

**TOWNSHIP OF DELANCO**

**ORDINANCE 2017-15**

**AMENDING CHAPTER 65 GOVERNING  
"FLOOD DAMAGE PREVENTION"**

**WHEREAS**, the Township of Delanco has existing provisions governing **Flood Damage Prevention** under Chapter 65 of the Township Code; and

**WHEREAS**, pursuant to the recommendation of the New Jersey Department of Environmental Protection - Bureau of Dam Safety and Flood Control, and in order to continue participation in the National Flood Insurance Program, the Township Committee, have deemed it in the best interest of health, safety and welfare of the Township's residents and the public at large to repeal the current Chapter 65 and adopt a new Chapter 65 Flood Damage Prevention in its place;

**NOW, THEREFORE, BE IT HEREBY ORDAINED** by the Township Committee of the Township of Delanco, County of Burlington, State of New Jersey, as follows:

**Section 1.**

The Code of the Township of Delanco is hereby repealed and in its place the following Flood Damage Prevention chapter is adopted:

**§ 65-1 Statutory authorization.**

The Township Committee of the Township of Delanco does hereby determine that the Legislature of the State of New Jersey has in N.J.S.A. 40:48-1 delegated to local governmental units, such as the Township Committee of the Township of Delanco, the responsibility to adopt regulations designed to promote the public health, safety and general welfare of its citizens.

**§ 65-2 Findings of fact.**

- A. The flood hazard areas of the Township of Delanco are subject to periodic inundation which results in loss of life, 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 floodplains causing increases in flood heights and velocities and when inadequately anchored, causes damage in other areas. Uses that are inadequately elevated, floodproofed or otherwise protected from flood damage also contribute to the flood loss.

**§ 65-3 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 and bridges located in floodplains.
- F. Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas.
- G. Ensure that potential buyers are notified that property is in a flood area.
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

**§ 65-4 Methods of reducing flood losses.**

In order to accomplish its purposes, this chapter uses the following methods:

- A. Restricts or prohibits 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. Requires that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- C. Controls the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of flood areas.
- D. Controls filling, grading, dredging and other development which may increase flood damage.
- E. Prevents or regulates the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazard to other lands.

**§ 65-5 Definitions.**

- A. Unless specifically defined below, words or phrases 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:

**AE ZONE-** The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone, either at cross section locations or a static whole-foot elevations that apply throughout the zone.

**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

**APPEAL**

A request for a review of the Construction Code Official's interpretation of any provision of this chapter or a request for a variance.

**AREA OF SHALLOW FLOODING**

A designated AO Zone on the Flood Insurance Rate Map (FIRM) with a one percent annual or greater chance of flooding to an average depth of one foot to three feet; a clearly defined channel

does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

#### **AREA OF SPECIAL FLOOD HAZARD**

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 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.

#### **BASEMENT**

Any area of the 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 supporting foundation system.

**CUMULATIVE SUBSTANTIAL IMPROVEMENT** — Any reconstruction, rehabilitation, addition, or other improvement of a structure that equals or exceeds 50 percent of the market value of the structure at the time of the improvement or repair when counted cumulatively for 10 years.

#### **DEVELOPMENT**

Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of materials located within the area of special flood hazard.

**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 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 of 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.

#### **EXPANSION TO AN EXISTING MOBILE HOME PARK OR MOBILE HOME SUBDIVISION**

The preparation of additional sites by the construction of facilities for servicing the lots on which the mobile homes are to be affixed (including the installation of utilities, either final site grading or

pouring of concrete, or the construction of streets).

### **FLOOD or FLOODING**

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

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

### **FLOOD INSURANCE RATE MAP (FIRM)**

The official map on which the Federal Insurance Administration has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

### **FLOOD INSURANCE STUDY(FIS)**

The official report provided 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** — 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** — 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 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 0.2 foot.

**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:

- (1) 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;
- (2) 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;
- (3) 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
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - (a) By an approved State program as determined by the Secretary of the Interior; or

(b) 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 connected to the required utilities. For floodplain management purposes, the term manufactured home also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes, the term manufactured home does not include a "recreational vehicle".

### **MANUFACTURED HOME PARK or MANUFACTURED HOME SUBDIVISION**

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

### **NEW CONSTRUCTION**

Structures for which the start of construction commenced on or after the effective date of a floodplain regulation adopted by a community and includes any subsequent improvements to such structures.

### **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. 97-348)), includes substantial improvement and means the date the building permit was issued, provided that 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, 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 DAMAGE** — Damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred. Substantial Damage also means flood-related damages sustained by a structure on two or more separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

#### **SUBSTANTIAL IMPROVEMENT**

Any repair, rehabilitation, reconstruction, addition or other improvement of a structure during a 10-year period, the cost of which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement. Substantial improvement also means "cumulative substantial improvement." This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

- (1) 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
- (2) Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

#### **VARIANCE**

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

**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.

#### **§ 65-6 General provisions.**

- A. Lands to which this chapter applies. This chapter shall apply to all areas of special flood hazard within the jurisdiction of the Township of Delanco, County of Burlington, New Jersey.
- B. Basis for establishing the areas of special flood hazard. The areas of special flood hazard for the Township of Delanco, Community No. 340093, are identified and defined on the following documents prepared by the Federal Emergency Management Agency:
  - (1) A scientific and engineering report "Flood Insurance Study, Burlington County, New Jersey (All Jurisdictions)" dated December 21, 2017.
  - (2) "Flood Insurance Rate Maps for Burlington County, New Jersey (All Jurisdictions)" as shown on Index and panels 34005C0104F, 34005C0108F, 34005C0111F, 34005C0112F, 34005C0116F, and 34005C0118F 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 at the Delanco Municipal Building, 770 Coopertown Road, Delanco, New Jersey, or FEMA Map Service Center website - <https://msc.fema.gov/portal/advanceSearch>.

- 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 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 punished as provided in Chapter 1, General Provisions, Article II, General Penalty. Nothing herein contained shall prevent the Township of Delanco from taking such other lawful action as is necessary to prevent or remedy any violation.

- D. Abrogation and greater restrictions. This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another chapter, easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- E. Interpretation. In the interpretation and application of this chapter, all provisions shall be:
  - (1) Considered as minimum requirements.
  - (2) Liberally construed in favor of the governing body.
  - (3) Deemed neither to limit nor repeal any other powers granted under State statutes.
- F. 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 hazard 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 Township of Delanco, 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 hereunder.

#### § 65-7 Administration.

- A. 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 § 65-6B. Application for a development permit shall be made on forms furnished by the Construction Code 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 materials and drainage facilities; and the location of the foregoing. Specifically, the following information is required:
  - (1) Elevation in relation to mean sea level and/or North American Vertical Datum of 1988 (NAVD88) datum, of the lowest flood, including basement, of all structures.
  - (2) Elevation in relation to mean sea level and/or North American Vertical Datum of 1988 (NAVD88) datum, to which any structure has been floodproofed.
  - (3) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in § 65-8B(2).
  - (4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
- B. Designation of administrative official. The Construction Code Official is hereby appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.
- C. Duties and responsibilities of the administrative official. Duties of the Construction Code Official shall include, but not be limited to:

- (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 and to assure that the encroachment provisions of § **65-8C** are met.
  
- (2) Use of other base flood and floodway data. When base flood elevation and floodway data has not been provided in accordance with § **65-6B**, Basis for establishing the areas of special flood hazard, the Construction Code Official 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 § **65-8B(1)**, Specific standards, Residential construction, and § **65-8B(2)**, Specific standards, Nonresidential construction.
  
- (3) Information to be obtained and maintained.
  - (a) Obtain and record the actual elevation (in relation to mean sea level and/or North American Vertical Datum of 1988 (NAVD88) datum) 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 substantially improved floodproofed structures:
    - [1] Verify and record the actual elevation (in relation to mean sea level and/or North American Vertical Datum of 1988 (NAVD88) datum).
    - [2] Maintain the floodproofing certifications required in § **65-7A(3)**.
  - (c) Maintain for public inspection all records pertaining to the provisions of this chapter.
  
- (4) Alteration of watercourses.
  - (a) Notify adjacent communities and the New Jersey Department of Environmental Protection, Bureau of Flood Control and the Land Use Regulation Program and the Township Engineer 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 that the flood-carrying capacity is not diminished.
  
- (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, Bureau of Flood Control.
  - (c) Ensure substantial improvements meet the requirements of sections 65-8B(1), SPECIFIC STANDARDS, RESIDENTIAL CONSTRUCTION, 65-8B(2), SPECIFIC STANDARDS, NONRESIDENTIAL CONSTRUCTION and 65-8B(3), SPECIFIC STANDARDS, MANUFACTURED HOMES.
  
- (6) Interpretation of FIRM boundaries. Make interpretations where needed as to the exact location of the boundaries of the areas of special flood hazard (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 Subsection **D**.

D. Appeal Board.



- (1) The Township Committee of the Township of Delanco shall hear and decide appeals and requests for variances from the requirements of this chapter.
- (2) The Township Committee shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the Construction Code Official in the enforcement or administration of this chapter.
- (3) Those aggrieved by the decision of the Township Committee or any taxpayer may appeal such decision to the Superior Court Law Division, State of New Jersey, as provided for by the laws of the State of New Jersey.
- (4) In passing upon such applications, the Township Committee shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter and:
  - (a) The danger that materials may be swept onto other lands to the injury of others.
  - (b) The danger to life and property due to flooding or erosion damages.
  - (c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
  - (d) The importance of the services provided by the proposed facility to the community.
  - (e) The necessity to the facility of a waterfront location, where applicable.
  - (f) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage.
  - (g) The compatibility of the proposed use with existing and anticipated development.
  - (h) The relationship of the proposed use to the Comprehensive Plan and floodplain management program of that area.
  - (i) The safety of access to the property in times of flood for ordinary and emergency vehicles.
  - (j) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave actions, if applicable, expected at the site.
  - (k) The costs of providing governmental services during the after flood conditions, including maintenance and repair of public utilities and facilities, such as sewer, gas, electrical and water systems, and streets and bridges.
- (5) Upon consideration of the factors of § **65-7D(4)** and the purposes of this chapter, the Township Committee may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
- (6) The Construction Code Official shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Insurance Administration upon request.

E. Conditions for variances.

- (1) 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 § **65-7D(4)(a)** through **(k)** have been fully considered. As the lot size increases beyond 1/2 acre, the technical justification required for issuing the variance increases.
- (2) Variances may be issued for the repair, reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places and the variance is the minimum necessary to preserve the historic character and design of the structure.

- (3) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (5) Variances shall only be issued upon:
  - (a) A showing of good and sufficient cause;
  - (b) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
  - (c) 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 or cause fraud on or victimization of the public as identified in § 65-7D(4) or conflict with existing local laws or ordinances.
- (6) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

**§ 65-8 Provisions for flood hazard reduction.**

- A. General standards. In all areas of special flood hazard 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.
      - [1] Over-the-top ties shall be provided at each of the four corners of the mobile home, with two additional ties per side at intermediate locations, with mobile homes less than 50 feet long requiring one additional tie per side.
      - [2] Frame ties shall be provided at each corner of the home with five additional ties per side at intermediate points, with mobile homes less than 50 feet long requiring four additional ties per side.
      - [3] All components of the anchoring system shall be capable of carrying a force of 4,800 pounds.
      - [4] Any additions to the mobile homes shall be similarly anchored.
  - (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.
  - (3) Utilities.
    - (a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
    - (b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters 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.

(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.

(d) Base flood elevation data shall be provided for all subdivision proposals and other proposed new development.

(5) Enclosure openings. For 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 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

B. Specific standards. In all areas of special flood hazard where base flood elevation data have been provided as set forth in § **65-6B**, Basis for establishing the areas of special flood hazard, or in § 65-7C(2), Use of other base flood data, the following standards are required:

(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 two (2) feet 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 two (2) feet, 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 either have the lowest floor, including basement together with attendant utilities and sanitary facilities, as well as all electrical, heating, ventilating, air-conditioning and other service equipment shall either:

- a) Elevated to or above the base flood elevation plus two (2) feet 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 two (2) feet, 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 two (2) feet 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 the subsection. Such certification shall be provided to the official as set forth in § **65-7C(3)(b)(2)**.
- (3) Manufactured homes.
- (a) Manufactured homes shall be anchored in accordance with § **65-8A(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,
    - iv. Be elevated on a permanent foundation such that the top of the lowest floor is at or above the base flood elevation plus two (2) feet or as required by ASCE/SEI 24-14, Table 2-1, whichever is more restrictive and;
    - v. 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.

C. Floodways. Located within areas of special flood hazard established in § **65-6** are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions apply:

- (1) Encroachments, including fill, new construction, substantial improvements and other development, are prohibited unless a technical evaluation demonstrates that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (2) If Subsection **C(1)** above is satisfied, all new construction and substantial improvements shall comply with section § **65-8**, Provisions for flood hazard reduction.
- (3) 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 2. Repealer.** Any Ordinances inconsistent with this ordinance is hereby repealed to the extent of its inconsistency.

**Section 3. Severability.** If any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance shall be declared invalid for any reason whatsoever, such decision shall not affect the remaining portions of the Ordinance, which shall remain in full force and effect, and for this purpose the provisions of the Ordinance are hereby declared to be severable.

**Section 4. Effective date.** This Ordinance shall be effective on December 21, 2017, and shall remain in force until modified, amended or rescinded by the Township of Delanco, Burlington County take effect upon proper passage in accordance with the law.