

**CITY OF FLORENCE
ORDINANCE NO. 6, SERIES 2017**

**An Ordinance amending Florence City Code Title 4, Chapter 4
Regarding Flood Damage Prevention.**

RECITALS:

1. The City of Florence has a participation agreement with Federal Emergency Management whereby the City must adopt and enforce a floodplain ordinance.
2. The City of Florence participates in the National Flood Insurance Program (NFIP) to qualify properties within its jurisdiction for flood insurance and make them eligible for federal mortgages.
3. By participating in the NFIP through implementation of floodplain regulations the City is deemed to comply with Oregon Land Use Goal 7 for coastal and riverine flood hazards.
4. The City wishes to change its floodplain ordinance to comply with federal policy changes.
5. The Florence City Council adopted 2017-2018 Workplan, Goal 1, Objective 6 of Community Development to "Update Title 4 Building Code".

Based on these findings,

THE CITY OF FLORENCE ORDAINS AS FOLLOWS:

1. The Florence City Code Chapter 4 of Title 4 is amended as shown in Exhibit A.
2. The City Recorder is authorized to administratively correct any reference errors contained herein or in other provisions of the Florence City Code to the provisions added, amended, or repealed herein.

ADOPTION:

First Reading on the 17th day of April, 2017.

Second Reading on the _____ day of _____, 2017

This Ordinance is passed and adopted on the 17th day of April, 2017.

AYES Councilors
NAYS
ABSTAIN
ABSENT

Joe Henry, Mayor

Attest:

Kelli Weese, City Recorder

TITLE 4
CHAPTER 4

FLOOD DAMAGE PREVENTION

SECTION:

- 4-4-1: Purpose
- 4-4-2: Methods of Reducing Flood Losses
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- 4-4-5-2: Designation of the ~~Building Official~~ Floodplain Manager
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- 4-4-5-4: Variance Procedure
- 4-4-6: Provisions for Flood Hazard Protection
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- 4-4-6-2: Specific Standards
- 4-4-6-3: Encroachments
- 4-4-6-4: Standards for Shallow Flooding Areas (AO Zones)

4-4-1: PURPOSE: It is the purpose of this Chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- A. To protect human life and health.
- B. To minimize expenditure of public money and costly flood control projects.
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- D. To minimize prolonged business interruptions.
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard.
- F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas.
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard.
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

4-4-2: METHODS OF REDUCING FLOOD LOSSES: In order to accomplish its purposes, this Chapter includes methods and provisions for:

- A. Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities.

- B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- C. Controlling the alteration of natural flood plains, stream channels and natural protective barriers, which help accommodate or channel flood waters.
- D. Controlling filling, grading, dredging and other development which may increase flood damage.
- E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

4-4-3: DEFINITIONS:

4-4-3-1: CONSTRUCTION OF WORDS: Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the meaning they have in common usage and to give this Chapter its most reasonable applications.

4-4-3-2: GENERAL DEFINITIONS:

APPEAL	A request for a review of the Building Officials' Floodplain Manager interpretation of any provision of this Chapter or a request for a variance.
AREA OF SHALLOW FLOODING	A designated AO or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one foot to three feet (1'- 3'); a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.
AREA OF SPECIAL FLOOD HAZARD	The land in the flood plain within a community subject to a one percent (1%) or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.
BASE FLOOD	The flood having a one percent (1%) chance of being equaled or exceeded in any given year. Also referred to as the "100-year flood." Designation on maps always includes the letters A or V.
BASEMENT	Any area of building having its floor subgrade (below ground level) on all sides.
BREAKAWAY WALL	A wall that is not part of the structural support of a building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.
COASTAL HIGH HAZARD AREA	Means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as Zone V1-V30, VE or V.
CRITICAL FACILITY	A facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospital, police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste.
DEVELOPMENT	Any man made 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, storage of equipment and materials, and substantial improvement or repair of substantial damage located within the area of special flood hazard.

ELEVATED BUILDING

For insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

EXISTING
MANUFACTURED
HOME PARK OR
SUBDIVISION

A manufactured home park 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 adopted flood plain management regulations.

EXPANSION EXISTING
MANUFACTURED
HOME PARK OR
SUBDIVISION

The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured home are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or pouring of concrete pads).

FLOOD OR FLOODING

A general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal waters, and/or
2. The unusual and rapid accumulation of runoff of surface waters from any source.

FLOOD INSURANCE
RATE MAP (FIRM)

The official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community, and filed with the Building Official/Floodplain Manager.

FLOOD
INSURANCE
STUDY

The official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood, and filed with the ~~Building~~ Official/Floodplain Manager.

FLOODWAY

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot (1')

LOWEST FLOOR

The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance found at Section 4-4-6-2.

HABITABLE FLOOR

Any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a "habitable floor".

MANUFACTURED HOME

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 connected to the required utilities. For flood plain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes the term

"manufactured home" does not include park trailers, travel trailers, and other similar vehicles.

MANUFACTURED HOME
PARK OR SUBDIVISION

A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

NEW CONSTRUCTION

Structures for which the "start of construction" commenced on or after the effective date of this chapter.

NEW MANUFACTURED
HOME PARK OR
SUBDIVISION

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 the effective date of adopted floodplain management regulations.

RECREATIONAL
VEHICLE

Mean a vehicle which is:
a. Built on a single chassis;
b. 400 square feet or less when measured at the largest horizontal projection;
c. Designed to be self-propelled permanently towable by a light duty truck;
d. Designed primarily not for use as a permanent dwelling but as a 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, 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. 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 foundation 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 not part of the main structure.

STRUCTURE

A building, as defined in City Code Section 10-1-4, and includes any walled and roofed building including a gas or liquid storage tank that is principally above ground.

SUBSTANTIAL
DAMAGE

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 (50%) of the market value of the structure before the damage occurred.

SUBSTANTIAL
IMPROVEMENT

Any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

1. Before the improvement or repair is started, or
2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall,

ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

1. Any project for improvement of a structure to comply with existing State or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions, or
2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

VARIANCE

A grant of relief from the requirements of this Chapter which permits construction in a manner that would otherwise be prohibited by this Chapter.

WATER DEPENDENT

A structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operation.

4-4-4: GENERAL PROVISIONS:

4-4-4-1: LANDS TO WHICH THIS CHAPTER APPLIES: This Chapter shall apply to all areas of special flood hazards within the jurisdiction of the City of Florence, hereinafter known as the City.

4-4-4-2: BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD: The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the City of Florence", dated May 17, 1982, Panel No. 4101230001 B with accompanying Flood Insurance Maps is hereby adopted by reference and declared to be a part of their regulations. The Flood Insurance Study is on file with the ~~Building Official~~Floodplain Manager, Florence City Hall, 250 Highway 101, Florence, Oregon.

4-4-4-3: COMPLIANCE: No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Chapter and other applicable regulations. Violations of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions), shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall be prosecuted as set forth in section 6-1-1B in this code. Nothing herein contained shall prevent the City of Florence from taking such other lawful action as is necessary to prevent or remedy any violation.

4-4-4-4: ABROGATION AND GREATER RESTRICTIONS: This Chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this Chapter and another City Code title, chapter or section, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

4-4-4-5: INTERPRETATION: In the interpretation and application of this Chapter, all provisions shall be:

- A. Considered as minimum requirements.
- B. Liberally construed in favor of the governing body.
- C. Deemed neither to limit nor repeal any other powers granted under State statutes.

4-4-4-6: WARNING AND DISCLAIMER OF LIABILITY: The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This Chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This Chapter shall

not create liability on the part of the City, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.

4-4-5 ADMINISTRATION:

4-4-5-1: ESTABLISHMENT OF DEVELOPMENT PERMIT: A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 4-4-2. The permit shall be for all structures including, manufactured homes as set forth in Definitions, Section 4-4-3, and for all other development including fill and other activities, also as set forth in the Definitions, Section 4-4-3. Application for a development permit shall be made on forms furnished by the ~~Building Official Floodplain Manager~~ and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

- A. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures.
- B. Elevation in relation to mean sea level to which any structure has been floodproofed.
~~structure has been floodproofed.~~
- C. Certification by a registered ~~professional~~ engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 4-4-6-2B.
- D. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

4-4-5-2: DESIGNATION OF THE ~~BUILDING OFFICIAL FLOODPLAIN MANAGER:~~ The ~~Building Official Planning Director or his/her designee~~ is ~~hereby~~ appointed to administer and implement this Chapter ~~by granting or denying development permit applications~~ in accordance with its provisions

4-4-5-3: DUTIES AND RESPONSIBILITIES: ~~OF THE BUILDING OFFICIAL~~

A. FLOODPLAIN MANAGER: Duties of the ~~Building Official Floodplain Manager~~ shall include, but are not ~~be~~ limited to:

- 1A. Permit Review.
 - a1. Review all development permits to determine that the permit requirements of this Chapter have been satisfied.
 - b2. Review all development permits to determine that all necessary permits have been obtained from those Federal, State or local governmental agencies from which prior approval is required. Copies of such permits shall be maintained on file.
- 2B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 4-4-4- 2, Basis for Establishing the Areas of Special Flood Hazard, the ~~Building Official Floodplain Manager~~ shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, in order to administer Section 4-4-6-2A, Specific Standards - Residential Construction, and Section 4-4-6-2B, Specific Standards - Nonresidential Construction and section 4-4-6-3, Encroachments.
- 3C. Information to be Obtained and Maintained.
 - a1. Where base flood elevation data is provided through the Flood Insurance Study or required as in Section 4-4-5-3-~~A2B~~, obtain and record the actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

| b2. For all new or substantially improved floodproofed structures:

- ia. Verify and record the actual elevation (in relation to mean sea level), and
- iib. Maintain the floodproofing certifications required in Section 4-4-5-1B.
- c3. Maintain for public inspection all records pertaining to the provisions of this Chapter.

4D. Alteration of Watercourses.

- a.4. Notify affected jurisdictions, and the Director of the ~~Division~~ Department of State Lands, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
- b.2. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

5E. Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 4-4-5-4.

6. Communication.

- a. Communicate to the Building Official the applicable flood zone, base flood elevation for building permits, and freeboard requirement for lowest floor and mechanicals.
- b. Make substantial damage and improvement calculations.
- c. Inspect development to assure compliance with the local flood hazard regulations.
- d. Acknowledge ESA compliance for LOMR-F applications.
- e. Assist FEMA in preparation and revision of flood maps
- f. Verify BFEs estimated by non-state and federal agencies.
- g. Assist residents in obtaining information on flood hazards, map data, flood insurance and proper construction measures.
- h. Notify landowners in writing of insurance implications when issuing a variance approved under 4.4.5.4. Retain documentation of notification.

B. BUILDING OFFICIAL: Duties of the Building Official shall include, but are not limited to:

- 1. Ensure the lowest floor is elevated to or above BF#E + freeboard established by the Floodplain Administrator.
- 2. Ensure mechanical equipment and ducting is installed to or above BFE + freeboard established by Floodplain Administrator.
- 3. Ensure installation of adequate flood openings.
- 4. Ensure use of flood resistant materials below BFE
- 5. Ensure enclosed areas below BFE are outfitted to allow only parking, building access and storage.

4-4-5-4: VARIANCE PROCEDURE:

A. Appeal Board.

1. The Planning Commission, as established by the City, shall hear and decide appeals and requests for variances from the requirements of this Chapter.
2. The Planning Commission shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the ~~Building Official~~ Floodplain Manager in the enforcement or administration of this Chapter.
3. A written appeal shall be filed with the ~~Building Official~~ Floodplain Manager within fifteen (15) days after receiving notification of the decision of the ~~Building Official~~ Floodplain Manager. Such appeal shall state the grounds for appealing such decision and setting forth the alleged error in detail.
4. In passing upon such applications, the Planning Commission shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Chapter, and:
 - a. The danger that materials may be swept onto other lands to the injury of others.
 - b. The danger of life and property due to flooding or erosion damage.
 - c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
 - d. The importance of the services provided by the proposed facility to the community.
 - e. The necessity to the facility of a waterfront location, where applicable.
 - f. The availability of alternative locations, for the proposed use which are not subject to flooding or erosion damage.
 - g. The compatibility of the proposed use with existing and anticipated development.

- h. The relationship of the proposed use to the comprehensive plan and flood plain management program for that area.
 - i. The safety of access to the property in times of flood for ordinary and emergency vehicles.
 - j. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site.
 - k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
5. Upon consideration of the factors of Section 4-4-5-4A.4, and the purposes of this Chapter, the Planning Commission may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Chapter.
 6. A decision of the Planning Commission may be appealed to the City Council, by filing a written appeal with the Planning Department within fifteen (15) days after the date of the ~~P~~lanning Commission decision. Such appeal shall state the grounds for appealing such decision and setting forth the alleged error. The City Council review is an inspection of the record to determine whether there ~~is~~ evidence to support the findings and that the findings are sufficient to support the Planning Commission decision.
 7. The ~~Building Official~~ Floodplain Manager shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

B. Conditions for Variances.

1. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this Section.
2. Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (1/2) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (a-f) in Section 4-4-5-4A.4 have been fully considered. As the lot size increases beyond the one-half (1/2) acre, the technical justification required for issuing the variance increases.
3. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
4. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Variances shall only be issued upon:
 - a. A showing of good and sufficient cause.
 - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant.
 - c. A determination that the granting of a 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 as identified in Section 4-4-5-4-A.4.

6. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
7. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.
8. Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except 4-4-5-4-B-1, and otherwise complies with Sections 4-4-6-1-A and 4-4-6-1-B of the General Standards.

4-4-6: PROVISIONS FOR FLOOD HAZARD PROTECTION:

4-4-6-1: GENERAL STANDARDS: In all areas of special flood hazards the following standards are required:

- A. Anchoring.
 1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
 2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).
- B. Construction Materials and Methods.
 1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
 2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
 3. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- C. Utilities.
 1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
 2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
- D. Subdivision Proposals.
 1. All subdivision proposals shall be consistent with the need to minimize flood damage.

2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
 3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
 4. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed development which contain at least fifty (50) lots or five (5) acres (whichever is less).
- E. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study or from another authoritative source, applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

4-4-6-2: SPECIFIC STANDARDS: In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 4-4-4-2, Basis for Establishing the Areas of Special Flood Hazard, or Section 4-4-5-3B. Use in other Base Flood Data, the following provisions are required:

A. Residential Construction.

1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least one foot (1') above the base flood elevation. (Ord. 20 Series 1994)
2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - 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, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

B. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of the base elevation; or, together with attendant utility and sanitary facilities, shall:

1. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water.
2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the **official manager** as set forth in Section 4-4-5-3A.

4. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in 4-4-6-2-A.
5. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g. a building constructed to the base flood level will be rated as one foot below that level).

C. **Manufactured Homes.**

1. All manufactured homes to be placed or substantially improved within Zones A1-A30, AH, and AE on the community's FIRM on sites:
 - (i) Outside of a manufactured home park or subdivision,
 - (ii) In a new manufactured home park or subdivision,
 - (iii) In an expansion to an existing manufactured home park or subdivision, or
 - (iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage: as the result of a flood;

Shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement.

2.4. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, and AE on the community's FIRM that are not subject to the above manufactured home provisions be elevated so that either:

- (i) The lowest floor of the manufactured home is elevated one foot above the base flood elevation, or
- (ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are not less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

D. **Recreational Vehicles:** Recreational vehicles placed on sites within ZONES A1-30, AH, and AE on the community's FIRM either:

- (i) Be on the site for fewer than 180 consecutive days.
- (ii) Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has not permanently attached additions; or
- (iii) Meet the requirements of Section 4-4-6-2C.

E. **Floodways:** Located within areas of special flood hazard established in 4-4-4-2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

1. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional civil engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
2. If this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 4-4-6.

4-4-6-3: ENCROACHMENTS:

The cumulative effect of any proposed development, when combined with all other existing and anticipated development, shall not increase the water surface elevation of the base flood more than one foot (1') at any point. (Ord. 661,11-24-81)

4-4-6-4: STANDARDS FOR SHALLOW FLOODING AREAS (AO ZONES)

Shallow flooding areas appear on FIRMS as AO zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

1. New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified).
2. New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - (i) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified); or
 - (ii) Together with attendant utility and sanitary facilities, be completely flood proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as described in Section 4-4-6-2, B-3.
3. Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structure.
4. Recreational vehicles placed on sites within AO Zones on the community's FIRM either:
 - (i) Be on the site for fewer than 180 consecutive days,
 - (ii) Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
 - (iii) Meet the requirements of Section 4-4-6-2C.

Amended by Ord. 1, Series 1987
Amended by Ord. 20, Series 1994
Amended by Ord. 9, Series 1999