ARTICLE III. - PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 34-81. - General standards.

In all areas of special flood hazard the following provisions are required:

(1) New construction and substantial improvements of existing structures shall be anchored to prevent flotation, collapse or lateral movement of the structure;

(2) New construction and substantial improvements of existing structures shall be constructed with materials and utility equipment resistant to flood damage;

(3) New construction or substantial improvements of existing structures shall be constructed by methods and practices that minimize flood damage;

(4) Elevated buildings. All new construction or substantial improvements of existing structures that include any fully enclosed area located below the lowest floor formed by foundation and other exterior walls shall be designed so as to be an unfinished or flood resistant enclosure. The enclosure shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater:

a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:

1. Provide 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;

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

3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both directions.

b. So as not to violate the "lowest floor" criteria of this chapter, the unfinished or flood resistant enclosure shall only be used for parking of vehicles, limited storage of maintenance equipment used in connection with the premises, or entry to the elevated area; and

c. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.

(5) All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

(6) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;

(7) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

(8) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;

(9) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and

(10) Any alteration, repair, reconstruction or improvement to a structure which is not compliant with the provisions of this chapter shall be undertaken only if the non-conformity is not furthered, extended or replaced.

(Ord. of 3-3-15, § 1)

Sec. 34-82. - Specific standards.

In all areas of special flood hazard the following provisions are required:

(1) *New construction and/or substantial improvements.* Where base flood elevation data are available, new construction and/or substantial improvement of any structure or manufactured home shall have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate equalization of flood hydrostatic forces on both sides of exterior walls shall be provided in accordance with standards of subsection 34-81(4) of this article.

a. All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing, and other service facilities shall be elevated at or above one foot above the base flood elevation.

(2) *Non-residential construction.* New construction and/or the substantial improvement of any structure located in A1-30, AE, or AH zones may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be watertight to one foot above the base flood elevation, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the county engineer as set forth in subsection 34-49(6) of this chapter.

(3) *Standards for manufactured homes and recreational vehicles.* Where base flood elevation data are available:

a. All manufactured homes placed and/or substantially improved on: (1) individual lots or parcels, (2) in new and/or substantially improved existing manufactured home parks or subdivisions, (3) in expansions to existing manufactured home parks or subdivisions, or (4) on a site in an existing manufactured home park or subdivision where a manufactured home has incurred "substantial damage" as a result of a flood must have the lowest floor including basement elevated no lower than one foot above the base flood elevation.

b. Manufactured homes placed and/or substantially improved in an existing manufactured home park or subdivision may be elevated so that either:

1. The lowest floor of the manufactured home is elevated no lower than one foot above the level of the base flood elevation; or

2. The manufactured home chassis is elevated and supported by reinforced piers (or other foundation elements of at least an equivalent strength) of no less than 36 inches in height above grade.

c. All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement (reference subsection 34-81(6)).

d. All recreational vehicles placed on sites must either:

1. Be on the site for fewer than 180 consecutive days;

2. Be fully licensed and ready for highway use, (a recreational vehicle is ready for highway use if it is licensed, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached structures or additions); or

3. The recreational vehicle must meet all the requirements for "new construction," including the anchoring and elevation requirements of items a. and c., above.

(4) *Floodway*—Located within areas of special flood hazard established in section 34-7 may be areas designated as floodway. A floodway may be an extremely hazardous area due to velocity floodwaters, debris or erosion potential. In addition, the area must remain free of encroachment in order to allow for the discharge of the base flood without increased flood heights. Therefore, the following provisions shall apply:

a. Encroachments are prohibited, including earthen fill, new construction, substantial improvements or other development within the regulatory floodway. Development may be permitted provided that it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the encroachment shall not result in any increase in flood levels or floodway widths during a base flood discharge. A registered professional engineer must provide supporting technical data and certification thereof.

b. Any new construction or substantial improvement allowed in accordance with subsection a. above shall comply with all other applicable flood hazard reduction provisions of this article.

(Ord. of 3-3-15, § 1)

Sec. 34-83. - Building standards for streams without established base flood elevations and/or floodway (A-zones).

Within the areas of special flood hazard established in section 34-7, where streams exist but no base flood data have been provided (A-zones), or where base flood data have been provided but a floodway has not been delineated, the following provisions apply:

(1)

When base flood elevation data or floodway data have not been provided by FEMA in accordance with section 34-7, then the county engineer may obtain, review, and reasonably utilize any scientific or historic base flood elevation and floodway data available from a federal, state, or other source, in order to administer the provisions of this article. If data are not available from these sources, then the following provisions (2) and (3) shall apply.

(2) No encroachments, including structures or fill material, shall be located within an area equal to the width of the stream or within 20 feet, whichever is greater, measured from the top of the stream bank, unless certification by a registered professional engineer is provided demonstrating that such encroachment shall not result in more than a one foot increase in flood levels during the occurrence of the base flood discharge.

(3) In special flood hazard areas without base flood elevation data, new construction and substantial improvements of existing structures shall have the lowest floor of the lowest enclosed area (including basement) elevated no less than three feet above the highest adjacent grade at the building site. NOTE: Require the lowest floor to be elevated one foot above the estimated base flood elevation in A-zone areas where a limited detail study has been completed). Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of subsection 34-81(4) of this article.

a. All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing, and other service facilities shall be elevated no less than three feet above the highest adjacent grade at the building site.

A registered land surveyor or professional engineer shall certify the lowest floor elevation level to the county engineer and the record shall become a permanent part of the permit file.

(Ord. of 3-3-15, § 1)

Sec. 34-84. - Standards for areas of special flood hazard (zones AE) with established base flood elevations without designated floodways.

Within the areas of special flood hazard established in section 34-7 where streams with base flood elevations are provided but no floodways have been designated (zones AE), the following provisions apply:

(1) No encroachments, including fill material, new structures or substantial improvements shall be located within areas of special flood hazard, unless certification by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood ~~more than one foot at any point within the community~~. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

(2) New construction or substantial improvements of buildings shall be elevated or floodproofed to elevations established in accordance with section 34-82 of this article.

(Ord. of 3-3-15, § 1)

Sec. 34-85. - Standards for areas of shallow flooding (AO zones).

Areas of special flood hazard established in section 34-7 may include designated "AO" shallow flooding areas. These areas have base flood depths of one to three feet above ground, with no clearly defined channel. The following provisions apply:

(1) All new construction and substantial improvements of residential and non-residential structures shall have the lowest floor, including basement, elevated to the flood depth number specified on the flood insurance rate map (FIRM), above the highest adjacent grade. If no flood depth number is specified, the lowest floor, including basement, shall be elevated at least three feet above the highest adjacent grade. Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of subsection 34-81(4) of this article.

A registered land surveyor or professional engineer shall certify the lowest floor elevation level to the county engineer and the record shall become a permanent part of the permit file.

(2) New construction or the substantial improvement of a non-residential structure may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be watertight to the specified FIRM flood level plus one foot above highest adjacent grade, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and as required in subsections 34-47(1)c. and (2).

(3) Drainage paths shall be provided to guide floodwater around and away from any proposed structure.

(Ord. of 3-3-15, § 1)

Sec. 34-86. - Standards for subdivisions.

For the purposes this section, "subdivisions" shall include only major subdivisions as defined in the subdivision regulations (appendix B), and "development" shall not include those activities exempt under the development plan ordinance (appendix E).

(1) All subdivision and/or development proposals shall be consistent with the need to minimize flood damage;

(2) All subdivision and/or development 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 and/or development proposals shall have adequate drainage provided to reduce exposure to flood hazards; and

(4) For subdivisions and/or developments greater than 50 lots or five acres, whichever is less, base flood elevation data shall be provided for subdivision and all other proposed development, including manufactured home parks and subdivisions. Any changes or revisions to the flood data adopted herein and shown on the FIRM shall be submitted to FEMA for review as a conditional letter of map revision (CLOMR) or conditional letter of map amendment (CLOMA), whichever is applicable. Upon completion of the project, the developer is responsible for submitting the "as-built" data to FEMA in order to obtain the final LOMR and assuring that the new base flood boundary, floodway and/or V zone boundary if applicable, and the applicable base flood elevation for the building site on each lot, be clearly marked on all recorded subdivision plats, be they for residential, commercial, or industrial use.

(Ord. of 3-3-15, § 1)

Sec. 34-87. - Standards for critical facilities.

(a) Critical facilities shall not be located in the area of special flood hazard.

(b) All ingress and egress from any critical facility must be protected to the highest known base flood elevation.

(Ord. of 3-3-15, § 1)