

**2016-33 AN ORDINANCE BY  
PRINCETON CONCERNING  
FLOOD DAMAGE PREVENTION,  
AMENDING CHAPTER 14A OF  
THE “CODE OF THE BOROUGH  
OF PRINCETON, NEW JERSEY,  
1974”, AND REPEALING  
CHAPTER 9A OF THE “CODE OF  
THE TOWNSHIP OF PRINCETON,  
NEW JERSEY, 1968”**

WHEREAS, the Borough of Princeton and Township of Princeton pursuant to the provisions of the New Jersey Municipal Consolidation Act, *N.J.S.A. 40:43-66.35* consolidated as Princeton on January 1, 2013; and

WHEREAS, pursuant to *N.J.S.A. 40:43-66.64*, the Princeton Council on January 1, 2013 adopted a Resolution continuing in effect Ordinances of the former Borough of Princeton and the former Township of Princeton as a new Code for Princeton is prepared; and

WHEREAS, the former Township of Princeton and former Borough of Princeton’s flood damage prevention ordinances are presently codified in Chapter 9A of the “Code of the Township of Princeton, New Jersey, 1968” and Chapter 14A of the “Code of the Borough of Princeton, New Jersey, 1974” respectively; and

WHEREAS, the New Jersey Department of Environmental Protection (NJDEP) has notified municipalities that pursuant to a Letter of Final Determination issued on January 20, 2016 by the Federal Emergency Management Agency (FEMA), it is necessary for municipalities to revise their current flood damage prevention ordinances in order to continue participation in the national flood insurance program; and

WHEREAS, to the end, the NJDEP has provide municipalities with a model ordinance that meets or exceeds the minimum requirements accepted by FEMA and the State of New Jersey; and

WHEREAS, Princeton wishes to update and revise the former Township and former Borough flood damage prevention ordinances in compliance with federal and State requirements, and at the same time wishes to consolidate said ordinances into a single flood damage prevention ordinance to become part of Princeton's new Code;

NOW, THEREFORE, BE IT ORDAINED by the Princeton Council as follows:

Section 1. Chapter 14A, Flood Damage Prevention, of the "Code of the Borough of Princeton, New Jersey, 1974" ("Borough Code") is hereby amended to read as set forth in Exhibit A attached hereto and made a part hereof.

Section 2. Chapter 9A of the "Code of the Township of Princeton, New Jersey, 1968" is hereby repealed, and the provisions of the attached revised Chapter 14A of the Borough Code shall be applicable within the entirety of Princeton upon taking effect and shall become a part of the new Princeton Code once completed and adopted.

Section 3. All ordinances and resolutions or parts thereof inconsistent with this Ordinance are repealed to the extent of such inconsistency.

Section 4. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portion thereof.

Section 5. This Ordinance shall take effect upon its final adoption and publication as provided for by law.

STATEMENT OF PURPOSE: This ordinance consolidates and updates the provisions of the former Borough of Princeton and Township of Princeton's flood damage prevention ordinance, in accordance with State and federal requirements.

I, Kathleen K. Brzezynski, Deputy Clerk of Princeton, County of Mercer, State of New Jersey, do hereby certify that the foregoing is a true copy of an ordinance adopted by the Mayor and Council of Princeton at its meeting held July 11, 2016.

A handwritten signature in cursive script that reads "Kathleen K. Brzezynski".

Kathleen K. Brzezynski, Deputy Clerk

## EXHIBIT A

### CHAPTER 14A

#### Flood Damage Prevention

##### Sec. 14A-1. Statutory authorization, findings of fact, purpose and objectives

###### Sec. 14A-1.1. Statutory authorization

The Legislature of the State of New Jersey has in N.J.S.A. 40:48-1, *et seq.*, delegated the responsibility to local governmental units to adopt regulations designed to promote public health, safety, and general welfare of its citizenry. Therefore, the Mayor and Council of Princeton in Mercer County, New Jersey does ordain as follows:

###### Sec. 14A-1.2. Findings of fact

a) The flood hazard areas of Princeton are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

b) These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazard which increase flood heights and velocities, and when inadequately anchored, causes damage in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

###### Sec. 14A-1.3. 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) 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, 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) Ensure that potential buyers are notified that property is in an area of special flood hazard;

and

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

#### Sec. 14A-1.4. 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 floodplains, 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; and,

e) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

#### Sec. 14A-2.0. Definitions.

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 application.

“Administrator” or “Local Administrator” shall mean the individual or individuals designated in section 14A-4.2 below.

“AO Zone” shall mean areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet.

“AH Zone” shall mean areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown in this zone

“Appeal” shall mean a request for a review of the local administrator’s interpretation of any provision of this Chapter or a request for a variance.

“Appeal Board” shall mean the board designated in section 14A-4.4 below to hear appeals from the local administrator’s interpretation of, and requests for variances from, the provisions of this Chapter.

“Area of Shallow Flooding” shall mean a designated AO or AH zone on a community’s Digital Flood Insurance Rate Map (DFIRM) with a one percent annual or greater chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

“Area of Special Flood Hazard” shall mean land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. It is shown on the FIRM as Zone V, VE, V1-30, A, AO, A1-A30, AE, A99, or AH.

“Base Flood” shall mean a flood having a one percent chance of being equaled or exceeded in any given year.

“Base Flood Elevation (BFE)” shall mean the flood elevation shown on a published Flood Insurance Study (FIS) including the Flood Insurance Rate Map (FIRM). For zones AE, AH, AO, and A1-30 the elevation represents the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.

“Basement” shall mean any area of the building having its floor subgrade (below ground level) on all sides.

“Development” shall mean 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, or storage of equipment or materials located within the area of special flood hazard.

“Digital Flood Insurance Rate Map (DFIRM)” shall mean 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.

“Elevated Building” shall mean a non-basement building (i) built, in the case of a building in an Area of Special Flood Hazard, to have the top of the elevated floor elevated above the base flood elevation plus freeboard by means of piling, columns (posts and piers), or shear walls parallel to the flow of the water, and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood up to the magnitude of the base flood. In an Area of

Special Flood Hazard “elevated building” also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

“Erosion” shall mean the process of the gradual wearing away of land masses.

“Existing Manufactured Home Park or Subdivision” shall mean 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 before the effective date of the floodplain management regulations adopted by a community.

“Flood or Flooding” shall mean a general and temporary condition of partial or complete inundation of normally dry land areas from:

- a) The overflow of inland or tidal waters and/or
- b) The unusual and rapid accumulation or runoff of surface waters from any source.

“Flood Insurance Rate Map (FIRM)” shall mean 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.

“Flood Insurance Study (FIS)” shall mean the official report in which the Federal Insurance Administration has provided flood profiles, as well as the Flood Insurance Rate Map(s) and the water surface elevation of the base flood.

“Floodplain Management Regulations” shall mean zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such State or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

“Floodproofing” shall mean 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” shall mean 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 accumulatively increasing the water surface elevation more than 0.2 feet.

“Freeboard” shall mean a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. “Freeboard” tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

“Highest Adjacent Grade” shall mean the highest natural elevation of the ground surface prior to construction next to the proposed or existing walls of a structure.

“Historic Structure” shall mean any structure that is:

- a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- b) 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;
- c) Individually listed on a State inventory of historic places in States with historic preservation programs which have been approved by the Secretary of the Interior; or
- d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - (1) By an approved State program as determined by the Secretary of the Interior; or
  - (2) Directly by the Secretary of the Interior in States without approved programs.

“Local Administrator” – see definition of “Administrator” above.

“Lowest Floor” shall mean the lowest floor of the lowest enclosed area [including basement]. An unfinished or flood resistant enclosure, useable solely for the 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 to render the structure in violation of other applicable non-elevation design requirements of 44 CFR Section 60.3.

“Manufactured Home” shall mean 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 attached to the required utilities. The term “manufactured home” does not include a “recreational vehicle”.

“Manufactured Home Park or Manufactured Home Subdivision” shall mean a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

“New Construction” shall mean structures for which the start of construction commenced on or after the effective date of a floodplain regulation adopted by a community and includes any subsequent improvements to such structures.

“New Manufactured Home Park or Subdivision” shall mean 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 the floodplain management regulations adopted by the municipality.

“Recreational Vehicle” shall mean a vehicle which is (i) built on a single chassis; (ii) 400 square feet or less when measured at the longest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light duty truck; and (iv) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

“Start of Construction” shall mean for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. No. 97-348) includes substantial improvements 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 footings, the installation of pilings, 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 or piers, or foundations 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. 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” shall mean a walled and roofed building, a manufactured home, or a gas or liquid storage tank that is principally above ground.

“Substantial Damage” shall mean damage of any origin sustained by a structure whereby the cost of restoring the structure to its condition before damage would equal or exceed fifty percent of the market value of the structure before the damage occurred.

“Substantial Improvement” shall mean any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either:

- a) 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 assure safe living conditions;

or

- b) Any alteration of a “historic structure,” provided that the alteration will not preclude the structure’s continued designation as a “historic structure”.

“Variance” shall mean a grant of relief from the requirements of this Chapter that permits construction in a manner that would otherwise be prohibited by this Chapter.

“Violation” shall mean the failure of a structure or other development to be fully compliant with this Chapter. A new or substantially improved structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR §60.3(b)(5), (c)(4), (c)(10), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

### Sec. 14A-3.0. General provisions

#### Sec. 14A-3.1. Lands to which this Chapter applies

This Chapter shall apply to all areas of special flood hazards within the jurisdiction of Princeton.

#### Sec. 14A-3.2. Basis for establishing the areas of special flood hazard

The areas of special flood hazard for Princeton, Community No. 340252, are identified and defined on the following documents prepared by the Federal Emergency Management Agency:

- a) A scientific and engineering report “Flood Insurance Study, Mercer County, New Jersey (All Jurisdictions)” whose effective date is July 20, 2016.
- b) “Flood Insurance Rate Map for Mercer County, New Jersey (All Jurisdictions)” as shown on Index and panel(s) 34021C0038F, 34021C0039F, 34021C0043F, 34021C0044F, 34021C0063F, 34021C0126F, 34021C0127F, 34021C0129, 34021C0131F, 34021C0132F, 34021C0133F, 34021C0134F, 34021C0137F, 34021C0141F, and 34021C0151F, whose effective date is July 20, 2016.

The above documents are hereby adopted and declared to be a part of this Chapter. The Flood Insurance Study, maps and advisory documents are on file in the office of the Princeton Municipal Engineer, 400 Witherspoon Street, Princeton, New Jersey.

#### Sec. 14A-3.3. Penalties for noncompliance

No structure or land shall hereafter be constructed, re-located to, extended, converted, or altered without full compliance with the terms of this Chapter and other applicable regulations. Violation 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 upon conviction thereof be fined not more than two thousand dollars (\$2,000.00) or imprisoned for not more than ninety (90) days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent Princeton, from taking such other lawful action as is necessary to prevent or remedy any violation.

#### Sec. 14A-3.4. 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 other regulation, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

#### Sec. 14A-3.5. Interpretation

In the interpretation and application of this Chapter, all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under State statutes.

#### Sec. 14A-3.6. 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 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 Princeton, 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.

#### Sec. 14A-4.0. Administration

##### Sec. 14A-4.1. Establishment of development permit

A Development Permit shall be obtained before construction or development begins, including placement of manufactured homes, within any area of special flood hazard established in section 14A-3.2. Application for a Development Permit shall be made on forms furnished by the local administrator 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.

c) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in section 14A-5.2-2; and,

d) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

#### Sec. 14A-4.2. Designation of the local administrator

The Princeton Land Use Engineer is hereby appointed to administer and implement this Chapter by granting or denying development permit applications in accordance with its provisions.

#### Sec. 14A-4.3. Duties and responsibilities of the administrator

The duties of the administrator shall include, but not be limited to, the duties and responsibilities set forth in sections 14A-4.3-1 through 14A-4.3-6 below:

##### Sec. 14A-4.3-1. Permit review

a) Review all development permits to determine that the permit requirements of this Chapter have been satisfied.

b) 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.

c) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of 14A-5.3 a) are met.

##### Sec. 14A-4.3-2. Use of other base flood and floodway data

When base flood elevation and floodway data has not been provided in accordance with section 14A-3.2, "Basis for establishing the areas of special flood hazard," the local administrator 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 sections 14A-5.2-1, "Specific standards, residential construction," and 14A-5.2-2, "Specific standards, nonresidential construction."

#### Sec. 14A-4.3-3. Information to be obtained and maintained

a) Obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

b) For all new or substantially improved floodproofed structures:

- i. verify and record the actual elevation (in relation to mean sea level); and
- ii. maintain the floodproofing certifications required in section 14A-4.1 c).

c) Maintain for public inspection all records pertaining to the provisions of this Chapter.

#### Sec. 14A-4.3-4. Alteration of watercourses

a) Notify adjacent communities and the New Jersey Department of Environmental Protection, Dam Safety and Flood Control Section and the Land Use Regulation Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

b) Require that maintenance is provided within the altered or relocated portion of said watercourse so the flood carrying capacity is not diminished.

#### Sec. 14A-4.3-5. Substantial damage review

a) After an event resulting in building damages, assess the damage to structures due to flood and non-flood causes.

b) Record and maintain the flood and non-flood damage of substantial damage structures and provide a letter of Substantial Damage Determination to the owner and the New Jersey Department of Environmental Protection, Dam Safety and Flood Control Section.

c) Ensure substantial improvements meet the requirements of sections 14A-5.2-1, "Specific standards, residential construction," and 14A-5.2-2, "specific standards, nonresidential construction."

#### Sec. 14A-4.3-6. Interpretation of firm boundaries

Make interpretations where needed, as to the 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 14A-4.4.

## Sec. 14A-4.4. Variance procedure

### Sec. 14A-4.4-1. Appeal board

a) The Princeton Mayor and Council is hereby established as the appeal board to decide appeals and requests for variances from the requirements of this Chapter, except that pursuant to the authorization granted by *N.J.S.A. 40:55D-25b(3)*, the Mayor and Council may obtain the aid and assistance of the Princeton Planning Board by referring any appeal or request for variances to the said Board to conduct a hearing thereon and advise the Mayor and Council as to its recommended findings and conclusions, applying the criteria set forth in this section and in section 14A-4.4-2 below.

b) The appeal board shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the local administrator in the enforcement or administration of this Chapter.

c) Those aggrieved by the decision of the appeal board, or any taxpayer, may appeal such decision to the Superior Court of New Jersey, Law Division.

d) In passing upon such applications, the appeal board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Chapter, and:

- i. the danger that materials may be swept onto other lands to the injury of others;
- ii. the danger to life and property due to flooding or erosion damage;
- iii. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- iv. the importance of the services provided by the proposed facility to the community;
- v. the necessity to the facility of a waterfront location, where applicable;
- vi. the availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- vii. the compatibility of the proposed use with existing and anticipated development;
- viii. the relationship of the proposed use to the comprehensive plan and floodplain management program of that area;
- ix. the safety of access to the property in times of flood for ordinary and emergency vehicles;
- x. the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters; and,
- xi. 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.

e) Upon consideration of the factors of section 14A-4.4-1 d) and the purposes of this Chapter, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Chapter.

f) The local administrator shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Insurance Administration upon request.

#### Sec. 14A-4.4-2. Conditions for variances

a) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items i.-xi. in section 14A-4.4-1 d) have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

b) 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.

c) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

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

e) 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 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 14A-4.4- 1 d), or conflict with existing local laws or ordinances.

f) 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.

#### Sec. 14A- 5.0. Provisions for flood hazard reduction

##### Sec. 14A-5.1. General standards

In all areas of special flood hazards, compliance with the applicable requirements of the Uniform Construction Code (N.J.A.C. 5:23) and the following standards, whichever is more restrictive, is required:

#### Sec. 14A-5.1-1. Anchoring

- a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- b) All manufactured homes to be placed or substantially improved shall be anchored to resist flotation, collapse or lateral movement. 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.

#### Sec. 14A-5.1-2. Construction materials and methods

- a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

#### Sec. 14A-5.1-3. Utilities

- a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- b) 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;
- c) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding; and
- d) For all new construction and substantial improvements the 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.

#### Sec. 14A-5.1-4. Subdivision proposals

- a) All subdivision proposals and other proposed new development shall be consistent with the need to minimize flood damage;
- b) All subdivision proposals and other proposed new development shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;
- c) All subdivision proposals and other proposed new development shall have adequate drainage provided to reduce exposure to flood damage; and,

d) Base flood elevation data shall be provided for subdivision proposals and other proposed new development which contain at least fifty (50) lots or five (5) acres (whichever is less).

#### Sec. 14A-5.1-5. Enclosure openings

All new construction and substantial improvements having fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria: A minimum of two (2) openings in at least two exterior walls of each enclosed area, having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, or other covering or devices provided that they permit the automatic entry and exit of floodwaters.

#### Sec. 14A-5.2. Specific standards

In all areas of special flood hazards where base flood elevation data have been provided as set forth in section 14A-3.2, "Basis for establishing the areas of special flood hazard" or in section 14A-4.3-2, "Use of other base flood data," the following standards are required:

##### Sec. 14A-5.2-1. Residential construction

a) New construction and substantial improvement of any residential structure located in an A or AE zone shall have the lowest floor, including basement together with the attendant utilities and sanitary facilities, elevated at or above the base flood elevation plus one foot or as required by ASCE/SEI 24-14, Table 2-1, whichever is more restrictive;

b) Require within any AO or AH zone on the municipality's FIRM that all new construction and substantial improvement of any residential structure shall have the lowest floor, including basement together with the attendant utilities and sanitary facilities, elevated above the depth number specified in feet plus one foot, above the highest adjacent grade (at least three feet if no depth number is specified). And, require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.

##### Sec. 14A-5.2-2. Nonresidential construction

In an Area of Special Flood Hazard, all new construction and substantial improvement of any commercial, industrial or other nonresidential structure located in an A or AE zone shall have the lowest floor, including basement together with the attendant utilities and sanitary facilities:

Either

- (1) Elevated to or above the base flood elevation plus one (1) foot or as required by ASCE/SEI 24-14, Table 2-1, whichever is more restrictive; and
- (2) Require within any AO or AH zone on the municipality's DFIRM to elevate above the depth number specified in feet plus one (1) foot, above the highest adjacent grade (at least three feet if no depth number is specified). And, require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures;

Or

- (3) Be floodproofed so that below the base flood level plus one (1) foot or as required by ASCE/SEI 24-14, Table 6-1, whichever is more restrictive, the structure is watertight with walls substantially impermeable to the passage of water;
- (4) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and,
- (5) 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 the applicable provisions of this subsection. Such certification shall be provided to the official as set forth in section 14A-4.3-3 b) ii.

#### Sec. 14A-5.2-3. Manufactured homes

- a) Manufactured homes shall be anchored in accordance with section 14A-5.1-1 b).
- b) All manufactured homes to be placed or substantially improved within an area of special flood hazard shall:
  - i. Be consistent with the need to minimize flood damage,
  - ii. Be constructed to minimize flood damage,
  - iii. Have adequate drainage provided to reduce exposure to flood damage; and,
  - iv. Be elevated on a permanent foundation such that the top of the lowest floor is at or above the base flood elevation plus one (1) foot or as required by ASCE/SEI 24-14, Table 2-1, whichever is more restrictive.

#### Sec. 14A-5.3. Floodways

Located within areas of special flood hazard established in section 14A-3.2 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:

- a) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless a technical evaluation demonstrates that encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.

- b) If section 14A-5.3 a) is satisfied, all new construction and substantial improvements must comply with section 14A-5.0 “Provisions for flood hazard reduction.”
- c) In all areas of special flood hazard in which base flood elevation data has been provided and no floodway has been designated, the accumulative 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 two-tenths of a foot at any point.

Sec. 14A- 6.0. Severability

If any section, subsection, paragraph, sentence, clause, or phrase of this Chapter 14A shall be declared invalid for any reason whatsoever, such a decision shall not affect the remaining portions of the Chapter, which shall remain in full force and effect, and for this purpose the provisions of this Chapter are hereby declared to be severable.