contamination from such systems during flooding.

(10) 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.

(11) Storage of other material or equipment may be allowed if 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 the issuance of flood warning by appropriate authorities.

(12) Filling, grading, and excavation may be allowed in the designated floodplain or floodprone area under the following conditions:

(i) Fill shall be protected against erosion and sediment by such measures as rip-rap, vegetative cover, bulkheading, or sedimentation basins as approved by the Director of Building and Safety.

(ii) Any fill to be deposited in the floodplain or floodprone area must be shown by the applicant not to be a detriment to the general public as well as the surrounding land owners.

(iii) Fill materials shall be of a selected type, preferably clean dirt, gravel, or rock no greater than two inches in diameter. The use of decomposing materials, such as wood and other degradables, shall be prohibited. Fill shall be placed in six inch compacted layers. Fill selection and placement shall recognize the effects of saturation from flood waters on slope stability, uniform and differential settlement, and scour potentials.

(iv) Prior to placement of any fill or embankment materials, the area upon which fill is to be placed shall be cleared of debris, snags, stumps, brush, down timber, logs, and other objects. All materials and debris from this clearing shall be removed from the proposed fill and disposed of at approved locations outside the floodplain or floodprone area.

(v) Fill slopes for granular materials shall be no steeper than one vertical on two horizontal unless substantiating data justifying steeper slopes are submitted to the Director of Building and Safety and approved.

(vi) Excavation in the floodplain or floodprone area shall be done so that the land surface is maintained in such a manner that surface waters do not collect and pond unless specifically approved by the Director of Building and Safety.

(b) Residential Construction. All new construction and substantial improvements of residential structures within the designated floodplain or floodprone area shall have the lowest floor, including basement, elevated at least one foot above the base flood level. Garages and storage buildings used exclusively for the storage of motor vehicles, and storage of other items readily removable in the event of a flood warning may have their lowest floor below flood elevation, provided the building structure is capable of withstanding hydrostatic and hydrodynamic forces caused by the 100-year flood and, further, provided that no utilities are installed in the building except elevated or floodproofed electrical fixtures. If the building is converted to another use, it must be brought into full compliance with the requirements of this title governing such uses.

(c) Nonresidential Construction. All new construction, substantial improvements, and any lateral addition to commercial, industrial, and other nonresidential structures within the floodplain or floodprone area shall either have the lowest floor, including basement, elevated at least one foot above the base flood level or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood level plus one foot the structure is watertight in accordance with the performance standards set forth in the city's building code. A registered professional engineer or architect shall develop or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction meet the watertight performance standards. The certification shall be provided to the city as set forth in Section 27.53.040 of this chapter.

(d) For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

(1) 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;

(2) The bottom of all openings shall be no higher than one foot above grade; and

(3) Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

(e) Manufactured Home Parks and Subdivisions. All manufactured homes shall be located in a manufactured home park or a manufactured home subdivision in accordance with Sections 27.63.120 and 27.63.125 of this title. No manufactured home shall be located in a manufactured home park or subdivision within the floodplain or floodprone area unless the following conditions are met:

(1) New manufactured home parks and subdivisions; expansions; substantial damage. Manufactured homes placed (i) on individual lots within or outside of new manufactured home parks or subdivisions, (ii) on individual lots within an expanded area of an existing manufactured home park or subdivision, or (iii) in an existing manufactured home park or subdivision in which a manufactured home has incurred substantial damage as the result of a flood, shall be elevated on a permanent foundation such that their lowest floor is at least one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system in accordance with the standards to resist floatation, collapse, and lateral movement set forth in subsection (f) below;

(2) Existing manufactured home parks and subdivisions. Manufactured homes to be placed or substantially improved on individual lots in existing manufactured home parks or subdivisions, shall either (i) be elevated on a permanent foundation such that their lowest floor is at least one foot above the base flood elevation or (ii) be supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than three feet in height above grade and be securely anchored to an adequately anchored foundation system in accordance with the standards to resist floatation, collapse, and lateral movement set forth in subsection (f) below.

If the option provided by (ii) above is exercised, the current owner and occupant, and any future buyer, renter, or occupier shall jointly acknowledge in writing that the option of piers as an alternative to placement of the manufactured home one foot above the base flood elevation has been exercised and, therefore, may be subject to flooding. Such acknowledgment shall be filed with the Director of Building and Safety prior to the issuance of hook-up permits to the subject home.

(3) Adequate surface drainage and access for a hauler are provided;

(4) Where manufactured homes are elevated on pilings, lots shall be large enough to permit steps, piling foundations shall be placed in stable soil no more than ten feet apart, and reinforcement shall be provided for pilings more than six feet above the ground level; and

(5) The grade of land for manufactured home parks or subdivisions which are situated within the floodplain or floodprone area shall be raised at least one foot above the base flood elevation.

(f) Manufactured Homes Located Outside of a Manufactured Home Park or Subdivision. Manufactured homes located outside of a manufactured home park or subdivision shall be elevated at least one foot above the base flood elevation or anchored to the elevated foundation to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top and frame ties to ground anchors;

(1) If over-the-top ties are used, such ties shall be provided at each of the four corners of the manufactured home, with two additional ties per side at intermediate locations except that manufactured homes less than fifty feet in length may provide only one additional tie per side;

(2) Frame ties shall be provided at each corner of the manufactured home with five additional ties per side at intermediate points except that manufactured homes less than fifty feet in length may provide only four additional ties per side;

(3) All components of the anchoring system shall be capable of carrying a force of 4,800 pounds; and

(4) Any additions to the manufactured home shall be similarly anchored.

(g) Recreational Vehicles:

(1) Shall be on the site for fewer than 180 consecutive days;

(2) Shall be fully licensed and ready for highway use (on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions); or

(3) Meet the requirements for manufactured homes.

(h) Floodways.

(1) Encroachments into the floodway are prohibited, including fill, new construction, substantial improvements, and other development within the floodway unless certification by a qualified engineer is provided, demonstrating that the proposed encroachment will

not result in any increase in flood levels during occurrence of the base flood discharge along the floodway profile.

An exception to the above shall be permitted provided the applicant has acquired by land rights purchase, flowage easement, or other legal arrangement the right to increase the flood levels on all affected lands, and provided that before any permit is issued the applicant submits a Federal Emergency Management Agency (FEMA) approved Conditional Letter of Map Revision to the Director of Building and Safety. When such encroachment is completed, a FEMA approved Letter of Map Revision must also be provided by the applicant.

(2) If the above provision is satisfied, all new construction and substantial improvements shall comply with all other applicable provisions contained in Section 27.53.030.

(3) The placement of any manufactured home parks and manufactured home sub-divisions and the construction of new structures for human habitation within the floodway is prohibited.

(i) AO Zones. Designated AO zones within the floodplain have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply within AO zones:

(1) All new construction and substantial improvements of residential structures shall have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as one foot above the depth number specified in feet on the FIRM (at least two feet if no depth number is specified).

(2) All new construction, any lateral addition, and substantial improvements of non-residential structures shall:

(i) Have the lowest floor elevated above the highest adjacent grade at least as high as one foot above the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or

(ii) Together with attendant utility and sanitary facilities be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the

capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Such certification shall be provided to the official as set forth in Section 27.53.040(d).

(3) Adequate drainage paths around structures on slopes shall be required in order to guide floodwaters around and away from proposed structures.

Section 2. That Section 27.53.030 of the Lincoln Municipal Code as hitherto existing be and the same is hereby repealed.

Section 3. That this ordinance shall take effect and be in force from and after its passage and publication according to law.

Introduced by:

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Approved as to Form & Legality:

_____
City Attorney

Approved this ___ day of _____, 2005:

_____
Mayor