

CHAPTER 105 FLOOD DAMAGE PREVENTION

[HISTORY: Adopted by the Common Council of the City of Rensselaer 6-17-1987 as L.L. No. 2-1987 .
Amendments noted where applicable.]

GENERAL REFERENCES

Environmental quality review — See Ch. [93](#).

Zoning — See Ch. [179](#).

ARTICLE I Findings; Purpose; Objectives (§ 105-1 — § 105-3)**§ 105-1 Findings.**

The Common Council of the City of Rensselaer finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the City of Rensselaer and that such damages may include destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life. In order to minimize the threat of such damages and to achieve the purposes and objectives hereinafter set forth, this chapter is adopted.

§ 105-2 Statement of 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 to:

A.

Regulate 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.

Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.

C.

Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.

D.

Control filling, grading, dredging and other development which may increase erosion or flood damage.

E.

Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

F.

Qualify for and maintain participation in the National Flood Insurance Program.

§ 105-3 Objectives.

The objectives of this chapter are to:

A.

Protect human life and health.

B.

Minimize expenditure of public money for costly flood control projects.

C.

Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.

D.

Minimize prolonged business interruptions.

E.

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.

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.

Provide that developers are notified that property is in an area of special flood hazard.

H.

Ensure that those who occupy the areas of special flood hazard assume financial responsibility for their actions.

ARTICLE II **Definitions (§ 105-4)**

§ 105-4 **Word usage; definitions.**

A.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meanings they have in common usage and to give this chapter its most reasonable application.

B.

As used in this chapter, the following terms shall have the meanings indicated:

APPEAL

A request for a review of the local administrator's interpretation of any provision of this chapter, or a request for a variance.

AREA OF SHALLOW FLOODING

A designated AO or VO Zone on a community's Flood Insurance Rate Map (FIRM), with base flood depths from one to three feet, where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate and where the velocity flow may be evident.

BASE FLOOD

The flood having a one-percent chance of being equaled or exceeded in any given year.

BASEMENT

That portion of a building having its floor subgrade (below ground level) on all sides.

BREAKAWAY WALL

A wall that is not part of the structural support of the 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 the supporting foundation system.

BUILDING

Any structure built for support, shelter or enclosure for occupancy or storage.

CELLAR

The same meaning as "basement."

COASTAL HIGH-HAZARD AREA

THE AREA SUBJECT TO HIGH-VELOCITY WATERS, INCLUDING BUT NOT LIMITED TO HURRICANE WAVE WASH. THE AREA IS DESIGNATED ON A FIRM AS ZONE V1

30, VE, VO or V.

DEVELOPMENT

Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, paving, excavation or drilling operations located within the area

of special flood hazard.

ELEVATED BUILDING

A nonbasement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns, posts and piers or shear walls.

FLOOD BOUNDARY AND FLOODWAY MAP (FBFM)

An official map of the community published by the Federal Emergency Management Agency as part of a riverine community's Flood Insurance Study. The "FBFM" delineates a regulatory floodway along watercourses studied in detail in the Flood Insurance Study.

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.

(2)

The unusual and rapid accumulation of runoff of surface waters from any source.

FLOOD HAZARD BOUNDARY MAP (FHBM)

An official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined but no water surface elevation is provided,

FLOOD INSURANCE RATE MAP (FIRM)

An official map of a community on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY

The official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Boundary and Floodway Map and the water surface elevations of the base flood.

FLOODPROOFING

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

FLOODWAY

The same meaning as "regulatory floodway."

FLOOR

The top surface of an enclosed area in a building, including basement, i.e., the top of the slab in concrete slab construction or the top of wood flooring in wood-frame construction.

FUNCTIONALLY DEPENDENT USE

A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of passengers, shipbuilding and ship repair. The term does not include long-term storage, manufacture, sales or service facilities.

HIGHEST ADJACENT GRADE

The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

LOWEST FLOOR

The lowest level, including basement or cellar, of the lowest enclosed area. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement 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 nonelevation design requirements of this chapter.

MANUFACTURED HOME

A structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.

MEAN SEA LEVEL

For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

MOBILE HOME

The same meaning as "manufactured home."

NATIONAL GEODETIC VERTICAL DATUM (NGVD)

As corrected in 1929, a vertical control used as a reference for establishing varying elevations within the floodplain.

NEW CONSTRUCTION

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

ONE-HUNDRED-YEAR FLOOD

The same meaning as "base flood."

PRINCIPALLY ABOVE GROUND

That at least 51% of the actual cash value of the structure, excluding land value, is above ground.

REGULATORY 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 a designated height as determined by the Federal Emergency Management Agency in a Flood Insurance Study or by other agencies as provided in § [105-12B](#) of this chapter.

SAND DUNES

Naturally occurring accumulations of sand in ridges or mounds landward of the beach.

START OF CONSTRUCTION

The initiation, excluding planning and design, of any phase of a project or physical alteration of the property, and shall include land preparation, such as clearing, grading and filling; installation of streets and/or walkways; excavation for a basement, footings, piers or foundations or the erection of temporary forms. It also includes the placement and/or installation on the property of accessory buildings (garages or sheds), storage trailers and building materials. For manufactured homes, the "actual start" means affixing of the manufactured home to its permanent site.

STRUCTURE

A walled and roofed building, a manufactured home or a gas or liquid storage tank that is principally above ground.

SUBSTANTIAL IMPROVEMENT

Any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either before the improvement or repair is started or, 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 commence 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 building, fire, health, sanitary or safety code specifications which are solely necessary to assure safe living conditions; or

(2)

Any alteration of a structure or contributing 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 or use in a manner that would otherwise be prohibited by this chapter.

ARTICLE III General Provisions (§ 105-5 — § 105-9)

§ 105-5 Applicability.

This chapter shall apply to all areas of special flood hazard within the jurisdiction of the City of Rensselaer.

§ 105-6 Basis for establishing areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled the "Flood Insurance Study for the City of Rensselaer, of Rensselaer County, New York," dated September 1979, with accompanying Flood Insurance Rate Maps and Flood Boundary and Floodway Maps, are hereby adopted and declared to be a part of this chapter. The Flood Insurance Study and maps are on file at the Rensselaer Planning and Development Agency, City Hall, 505 Broadway, Rensselaer, New York 12144.

§ 105-7 Interpretation; conflict with other provisions.

This chapter is adopted in response to revisions to the National Flood Insurance Program effected October 1, 1986, and shall supersede all previous laws adopted for the purpose of establishing and maintaining eligibility for flood insurance. In their interpretation and application, the provisions of this chapter shall be held to be minimum requirements, adopted for the promotion of the public health, safety and welfare. Whenever the requirements of this chapter are at variance with the requirements of any other lawfully adopted rules, regulations or ordinances, the most restrictive or that imposing the highest standards shall govern.

§ 105-8 Penalties for offenses.

No structure shall hereafter be constructed, located, extended, converted or altered and no land shall be excavated or filled without full compliance with the terms of this chapter and any other applicable regulations. Any infraction of the provisions of this chapter by failure to comply with any of its requirements, including infractions of conditions and safeguards established in connection with conditions of the permit, shall constitute a violation. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined no more than \$250 or be imprisoned for not more than 15 days, or both. Each day of noncompliance shall be considered a separate offense. Nothing herein contained shall prevent the City of Rensselaer from taking such other lawful action as necessary to prevent or remedy an infraction. Any structure found not compliant with the requirements of this chapter for which the developer and/or owner has not applied for and received an approved variance under Article [VI](#) will be declared noncompliant and notification sent to the Federal Emergency Management Agency.

§ 105-9 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 area 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 of Rensselaer, any officer or employee thereof or the Federal Emergency Management Agency for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

ARTICLE IV Administration (§ 105-10 — § 105-12)

§ 105-10 Designation of local administrator.

The Building and Zoning Administrator is hereby appointed local administrator to administer and implement this chapter by granting or denying development permit applications, upon review and approval of the application and

accompanying plans and documentation by the City Planning Commission. The flood hazard development permit included herein shall be considered a special use permit under the city's Zoning Law (Schedule of Use Regulations) and shall be reviewed by the City Planning Commission in accordance with Article [V](#) of said Zoning Law.

Editor's Note: See Ch. [179](#), Zoning.

§ 105-11 **Development permit.**

§ 105-12 **Duties and responsibilities of local administrator.**

ARTICLE V **Provisions for Flood Hazard Reduction (§ 105-13 — § 105-15)**

§ 105-13 **General standards.**

In all areas of special flood hazard, 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 shall be installed using methods and practices which minimize flood damage. Manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Manufactured homes shall be elevated to or above the base flood elevation or two feet above the highest adjacent grade when no base flood elevation has been determined. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

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.

C.

Utilities.

(1)

Electrical, heating, ventilation, plumbing and air-conditioning equipment 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. When designed for location below the base flood elevation, a professional engineer's or architect's certification is required.

(2)

All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

(3)

New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters.

(4)

On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

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)

Base flood elevation data shall be provided for subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than either 50 lots or five acres.

E.

Encroachments.

(1)

All proposed development in riverine situation where no flood elevation data is available (unnumbered A Zones) shall be analyzed to determine the effects on the floodcarrying capacity of the areas of special flood hazard set forth in § [105-12A](#), Permit application review. This may require the submission of additional technical data to assist in the determination.

(2)

In all areas of special flood hazard in which base flood elevation data is available pursuant to § [105-12B](#) or [105-13D\(4\)](#) and no floodway has been determined, the cumulative effects 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 at any point.

(3)

In all areas of the special flood hazard where floodway data is provided or available pursuant to § [105-12B](#), the requirements of § [105-15](#), Floodways, shall apply.

§ 105-14 Specific standards.

In all areas of special flood hazard where base flood elevation data has been provided as set forth in § [105-6](#), Basis for establishing areas of special flood hazard, and § [105-12B](#), Use of other base flood and floodway data, the following standards are required:

A.

Residential construction. New construction and substantial improvement of any residential structure shall:

(1)

Have the lowest floor, including basement or cellar, elevated to or above the base flood elevation.

(2)

Have fully enclosed areas below the lowest floor that are subject to flooding 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 licensed professional engineer or architect or 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 such openings shall be no higher than one foot above the lowest adjacent finished grade.

(c)

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

B.

Nonresidential construction. New construction and substantial improvements of any commercial, industrial or other nonresidential structure, together with attendant utility and sanitary facilities, shall either have the lowest floor, including basement or cellar, elevated to or above the base flood elevation or be floodproofed so that the structure is watertight below the base flood level, with walls substantially impermeable to the passage of water. All structural components located below the base flood level must be capable of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy.

(1)

If the structure is to be elevated, fully enclosed areas below the base flood elevation shall be designed to automatically (without human intervention) allow for the entry and exit of floodwaters for the purpose of equalizing hydrostatic flood forces on exterior walls. Designs for meeting this requirement must either be certified by a licensed professional engineer or a licensed architect or 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 such openings shall be no higher than one foot above the lowest adjacent finished grade.

(c)

Openings may be equipped with louvers, valves, screens or other covering or devices, provided that they permit the automatic entry and exit of floodwaters.

(2)

If the structure is to be floodproofed:

(a)

A licensed professional engineer or architect shall develop and/or review structural design, specifications and plans for the construction and shall certify that the design and methods of construction are in accordance with accepted standards of practice to make the structure watertight, with walls substantially impermeable to the passage of water, with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(b)

A licensed professional engineer or licensed land surveyor shall certify the specific elevation, in relation to mean sea level, to which the structure is floodproofed.

(c)

The Building and Zoning Administrator shall maintain on record a copy of all such certificates noted in this section.

C.

Construction standards for areas of special flood hazard without base flood elevations. New construction or substantial improvements of structures, including manufactured homes, shall have the lowest floor, including basement, elevated to or above the base flood elevation as may be determined in § [105-12B](#) or two feet above the highest adjacent grade where no elevation data is available.

(1)

New construction or substantial improvements of structures, including manufactured homes, shall have the lowest floor, including basement, elevated at least two feet above the highest adjacent grade next to the proposed foundation of the structure.

(2)

Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically (without human intervention) allow for the entry and exit of floodwaters for the purpose of equalizing hydrostatic flood

forces on exterior walls. Designs for meeting this requirement must either be certified by a licensed professional engineer or a licensed architect or 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 such openings shall be no higher than one foot above the lowest adjacent finished grade.

(c)

Openings may be equipped with louvers, valves, screens or other coverings or openings, provided that they permit the automatic entry and exit of floodwaters.

§ 105-15 Floodways.

Located within areas of special flood hazard are areas designated as floodways. (See § 105-4, Word usage; definitions.) The floodway is an extremely hazardous area due to high-velocity floodwaters carrying debris and posing additional threats from potential erosion forces. When floodway data is available for a particular site as provided by §§ 105-6 and 105-12B, all encroachments, including fill, new construction, substantial improvements and other development, are prohibited within the limits of the floodway unless a technical evaluation demonstrates that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

ARTICLE VI Variance Procedure (§ 105-16 — § 105-17)

§ 105-16 Appeals Board.

A.

The Zoning Board of Appeals, as established by the City of Rensselaer, shall hear and decide appeals and requests for variances from the requirements of this chapter in accordance with procedures established in Article X of the City Zoning Law.

Editor's Note: See Ch. 179, Zoning.

B.

The Zoning Board of Appeals shall hear and decide appeals when it is alleged that there is an error in any requirement, decision or determination made by the Building and Zoning Administrator in the enforcement or administration of this chapter.

C.

Those aggrieved by the decision of the Zoning Board of Appeals may appeal such decision to the Supreme Court pursuant to Article 78 of the Civil Practice Law and Rules.

D.

In passing upon such applications, the Zoning Board of Appeals shall consider all technical evaluation, all factors and standards specified in other sections of this chapter and:

(1)

The danger that materials may be swept onto other lands to the injury of others.

(2)

The danger to life and property due to flooding or erosion damage.

(3)

The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.

(4)

The importance of the services provided by the proposed facility to the community.

(5)

The necessity to the facility of a waterfront location, where applicable.

(6)

The availability of alternate locations for the proposed use which are not subject to flooding or erosion damage.

(7)

The compatibility of the proposed use with existing and anticipated development.

(8)

The relationship of the proposed use to the Comprehensive Plan and floodplain management program of that area.

(9)

The safety of access to the property in times of flood for ordinary and emergency vehicles.

(10)

The costs to local governments and the dangers associated with conducting search and rescue operations during periods of flooding.

(11)

The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.

(12)

The costs of providing governmental services during and after flood conditions, including search and rescue operations, maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems and streets and bridges.

E.

Upon consideration of the factors of § [105-16D](#) and the purpose of this chapter, the Zoning Board of Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.

F.

The Building and Zoning Administrator shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Emergency Management Agency upon request.

§ 105-17 Conditions for variances.

A.

Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, provided that the items in Subsection [D\(1\)](#) through (12) of § 105-16 have been fully considered. As the lot size increases beyond 1/2 acre, the technical justification required for issuing the variance increases.

B.

Variances may be issued for the reconstruction, rehabilitation or restoration of structures and contributing structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the contributing structures procedures set forth in the remainder of this section.

C.

Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use, provided that:

(1)

The criteria of Subsections [A](#), [D](#), [E](#) and [F](#) of this section are met.

(2)

The structure or other development is protected by methods that minimize flood damage during the base flood and create no additional threat to public safety.

D.

Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood

discharge would result.

E.

Variations shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

F.

Variations shall only be issued upon receiving written justification of:

(1)

A showing of good and sufficient cause.

(2)

A determination that failure to grant the variance would result in exceptional hardship to the applicant.

(3)

A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety or extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in § [105-16D](#) or conflict with existing local laws or ordinances.

G.

Any applicant to whom a variance is granted for a building with the lowest floor below the base flood elevation shall be given written notice that the cost of flood insurance will be commensurate with the increased risk resulting from lowest floor elevation.