



Roll Call Number

Agenda Item Number

70

Date September 14, 2020

An Ordinance entitled, "AN ORDINANCE to amend the Municipal Code of the City of Des Moines, Iowa, 2000, adopted by Ordinance No. 13,827, passed June 5, 2000, as heretofore amended, by amending Sections 50-26, 50-32.05, 50-34 and 50-35, relating to floodplain development regulations",

which was considered and voted upon under Roll Call No. 20- 1364 of August 17, 2020; again presented.

Moved by _____ that this ordinance be considered and given second vote for passage.

(Second of three required readings)

COUNCIL ACTION	YEAS	NAYS	PASS	ABSENT
COWNIE				
BOESEN				
GATTO				
GRAY				
MANDELBAUM				
VOSS				
WESTERGAARD				
TOTAL				

MOTION CARRIED APPROVED

Mayor

CERTIFICATE

I, P. Kay Cmelik, City Clerk of said City hereby certify that at a meeting of the City Council of said City of Des Moines, held on the above date, among other proceedings the above was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

City Clerk

20-1364
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ORDINANCE NO. _____

AN ORDINANCE to amend the Municipal Code of the City of Des Moines, Iowa, 2000, adopted by Ordinance No. 13,827, passed June 5, 2000, as heretofore amended, by amending Sections 50-26, 50-32.05, 50-34 and 50-35, relating to floodplain development regulations.

Be It Ordained by the City Council of the City of Des Moines, Iowa:

Section 1. That the Municipal Code of the City of Des Moines, Iowa, 2000, adopted by Ordinance No. 13,827, passed June 5, 2000, as heretofore amended, is hereby amended by amending Sections 50-26, 50-32.05, 50-34 and 50-35, relating to floodplain development regulations, as follows:

Sec. 50-26. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

100-year flood or base flood means a flood, the magnitude of which has a one-percent chance of being equaled or exceeded in any given year. All determinations of the 100-year flood level shall be based on data provided by the Federal Insurance Administration. If the Federal Insurance Administration has not provided sufficient data to make a determination, the city shall obtain, review and reasonably utilize data available from the state department of natural resources and from any other source in making such determination.

100-year flood elevation or base flood elevation means the elevation that floodwaters would reach at a particular site during the occurrence of the 100-year flood.

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

Basement means any enclosed area of a building which has its floor below ground level (subgrade) on all sides.

Compensatory storage means an excavated hydrologically and hydraulically equivalent volume of storage created to offset the loss of existing flood storage.

Development means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials. "Development" does not include the following:

- (1) Small development activities (except for filling, grading and excavating) valued at less than \$500;
- (2) Normal maintenance of structures such as re-roofing, replacing roofing tiles and replacing siding;

- (3) Exterior and interior painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work;
- (4) Basement sealing;
- (5) Repairing or replacing damaged or broken window panes;
- (6) Repairing plumbing systems, electrical systems, heating or air conditioning systems and repairing wells or septic systems; or
- (7) Other repairs necessary to keep a structure in a safe and habitable condition that do not trigger a building permit, provided they are not associated with a general improvement of the structure or repair of a damaged structure.

Factory-built home means any structure, designed for residential use, which is wholly or in substantial part made, fabricated, formed or assembled in manufacturing facilities for installation or assembly and installation on a building site. For the purposes of this article, factory-built homes include mobile homes, manufactured homes and modular homes and also include park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days.

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

Flood insurance rate maps means the official maps on which the Federal Insurance Administration has delineated both the flood hazard areas and the risk premium zones applicable to the city.

Flood insurance studies means the Polk County Flood Insurance Study dated February 1, 2019, including but not limited to Panels 19153C0189F, 0195F, 0215F, 0220F, 0327F, 0329F, 0335F, 0340F, 0345F, 0355F, 0360F, 0365F, 0370F, 0380F, and the Warren County flood insurance study dated November 16, 2018, including but not limited to Panels 19181C0043G, 0044G, 0065G, 0068G, 0132G, 0151G, 0152G, 0156G, all of which are made a part of this article by reference, together with the flood profiles and all explanatory material contained therein, subject to any amendments thereto adopted by ordinance enacted by the city council pursuant to section 50-33. Flood insurance rate maps, flood profiles and the water surface elevation of the 100-year flood are contained within the flood insurance studies. The flood insurance studies shall be on file in the office of the city engineer.

Floodplain means any land area susceptible to being inundated by water from any source during the 100-year flood. The floodplain includes all areas designated as "A-" zones on the flood insurance rate maps, including but not limited to A, AE, A1-A30, AH and AO.

Floodproofing means any combination of structural and nonstructural additions, changes or adjustments to structures, including utility and sanitary facilities, which will reduce or eliminate flood damage to such structures.

Floodway means the channel of a river or other watercourse and the adjacent land areas designated to carry the waters of a 100-year flood without increasing the water surface elevation of that flood more than 1.0 foot. Floodways include the areas designated as Floodway Areas within Zone AE on the flood insurance rate maps in the flood insurance studies. The city council may by ordinance designate additional floodway areas which have been identified through engineering studies.

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 Department of the 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 the state register of historic places; or
- (4) Individually designated as a city landmark.

Lowest floor means the floor of the lowest enclosed area in a building or factory-built home, including a basement, except that when the lowest enclosed area satisfies all of the criteria set forth in the following subsections, the lowest floor is the floor of the next highest enclosed area that does not satisfy such criteria:

- (1) The enclosed area is designed to flood to automatically equalize hydrostatic pressure from flood forces on exterior walls by allowing for the entry and exit of floodwaters through walls or openings which satisfy the requirements of subsection 50-34(4) of this article.
- (2) The enclosed area is unfinished (i.e., not carpeted, drywalled, etc.) and is used solely for low damage potential uses such as building access, parking or storage.
- (3) All machinery and service facilities (e.g., hot water heater, furnace, electrical service) contained in the enclosed area are located at least one foot above the 100-year flood level.
- (4) The enclosed area is not a basement, as defined in this section.

Market value means the value of a structure determined using the most recent applicable county assessor's building valuation, or, if determined necessary by the city engineer, by independent appraisal provided by an applicant and verified and approved by the city engineer.

Minimum floodproofing/flood protection elevation means, for all floodplain areas except areas designated as AO zones on the flood insurance rate maps, the elevation of ~~one-foot~~ three feet above the 100-year flood ~~level~~ elevation. The additional elevation above the 100-year flood elevation is also known as "freeboard". For all areas designated as AO zones on the rate maps, the minimum floodproofing/flood protection elevation shall be equal to the depth as specified on the rate map above the highest adjacent grade, or, if no depth is specified, at least two feet above the highest adjacent grade. ~~number of feet above the highest adjacent grade as specified on the rate map, or at least two (2) feet if no depth is specified.~~

New construction means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation (ordinance) adopted by the city and includes any subsequent improvements to such structures.

Recreational vehicle means a vehicle which is:

- (1) Built on a single chassis;
- (2) Four hundred square feet or less when measured at the largest horizontal projection;
- (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.

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 a slab or footing, the installation of piles, the construction of columns, any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory structures, such as garages or sheds not occupied as dwelling units and not part of the main structure. For a substantial improvement, the *actual start of construction* means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means anything constructed or erected with a fixed location on the ground or attached to something having a fixed location on the ground. Structures include but are not limited to buildings, sheds, cabins, factory-built homes, gas or liquid storage tanks, monument signs, grain storage facilities and/or other similar uses.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, repairs, addition, modification, or other improvement of a structure, which satisfies either of the following criteria:

- (1) The cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement.
- (2) Any addition which increases the original floor area of a building or factory-built home by 25 percent or more. All additions constructed after February 4, 1981, shall be added to any proposed addition in determining whether the total increase in original floor space would exceed 25 percent.

The term "substantial improvement" includes structures which have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either: (i) 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 officer and which are the minimum necessary to ensure safe living conditions; or (ii) any alteration which will not preclude the structure's continued designation as a "historic structure."

Variance means a grant of relief by the city council from the terms of this chapter pursuant to section 50-35(c).

Violation means the failure of a structure or other development to be fully compliant with the requirements of this chapter. A structure or other development without a certificate of compliance or other evidence of compliance with the requirements in section 50-34 is presumed to be in violation until such time as that documentation is provided.

Section 50-32.05. Administration.

- (a) The City Engineer is hereby designated to administer and implement the provisions of this chapter.
- (b) The duties of the City Engineer under this chapter shall include, but not be limited to:

- (1) Review of all applications for certificates of compliance to assure that sites are reasonably safe from flooding and that the performance standards of this chapter have been satisfied.
- (2) Review all applications for certificates of compliance to assure that all necessary permits have been obtained from those governmental agencies from which approval is required by federal or state law, including section 404 of the federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. §1334.
- (3) Review all subdivision proposals and other new development, including manufactured home parks, to determine whether such proposals will be reasonably safe from flooding.
- (4) Record and maintain a record of: (i) elevation of the lowest floor (including basement) of all new or substantially improved structure; or (ii) the elevation to which all new or substantially improved structures have been floodproofed.
- (5) Issue certificates of compliance for all approved applications.
- (6) Notify adjacent communities and the state department of natural resources prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
- (7) Keep a record of all permits, appeals, and such other transactions and correspondence pertaining to the administration of this Chapter.
- (8) Maintain the accuracy of the community's Flood Insurance Rate Maps when:
 - a. Development placed within the Floodway results in any of following:
 1. An increase in the Base Flood Elevations, or
 2. Alteration to the floodway boundary.
 - b. Development placed in Zones A, AE, AH and A1–A30 that does not include a designated floodway that will cause a rise of more than one foot in the base elevation; or
 - c. Development relocates or alters a channel.

Within 6 months of the completion of the development, the applicant shall submit to FEMA all scientific and technical data necessary for a Letter of Map Revision.
- (9) Maintain any certificates of floodproofing, and information on the elevation (in relation to mean sea level) of the level of the lowest floor (including basement) of all new or substantially improved structures, and include whether or not such structures contain a basement, and if the structures have been floodproofed, the elevation (in relation to mean sea level) to which the structures were floodproofed.
- (10) Maintain records of damage, reconstruction, rehabilitation, repairs, additions, modifications, or other improvements to buildings within floodplain areas.

Sec. 50-34. Performance standards.

No structure or land shall hereafter be placed to a use and no structure shall be constructed, located, expanded, converted to a new use or structurally altered without full compliance with the terms of this chapter. All uses within floodplain areas must be consistent with the need to minimize flood damage and shall meet the following applicable performance standards:

- (1) All structures and factory-built homes (whether or not placed in existing factory-built home parks or subdivisions) for which the start of construction commenced

on or after February 4, 1981, or to which substantial improvements have been made on or after February 4, 1981, shall be:

- a. Adequately anchored to prevent flotation, collapse or lateral movement of the structure during conditions of flooding. Anchorage systems may include, but are not limited to, use of over-the-top or frame tied ground anchors;
 - b. Constructed with materials and utility equipment resistant to flood damage;
 - c. Constructed by methods and practices minimizing flood damage; and
 - d. Constructed with any electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
 - e. Reviewed to assure that all necessary permits have been received from those governmental agencies from which approval is required by federal or state law, including section 404 of the federal Water Pollution Control Act of 1972, 22 U.S.C. §1334.
- (2) All residential buildings and factory-built homes (whether or not placed in existing factory-built home parks or subdivisions) for which the start of construction commenced on or after February 4, 1981, or to which substantial improvements have been made on or after February 4, 1981, shall have the lowest floor, including basement, elevated equal to or above the minimum floodproofing/flood protection elevation. Elevation shall be achieved by means of compacted fill or by such other methods, including piers, as the city engineer determines to be adequate to support the structure as well as withstand the various forces and hazards associated with flooding.
- (3) All nonresidential buildings and factory-built homes (whether or not placed in existing factory-built home parks or subdivisions) for which the start of construction commenced on or after February 4, 1981, or to which substantial improvements have been made on or after February 4, 1981, shall have the lowest floor, including basement, elevated equal to or above the minimum floodproofing/flood protection elevation or, together with attendant utility and sanitary systems, shall be floodproofed to such a level. When floodproofing is utilized, a professional engineer registered in the state shall certify that the floodproofing methods used are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the 100-year flood and that the structure, below the minimum floodproofing/flood protection elevation, is watertight with walls substantially impermeable to the passage of water. A record of the certification indicating the specific elevation, in relation to National Geodetic Vertical Datum, to which any buildings are floodproofed shall be maintained by the office of the building official.
- (4) Within all buildings and factory-built homes (whether or not placed in existing factory-built home parks or subdivisions) for which the start of construction commenced on or after February 4, 1981, or to which substantial improvements have been made on or after February 4, 1981, any enclosed areas below the lowest floor shall be designed to automatically equalize hydrostatic pressure from flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs

for meeting this requirement either must be certified by a registered professional engineer or must meet the following criteria:

- 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.
 - b. The bottom of all openings shall be no higher than one foot above grade.
 - c. Openings may be equipped with screens, louvers, valves, or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.
 - e. Such enclosed areas shall be used solely for parking of vehicles, building access and low damage potential storage.
- (5) Utility and sanitary systems shall satisfy the following criteria:
- a. All new and replacement sanitary sewer systems shall be designed to minimize or eliminate infiltration of floodwaters into the system as well as the discharge of effluent into floodwaters. Wastewater treatment facilities shall be provided with a level of flood protection equal to or above the minimum floodproofing/flood protection elevation.
 - b. On-site waste disposal systems shall be located or designed to avoid impairment to the system or contamination from the system during flooding.
 - c. New or replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system. Water supply treatment facilities shall be provided with a level of protection equal to or above the minimum floodproofing/flood protection elevation.
 - d. Utilities such as gas and electrical systems shall be located and constructed to minimize or eliminate flood damage to the system and the risk associated with such flood damaged or impaired systems.
- (6) Flood control structural works such as levees and floodwalls shall provide, at a minimum, protection from a 100-year flood with a minimum of three feet of design freeboard and shall provide for adequate interior drainage. In addition, structural flood control works shall be approved by the state department of natural resources.
- (7) Storage of materials and equipment that are flammable, explosive or injurious to human, animal or plant life is prohibited unless stored indoors and elevated equal to or above the minimum floodproofing/flood protection elevation. Other material and equipment must either be:
- a. Similarly elevated;
 - b. Not subject to major flood damage and anchored to prevent movement due to floodwaters; or
 - c. Readily removable from the area within the time available after flood warning.
- (8) No use shall affect the capacity or conveyance of the channel or floodway of any tributary to the main stream, drainage ditch or other drainage facility or system.
- (9) All subdivisions shall be consistent with the need to minimize flood damages and shall have adequate drainage provided to reduce exposure to flood damage. Development associated with subdivision proposals shall meet the applicable performance standards. Subdivision proposals intended for residential development

shall provide all lots with a means of vehicular access that will remain dry during occurrence of the 100-year flood. Proposals for subdivisions and other proposed developments, including proposals for manufactured home parks and subdivisions, greater than five (5) acres or (50) lots, whichever is the lesser, shall include 100-year flood elevations for those areas located within the floodplain.

- (10) Detached garages, sheds and similar accessory structures that are incidental to a single-family (single-household) or two-family (two-household) residential use are exempt from the minimum floodproofing/flood protection elevation ~~100-year flood elevation~~ requirements, provided all of the following criteria are met:
- a. The structure shall not be used for human habitation, and shall be used solely for low flood damage potential purposes such as vehicle parking and limited storage.
 - b. The structure shall be designed to have low flood damage potential. Those portions of the structures located below the minimum flood protection elevation must be constructed of flood-resistant materials as determined by the Federal Emergency Management Agency.
 - c. The structure shall be constructed and placed on the building site so as to offer minimum resistance to the flow of floodwaters.
 - d. The structure shall be firmly anchored to prevent flotation which may result in damage to other structures.
 - e. The structure's service facilities such as electrical, heating, ventilation, plumbing, and air conditioning equipment shall be elevated or floodproofed to a level equal to or above the minimum floodproofing/flood protection elevation.
 - f. The structure's walls shall include openings that satisfy the provisions of subsection (4) of this section.
 - g. The owner of the structure must sign a non-conversion agreement whereby the owner agrees not to modify the enclosed area in any way that would make it more susceptible to flood damage. The agreement must contain a legal description sufficient to identify the property upon which the structure is located, and be recorded at the owner's expense with the applicable county recorder. The agreement shall allow the city the right to inspect the enclosed area at any time.
- (11) Recreational vehicles shall not be placed on sites within the areas designated as A1- A30, AO, AE, and AH on the flood insurance rate maps or in other approximate "A-" zones for which base flood elevation data has been obtained or provided by IDNR or the city engineer, unless the recreational vehicle will:
- a. Be on the site for fewer than 180 consecutive days;
 - b. Be fully licensed and ready for highway use; or
 - c. Meet the permit, elevation and anchoring requirements for a factory-built home.
- A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by disconnect-type utilities and security devices, and has no permanent attached additions.
- (12) Pipeline river and stream crossings shall be buried in the streambed and banks, or otherwise sufficiently protected to prevent rupture due to channel degradation and meandering or due to the action of flood flows, and shall be constructed, operated,

and maintained so as not to create premature overbank flow or excessive scour to the channel or banks. Spoil material resulting from the construction of a pipeline crossing shall be disposed of in a manner which will not obstruct low flow or flood flows.

- (13) In the AH and AO Zones as shown by the flood insurance rate maps, all structures on slopes for which the start of construction commenced on or after February 4, 1981, or to which substantial improvements have been made after February 4, 1981, shall have adequate drainage paths to guide floodwaters around and away from the structure.
- a. In AO Zones, as designated on the Flood Insurance Rate Map, the minimum flood protection elevation for all new construction and substantial improvements of residential structures shall be equal to or above the number of feet as specified on the Flood Insurance Rate Map (or a minimum of 2.0 feet, if no number is specified) above the highest adjacent grade to the structure, and the minimum flood protection elevation for all new construction and substantial improvements of nonresidential structures shall (i) be equal to the number of feet as specified in the Flood Insurance Rate Map (or a minimum of 2.0 feet, if no number is specified) above the highest adjacent grade, or (ii) together with attendant utility and sanitary facilities be completely floodproofed so that below the base flood level 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.
 - b. In AH Zones, as designated on the Flood Insurance Rate Map, the minimum flood protection elevation for all new construction and substantial improvements of residential structures shall be equal to or above the elevation as specified on the Flood Insurance Rate Map, and the minimum flood protection elevation for all new construction and substantial improvements of nonresidential structures shall (i) be equal to or above the number of feet as specified in the Flood Insurance Rate Map, or (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level 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.
- (14) All encroachments, including fill, new construction, substantial improvements, and other development, within a designated floodway are hereby prohibited unless it has been demonstrated to the reasonable satisfaction of the city engineer through hydrologic and hydraulic analysis performed in accordance with standard engineering practices that the proposed encroachment will not result in any increase in flood levels within the flood plain during the occurrence of a 100-year flood.
- a. No use shall be permitted in the Floodway that would result, individually or collectively, in any increase in the base flood elevation. Consideration of the effects of any development on flood levels shall be based upon the assumption that an equal degree of development would be allowed for all similarly situated lands. Notwithstanding the foregoing sentence, a

structure, associated fill, or another potential obstruction owned, operated, or maintained by a local, state or federal governmental entity, whose location in the floodway provides a substantial public benefit, such as bridge embankments, water supply intake structures, and water wells with appurtenant fill, may be allowed if the resulting increase in flood levels is mitigated by purchase of flooding easements or execution of other appropriate agreements with the owners of property on which flooding would be increased.

- b. No use shall affect the capacity or conveyance of the channel or floodway of any tributary to the main stream, drainage ditch or any other drainage facility or system.
 - c. Buildings, if permitted, shall have a low flood damage potential and shall not be used for human habitation.
 - d. Storage of materials or equipment that are buoyant, flammable, explosive or injurious to human, animal or plant life is prohibited.
 - e. Watercourse alterations or relocations must be designed to maintain the flood carrying capacity within the altered or relocated portion. In addition, such alterations or relocations must be approved by the Department of Natural Resources.
- (15) For any development in the floodplain in Zones A, AE, AH and A1-A30 for which no floodway is delineated, documentation must be provided to the City, in the form and to the extent required by the City Engineer, demonstrating that such development will not cause a rise of more than one foot in the base flood elevation.
- (16) a. Any addition to a structure or factory-built home (whether or not placed in an existing factory-built home park or subdivision) constructed on or after February 4, 1981, which addition increases the original floor area of the applicable structure or factory-built home by any amount, shall comply with subsections (a) through (e) of subsection 1 of this section.
- b. Any addition constructed on or after February 4, 1981 to a residential building or factory-built home (whether or not placed in an existing factory-built home park or subdivision), which addition increases the original floor area of the applicable structure or factory-built home by any amount, shall have its lowest floor, including basement, elevated equal to or above the minimum floodproofing/flood protection elevation. Elevation of the addition shall be achieved by means of compacted fill or by such other methods, including piers, as the city engineer determines to be adequate to support the structure as well as withstand the various forces and hazards associated with flooding.
 - c. Any addition constructed on or after February 4, 1981 to a nonresidential building or factory-built home (whether or not placed in an existing factory-built home park or subdivision), which addition increases the original floor area of the applicable structure or factory-built home by any amount, shall have its lowest floor, including basement, elevated equal to or above the minimum floodproofing/flood protection elevation or, together with attendant utility and sanitary systems, shall be floodproofed to such a level. When floodproofing is utilized, a professional engineer registered in the

state shall certify that the floodproofing methods used are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the 100-year flood and that the structure, below the minimum floodproofing/flood protection elevation, is watertight with walls substantially impermeable to the passage of water. A record of the certification indicating the specific elevation, in relation to National Geodetic Vertical Datum, to which any additions are floodproofed shall be maintained by the office of the building official.

(17) Unless otherwise specified in this subsection, development in the floodplain shall result in no net loss of natural floodplain storage, and compensatory storage equal to at least 1.5 times the volume of floodplain storage displaced shall be provided for all development above grade in the floodplain. All required compensatory storage shall be located at a hydraulically equivalent site on the same cross-section or as demonstrated by modeling provided by the applicant and prepared by an engineer licensed in the state of Iowa. For developments that are required to have stormwater detention facilities, the storage volume required to meet the city's stormwater management regulations for the 100-year flood event does not count as credit towards satisfying the compensatory storage requirement.

a. The following development projects are required to meet a compensatory storage requirement in accordance with this subsection equal to at least 1.0 times the volume of floodplain storage displaced, rather than equal to at least 1.5 times the volume of floodplain storage displaced:

i. Projects undertaken wholly within the geographic area mapped by the city engineer and generally described as the Des Moines River floodplain from the centerline of the East University Avenue bridge to a point that is 1,400 feet east of the centerline of the Southeast 14th Street bridge and the Raccoon River floodplain from the centerline of the Southwest 9th Street bridge to the confluence with the Des Moines River.

b. The following development projects are not required to meet the compensatory storage requirement unless specifically required by the city engineer after review of the initial certificate of compliance application:

i. Minor projects clearly having negligible impact, such as street/parking lot resurfacing/rehabilitation, certain utility infrastructure and appurtenances (e.g. hydrants, poles, manholes, underground pipes), bridge/culvert rehabilitation projects, landscaping, property maintenance, stream rehabilitation, restoration of natural floodplain functions, and minor water quality features which typically pose no increased fill or flood potential and do not inhibit the free flow of water.

ii. Flood protection of existing buildings for floodplain volume displaced by the building and within the area of 10 feet adjacent to said building.

(18) All new buildings constructed on fill in the floodplain must be constructed on properly designed and compacted fill that has appropriate protection from erosion and scour. Compacted fill must be placed, compacted, and sloped to minimize

shifting, slumping, and erosion during the rise and fall of flood water. Where shallow foundations will bear on compacted fill material, a geotechnical investigation report must be prepared in accordance with the International Building Code, published by the International Code Council, as adopted and amended in chapter 26 of this municipal code. Records of soil testing and inspection must be provided to the city prior to obtaining a certificate of occupancy.

Sec. 50-35. Certificate of compliance.

- (a) *Required.* An application for a certificate of compliance, also known as a floodplain development permit, shall be filed with the city permit and development center and a certificate of compliance must be issued pursuant to subsection (c) of this section prior to commencement of any proposed development or encroachment within a floodplain area. No application for any of the following shall be approved respecting proposed development within a floodplain area unless a certificate of compliance has been issued pursuant to subsection (c) of this section:
- (1) Site plan or alternate design documentation approval, pursuant to article 9 of chapter 135 of this Code.
 - (2) Grading permit approval, pursuant to section 42-86 of this Code.
 - (3) Building permit approval, pursuant to chapter 26 of this Code.
 - (4) Subdivision approval, pursuant to chapter 106 of this Code.
 - (5) Issuance of certificate of zoning compliance, pursuant to section 134-1.7 of chapter 134 of this Code.
 - (6) Development plan approval, pursuant to division 11 (R-5), division 12 (R-6), division 13 (PUD), division 14 (PBP) and division 23 (C-4) of article III of chapter 134 this Code if approved prior to December 15, 2019, and pursuant to legacy PUD approval in chapters 134 and 135 of this Code if approved on or after December 15, 2019.
- (b) *Required information.* Every application for a certificate of compliance shall contain the following information, which information shall be provided for city review and consideration prior to issuance of a certificate of compliance pursuant to subsection (c) of this section:
- (1) A description of the work for which application is to be made.
 - (2) A description of the land on which the proposed work is to be done (i.e., lot, block, tract, street address or similar description) that will readily identify and locate the work to be done.
 - (3) Indication of the use or occupancy for which the proposed work is intended.
 - (4) A report showing the elevation, in relation to National Geodetic Vertical Datum, of the lowest floor, including basement, of a building and of the level to which a building is to be floodproofed. In addition, such report shall include such information regarding the elevation of the 100-year flood and flood velocities during the 100-year flood as the city engineer deems reasonably necessary for the purpose of this article. Such report shall be prepared by a professional engineer registered under state laws, which report shall be approved by the city engineer as to method and form.

- (5) For buildings being improved or rebuilt, the estimated cost of improvements and market value of the building prior to the improvements.
 - (6) Volumetric calculations demonstrating compensatory storage when required by this article.
 - (7) Geotechnical investigation report and records of soil testing and inspection when required by this article.
 - (8) A recorded copy of the applicable non-conversion agreement, showing the book and page number and recording date, for detached garages, sheds, and similar accessory structures to which section 50-34(10) of this article applies.
 - (96) Such other information as the city engineer deems reasonably necessary for the purpose of this article.
- (c) *Determination and action.* The city engineer shall review each floodplain development application and shall, within a reasonable time, make a determination as to whether the proposed development meets the applicable performance standards of section 50-34 of this article and, on the basis of such determination, shall issue or deny the certificate of compliance. For a denial, the applicant shall be informed, in writing, of the specific reasons therefore and shall have the right to appeal to the city council for a variance of the requirements of this article on the grounds that (i) the city engineer made an erroneous determination or (ii) an exception or modification should be made to the full application of the performance standards of section 50-34 of this article in order to avoid unnecessary hardship to the applicant or to further the public interest. The city council shall authorize such a variance only as follows:
- (1) Variances shall only be issued upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of the variance 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 codes or ordinances.
 - (2) Variances shall not be issued within any designated floodway if any increase in flood levels during the 100-year flood would result. Consideration of the effects of any development on flood levels shall be based upon the assumption that an equal degree of development would be allowed for similarly situated lands.
 - (3) Variances shall only be granted upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (4) In cases where the variance involves a lower level of flood protection for buildings than what is ordinarily required by this article, the applicant shall be notified in writing over the signature of the City Engineer that: (i) the issuance of a variance will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and (ii) such construction increases risks to life and property. This statement shall be maintained as a required record under section 50-35(e) below.
 - (5) All variances granted shall have the concurrence or approval of the Department of Natural Resources.
 - (6) In addition to the above conditions in this subsection, variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued

designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

All actions by the city council in granting or denying appeals shall be by written decision setting forth the specific reasons therefore. The city council may attach such conditions to the granting of an exception or modification as it deems necessary to further the purposes of this article. If an appeal is granted by the city council, the city engineer shall thereafter issue a certificate of compliance.

- (d) *Construction and use as provided in application and plans.* Certificates of compliance issued on the basis of approved plans and applications authorize only the use, arrangement and construction set forth in such approved plans and applications and no other use, arrangement or construction. Any use, arrangement or construction at variance with that authorized shall be deemed a violation of this article and shall be punishable as provided in section 50-36 of this article. The applicant shall be required to submit certification by a professional engineer or land surveyor, as appropriate, registered in the state, that the finished fill, building floor elevations, floodproofing, or other flood protection measures were accomplished in compliance with this article prior to the use or occupancy of any structure.
- (e) *Required records.* The city engineer shall compile and maintain records of actions taken on all requests for a certificate of compliance, including justification for issuance or denial. The city permit and development center shall compile and maintain records of the elevation, in relation to National Geodetic Vertical Datum, of the lowest floor, including basement, of all new and substantially improved buildings within floodplain areas.

Section 2. This ordinance shall be in full force and effect from and after its passage and publication as provided by law.

FORM APPROVED:

/s/ Glenna K. Frank
Glenna K. Frank
Assistant City Attorney