

TOWNSHIP OF MOORESTOWN

ORDINANCE NO. 23-2017

**AN ORDINANCE OF THE TOWNSHIP OF MOORESTOWN AMENDING
CHAPTER 83 ENTITLED “FLOOD DAMAGE PREVENTION”**

WHEREAS, the US Department of Homeland Security’s Federal Emergency Management Agency (FEMA) and New Jersey’s Department of Environmental Protection (NJDEP) have required revisions and updates to the Township’s existing Flood Damage Prevention Ordinance.

WHEREAS, said requirements are necessary in order for continued participation in the National Flood Insurance Program (NFIP).

WHEREAS, Township Council and the Township’s Director of Community Development have reviewed the requirements, revisions and updates, and find same to be appropriate and reasonable.

NOW, THEREFORE, BE IT RESOLVED by the Township Council of the Township of Moorestown, County of Burlington, that Chapter 83 of the Code of the Township of Moorestown be amended as follows:

Section 1. Section 83-2, Findings of Fact, shall be amended as follows:

- 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, ~~damage uses~~ causes damage in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

Section 2. Section 83-5, Definitions, shall be amended as follows:

AO Zone- 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- 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.

Area of Shallow Flooding — A designated AO or AH ~~or VQ~~ 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 —~~The~~ 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 —A The flood having a one percent chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE) – 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.

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 supporting foundation system.

Digital Flood Insurance Rate Map (DFIRM) — 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 — 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, or, in the case of a building in a coastal high hazard area, to have the bottom of the lowest horizontal structural member of the elevated floor elevated above the ground level 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.

Existing 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 before the effective date of the floodplain management regulations adopted by a community.

Flood Insurance Study (FIS) — The official report in which the Federal Insurance Administration has provided flood profiles, as well as the Flood ~~Boundary/Floodway Map~~ Insurance Rate Map(s) and the water surface elevation 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.

Freeboard — 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 — The highest natural elevation of the ground surface prior to construction next to the proposed or existing walls of a structure.

Historic Structure — 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.

Lowest Floor — The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable 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 — 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 — A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

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 the floodplain management regulations adopted by the municipality.

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

Substantial Improvement — Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty (50) 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".

Violation — The failure of a structure or other development to be fully compliant with this ordinance. 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.

Section 3. Section 83-6, Administrative Provisions, shall be amended as follows:

- B. Basis for establishing the areas of special flood hazard. The areas of special flood hazard identified by the Federal Insurance Administration in the scientific and engineering report entitled the "Flood Insurance Study for the Township of Moorestown," dated September 4, 1991 and January 19, 1996, with accompanying Flood Insurance Rate Maps for the Township of Moorestown, Community No. 340105, are identified and defined on the following documents prepared by the Federal Emergency Management Agency:
 - a) A scientific and engineering report "Flood Insurance Study, Burlington County, New Jersey (All Jurisdictions)" dated December 21, 2017.
 - b) "Flood Insurance Rate Map for Burlington County, New Jersey (All Jurisdictions)" as shown on Index and panel(s) 114F, 118F, 119F, 207F, 209F, 226F, 227F, 228F, 229F, 231F, 232F, and 233F, whose effective date is December 21, 2017.

The above documents are hereby adopted and declared to be a part of this ordinance. The Flood Insurance Study and maps are on file in the office of the Township Clerk, Town Hall, 111 West Second Street, Moorestown, New Jersey.

- C. 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 ordinance and other applicable regulations. Violation of the provisions of this ordinance 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 ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$2000 or imprisoned for not more than 30 days, or

both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the Township of Moorestown, from taking such other lawful action as is necessary to prevent or remedy any violation.

Section 4. Section 83-7, Establishment of Development Permit, shall be amended as follows:

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 83-6B. Application for a Development Permit shall be made on forms furnished by the Construction Official 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~~ 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 83-11B(2); and,
- d) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

Section 5. Section 83-8, Designation of Administration, shall be amended as follows:

Designation of Local Administrator. The Construction Official, or his designee, is hereby appointed to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions.

Section 6. Section 83-9, Duties and Responsibilities of Construction Official, shall be amended as follows:

- A. Permit review. The Construction Official shall:
 - 1) Review all development permits to determine that the permit requirements of this ordinance have been satisfied.
 - 2) 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.
 - 3) Review all development permits to determine if the proposed development is located in the floodway. ~~And to~~ If located in the

floodway, assure that the encroachment provisions of section 83-12A are met.

- D. Alteration of watercourses. The Construction Official shall:
- 1) Notify adjacent communities and the New Jersey Department of Environmental Protection, ~~Division of Water Resources, Bureau of Floodplain Management~~ Bureau of Flood Control 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.
 - 2) Require that maintenance is provided within the altered or relocated portion of said watercourse so the flood carrying capacity is not diminished

- E. Substantial Damage review. The Construction Official shall:
- 1) After an event resulting in building damages, assess the damage to structures due to flood and non-flood causes.
 - 2) 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, Bureau of Flood Control.
 - 3) Ensure substantial improvements meet the requirements of sections 83-11B(1) Residential Homes, 83-11B(2) Nonresidential construction, and 83-11B(3) Manufactured homes.

- ~~F~~ E Interpretation of FIRM boundaries. The Construction Official shall 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 83-10.

Section 7. Section 83-11, Provisions for Flood Hazard Reduction, shall be amended as follows:

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

(3) Utilities. (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.

(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).

(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) A minimum of two (2) openings in at least two (2) 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. (b) The bottom of all openings shall be no higher than one (1) foot above grade. (c) Openings may be equipped with screens, louvers, or other covering or devices provided that they permit the automatic entry and exit of floodwaters.

B. Specific Standards.

(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 (including all electrical, heating, ventilating, air-conditioning and other service equipment) and sanitary facilities, elevated 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;

(b) Require within any AO or AH zone on the municipality's DFIRM 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 (1) foot, above the highest adjacent grade (at least three (3) 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.

(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 ~~elevated to the level of the base flood elevation~~ together with the attendant utilities and sanitary facilities as well as all electrical, heating, ventilating, air-conditioning and other service equipment:

either

- a) 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
- b) 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 (3) 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
- c) 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;
- d) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and,
- e) 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 83-9C2(b).

(3) Manufactured homes. (a) Manufactured homes shall be anchored in accordance with section 83-11A1(b).

(b) All manufactured homes to be placed or substantially improved within an area of special flood hazard shall:

(1) Be consistent with the need to minimize flood damage,

(2) Be constructed to minimize flood damage,

(3) Have adequate drainage provided to reduce exposure to flood damage,

- (4) 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 and;
- (5) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.

Section 8. Section 83-12, Floodways, shall be amended as follows:

Located within areas of special flood hazard established in section 83-6B 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 ~~are prohibited~~ 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 83-12A a) is satisfied, ~~the substantial flood hazard reduction provisions of~~ all new construction and substantial improvements must comply with section 83-11 Provisions for flood hazard reduction. shall be satisfied
- 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 (0.2) of a foot at any point.

Section 9. **Repealer.** Any and all other ordinances inconsistent with any of the terms and provisions of this ordinance are hereby repealed to the extent of such inconsistencies.

Section 10. **Severability.** In the event that any section paragraph, clause phrase, term, provision or part of this ordinance shall be adjudged by a court of competent jurisdiction to be invalid or unenforceable for any reason, such judgment shall not effect, impair or invalidate the remainder thereof, but shall be confined in its operation to the section, paragraph, clause, term, provision or part thereof directly involved in the controversy in such judgment shall be rendered.

Section 11. **Effective Date.** This ordinance shall take effect 20 days after adoption.

Section 12. **Short Title.** This Ordinance shall be known as Ordinance 23-2017.

Language with a ~~strike through~~ shall be deleted.
Language with an underline shall be added.

NOTICE AND CERTIFICATION

The ordinance published herewith was introduced and passed upon first reading at a meeting of the Township Council of the Township of Moorestown, County of Burlington, State of New Jersey, held on November 13, 2017. This ordinance will be further considered for final passage by the Township Council at a meeting to be held at the Town Hall, Council Chamber, 111 West Second Street, Moorestown, New Jersey on November 27, 2017 at 7:30 pm or at any time and place to which such meeting may be adjourned. All persons interested will be given the opportunity to be heard concerning such ordinance. During the week prior to and including the date of such further consideration, copies will be made available at the Municipal Clerk's Office in said Municipal Building to any member of the general public who shall request such copies.

Patricia L. Hunt, RMC
Township Clerk