

11. FLOODPLAIN MANAGEMENT REGULATIONS

11.1 STATUTORY AUTHORIZATION AND PURPOSE

A. STATUTORY AUTHORIZATION

The Legislature of the State of Connecticut has delegated in Title 7, Chapter 98, Section 7-148(c)(7)(A), and in Title 8, Chapter 124, Section 8-2 of the General Statutes the responsibility for local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. In response to the delegation of this trust, the Planning and Zoning Commission of the Town of Ridgefield amended and updated its regulation for management of development in floodplain areas, in accordance with the requirements of the Federal Emergency Management Agency (FEMA) and the State of Connecticut, to secure the safety of its residents from floods.

B. FINDINGS OF FACT

1. The flood hazard areas of the Town of Ridgefield are subject to periodic flood inundation which can result in the loss of life and property, the creation of health and safety hazards, the disruption of commerce and governmental services, the necessity for extraordinary public expenditures for flood protection and relief, and the impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
2. These flood losses are caused by the cumulative effect of obstructions in the floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazards to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damage. Uncontrolled development and use of the floodplains can adversely affect the community.
3. The Planning and Zoning Commission first regulated development in areas designated as "Flood Safety Zones" under zoning regulations adopted effective July 12, 1968, for flood areas shown on maps prepared by the State of Connecticut Water Resources Commission. The zoning regulations were amended in 1983 to incorporate reference to Flood Insurance Rate Maps (FIRMs) dated September 30, 1982 and a Flood Insurance Study dated March 30, 1982 (prepared by FEMA). The Town of Ridgefield has voluntarily participated in the National Flood Insurance Program (NFIP) since September 30, 1982, and adopted "Flood Damage Prevention Regulations" effective on July 2, 1982, to meet the strictest FEMA (federal) requirements at that time. This Section, adopted by the Commission effective on April 30, 2010, amends and updates all previous flood plain management regulations.
4. The NFIP is founded on mutual agreements between the federal government and individual participating communities. Local, state and federal governments must share roles and responsibilities to meet the goals and objectives of the NFIP, and the community's role is of paramount importance. Property owners are able to receive federally subsidized flood insurance only if the community enacts and enforces the minimum floodplain regulations required for participation in the NFIP.

C. STATEMENT OF PURPOSE

It is the purpose of this regulation to regulate floodplain development in Special Flood Hazard Areas (SFHAs), to protect 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:

1. Protect human life and health, and prevent damage to property;

2. Minimize expenditure of public funds for costly flood control projects;
3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. Minimize prolonged business interruptions and other economic disruptions;
5. Minimize damage to public facilities, infrastructure and utilities, such as water and gas mains, electric, telephone and sewer lines, and streets and bridges, located in the floodplain;
6. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas in such a manner as to minimize flood damage, and future flood blight areas;
7. Insure that potential buyers are notified that property is in a flood hazard area;
8. Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners;
9. Ensure that those who occupy the flood hazard areas assume responsibility for their actions; and
10. Discourage development in a floodplain if there is any practicable alternative to locate the activity, use, or structure outside of the floodplain.

D. OBJECTIVES

In order to accomplish its purposes, this regulation includes objectives, methods and provisions that:

1. Restrict or prohibit uses which are dangerous to health, safety and property due to flood or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
2. Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction;
3. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of flood waters;
4. Control filling, grading, dredging and other development which may increase erosion or flood damage; and
5. Prevent or regulate the construction of barriers or obstructions which will unnaturally divert flood waters or which may increase flood hazards to other lands.

11.2 DEFINITIONS

Unless specifically defined below, words and phrases used in this regulation shall have the same meaning as they have in common usage and to give this regulation its most reasonable application. For the purposes of regulating and evaluating development in designated floodplain areas, these definitions supersede any other definitions found in Sec. 2.2 of the zoning regulations.

Base Flood – The flood having a one (1) percent chance of being equaled or exceeded in any given year, also referred to as the one hundred (100) year flood, as published by the Federal Emergency Management Agency (FEMA) as part of a Flood Insurance Study (FIS) and depicted on a Flood Insurance Rate Map (FIRM).

Base Flood Elevation (BFE) – The elevation of the crest of the base flood or 100-year flood; the height in relation to mean sea level expected to be reached by the waters of the base flood at pertinent points in the floodplains of coastal and riverine areas.

Basement – Any area of the building having its floor subgrade (below ground level) on all sides.

Building – see definition for “Structure” in this Section.

Cost – As related to substantial improvements, the cost of any reconstruction, rehabilitation, addition, alteration, repair or other improvement of a structure is established by a detailed written contractor’s estimate, provided that the estimate includes, but is not limited to: the cost of materials (interior finishing elements, structural elements, utility and service equipment); sales tax on materials, building equipment and fixtures, including heating and air conditioning and utility meters; labor; built-in appliances; demolition and site preparation; repairs made to damaged parts of the building worked on at the same time; contractor’s overhead; contractor’s profit; and grand total. Items to be excluded include; cost of plans and specifications, survey costs, permit fees, outside improvements such as septic systems, water supply wells, landscaping, sidewalks, fences, yard lights, irrigation systems, and detached structures such as garages, sheds and gazebos.

Dangerous Materials - Any material or substance which may pose an unreasonable risk to the health and safety of individuals, property, water supplies and/or the environment if discharged or released. These materials or substances may be defined as explosive, blasting agent, flammable gas, nonflammable gas, combustible liquid, flammable liquid, flammable solid, organic peroxide, oxidizer, poison, irritating material, etiologic agent, radioactive material, corrosive material, other regulated material.

Development – Any man-made change to improved or unimproved real estate, including but not limited to the construction of buildings or structures; the construction of additions, alterations or substantial improvements to buildings or structures; the placement of buildings or structures; mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment; the storage, deposition, or extraction of materials; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities located within the Special Flood Hazard Area (SFHA).

Elevated Building – A non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts or piers), shear walls or breakaways walls, as allowed under applicable standards.

Federal Emergency Management Agency (FEMA) – The federal agency that administers the National Flood Insurance Program (NFIP).

Five Hundred Year Storm or 500-year Flood – Flooding having a 0.2 percent chance (1:500) of occurring or being equaled or exceeded in any given year.

Finished Living Space – As related to fully enclosed areas below the base flood elevation (BFE), a finished living space can include, but is not limited to, a space that is heated and/or cooled, contains finished floors (tile, linoleum, hardwood, etc.) has sheetrock walls that may or may not be painted or wallpapered, and other amenities such as furniture, appliances, bathrooms, fireplaces and other items that are easily damaged by floodwaters and expensive to clean, repair or replace.

Flood or Flooding – A general and temporary condition of partial or complete inundation of normally dry land areas from either the overflow of inland waters, or the unusual and rapid accumulation or runoff of surface waters from any source.

Flood Insurance Rate Map (FIRM) – The official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas (SFHAs, or 100-year floodplain) and the insurance risk premium zones applicable to a community.

Flood Insurance Study (FIS) – The official study of a community in which the Federal Emergency Management Agency (FEMA) has conducted an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

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 one (1.0) foot. For the purposes of these regulations, the term “Regulatory Floodway” is synonymous in meaning with the term “Floodway”.

Floor – The top surface of an enclosed area in a building (including basement), i.e., top of slab in concrete slab construction, or top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for the parking of vehicles.

Functionally Dependent Use or Facility – A use or facility that cannot perform its intended purpose unless it is located or carried out in close proximity to water, such as docking facilities and port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities. The term does not include seafood processing facilities, long-term storage, manufacturing, sales or service facilities.

Highest Adjacent Grade (HAG) - The highest natural elevation of the ground surface prior to construction next to the proposed 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 the 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 historic 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 parking of vehicles, building access or storage, in an area other than a basement area is not considered a building’s lowest floor, provided that such an area meets the design requirements specified in Section 11.5.C.3 of this regulation.

Manufactured Home – A structure, transportable in one (1) 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 also includes park trailers, travel trailers, recreational vehicles and other similar vehicles or transportable structures placed on a site for one hundred and eighty (180) consecutive days or longer and intended to be improved property.

Manufactured Home Park or Subdivision – A parcel or contiguous parcels of land divided into two (2) or more manufactured home lots for rent or sale.

Market Value - The market value of the structure shall be determined by the appraised value of the structure prior to the start of the initial repair or improvement, or in the case of damage, the value of the structure prior to the damage occurring.

Mean Sea Level (MSL) - The North American Vertical Datum (NAVD) of 1988 or other datum, to which the base flood elevations shown on a community's Flood Insurance Rate Map (FIRM) are referenced.

New Construction – Structures for which the “start of construction” commenced on or after July 2, 1982, the effective date of the initial adoption of floodplain management regulations in the Town of Ridgefield, and includes any subsequent improvements to such structures.

Recreational Vehicle – A vehicle which is: (a) built on a single chassis; (b) four hundred (400) square feet or less when measured at the largest horizontal projection; (c) designed to be self-propelled or permanently towable by a light duty truck; and (d) not designed for use as a permanent dwelling, but for primary use as temporary living quarters for recreational, camping, travel, or seasonal use.

Special Flood Hazard Area (SFHA) – The land in the floodplain within a community subject to a one (1) percent or greater chance of flooding in any given year. SFHAs are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for a community. BFEs provided on the Flood Insurance Rate Map (FIRM) are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. SFHAs include, but are not necessarily limited, to the land shown as Zones A, AE, AO, and AH on the FIRM. The SFHA is also called the Area of Special Flood Hazard.

Start of Construction – Includes substantial improvement and means the date the Site Plan for Floodplain Development was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, substantial improvement or other improvement was initiated within one hundred and eighty (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 slab or footings, the installation of piles, 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 erections 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 which is principally above ground, including a manufactured home, a gas or liquid storage tank, or other man-made facilities or infrastructures.

Substantial Damage – Damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement – Any combination of repairs, reconstruction, rehabilitation, alterations, additions or other improvements to a structure, taking place during a one (1) year period, in which the cumulative cost equals or exceeds fifty (50) percent of the market value of the structure as determined at the beginning of such ten (10) year period. This term includes structures that have incurred “substantial damage,” regardless of the actual repair work

performed. For purposes of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either: (1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official 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 by the Ridgefield Zoning Board of Appeals from the terms of this floodplain management regulation that allows construction in a manner otherwise prohibited, and where specific enforcement would result in unnecessary hardship.

Violation – Failure of a structure or other development to be fully compliant with Ridgefield’s floodplain management regulations. A structure or other development without required permits, lowest floor elevation documentation, flood-proofing certificates or required floodway encroachment calculations is assumed to be in violation until such time as that documentation is provided.

Water Surface Elevation – The height, in relation to the North American Vertical Datum (NAVD) of 1988 (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

11.3 GENERAL PROVISIONS

A. AREAS TO WHICH THIS REGULATION APPLIES

This Floodplain Management Regulation shall apply to all Special Flood Hazard Areas (SFHAs) shown as Zones A and AE, including areas designated as a floodway, on a Flood Insurance Rate Map (FIRM) for the Town of Ridgefield.

B. BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS (SFHAs)

The Special Flood Hazard Areas (SFHAs) identified by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study (FIS) for Fairfield County, Connecticut and accompanying Flood Insurance Rate Maps (FIRM) effective on June 18, 2010, and other supporting data applicable to the Town of Ridgefield, and any subsequent revisions thereto, are adopted by reference and declared to be a part of this Floodplain Management Regulation. Since mapping is legally adopted by reference into this regulation, it must take precedence even when more restrictive than actual conditions may appear, until such time as a map amendment or map revision is obtained from FEMA.

The SFHA for the Town of Ridgefield includes any area shown on the FIRM as Zones A and AE, including areas designated as a floodway on a FIRM. SFHAs are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the Flood Insurance Study (FIS) for Ridgefield. BFEs provided on a Flood Insurance Rate Map (FIRM) are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. The current FIRM and FIS are on file in the Planning and Zoning Department.

C. STRUCTURES ALREADY IN COMPLIANCE

Non-compliant Alterations Prohibited. A structure or development already in compliance with this regulation shall not be made non-compliant by any alteration, modification, repair, reconstruction or improvement and must also comply with other applicable local, state, and federal regulations. No structure or land shall hereafter be located, extended, converted,

modified or structurally altered without full compliance with the terms of this regulations and other applicable regulations.

D. ABROGATION AND GREATER RESTRICTIONS

This regulation is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. However, where this regulation and another ordinance, regulation, 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 regulation, all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body, and; (3) deemed to neither limit nor repeal any other powers granted under State statutes.

F. WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this regulation is considered the minimum reasonable for regulatory purposes and is based on scientific and engineering consideration and research. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This regulation does not imply or guarantee that land outside the Special Flood Hazard Area or uses permitted in such areas will be free from flooding and flood damages. This regulation shall not create liability on the part of the Town of Ridgefield or by any officer or employee thereof for any flood damages that result from reliance on this regulation or any administrative decision lawfully made thereunder. The Town of Ridgefield, its officers and employees shall assume no liability for another person's reliance on any maps, data or information provided by the Town of Ridgefield.

G. SEVERABILITY

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

11.4 ADMINISTRATION

A. DESIGNATION OF THE LOCAL ADMINISTRATOR

The Planning and Zoning Commission is designated to administer, implement and enforce the provisions of this zoning regulation and, except for the issuance of permits under this regulation, may delegate other administrative, implementation and enforcement duties and responsibilities to its designated agent(s).

B. CERTIFICATION

Where required under this regulation, a Connecticut registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions of this regulation. Such certification must be provided to the Planning and Zoning Office.

C. ESTABLISHMENT OF PERMITS FOR FLOODPLAIN DEVELOPMENT

A Site Plan Application for Floodplain Development is hereby established for securing a permit under these regulations, and shall be required in conformance with the provisions of this regulation prior to the commencement of any development activities. Permits issued under Site Plan Approval pursuant to this regulation shall expire if actual construction of a permitted structure does not commence within one hundred and eighty (180) days of the permit approval date.

D. PERMIT APPLICATION PROCEDURES

Site Plan Approval for Floodplain Development is required for all construction and other development to be undertaken in Special Flood Hazard Areas in the Town of Ridgefield. Prior to the issuance of a Zoning Permit for construction and prior to the commencement of any development activities, a Site Plan Application for Floodplain Development shall be approved by the Planning and Zoning Commission pursuant to the requirements in Sec. 9.1.C of the zoning regulations and the additional requirements of these Floodplain Management Regulations. The application shall be filed on a form provided by the Planning and Zoning Office and shall include at least the information listed below (unless otherwise authorized by the Director of Planning):

1. **Site Plan and supporting documentation.** Two (2) hard copies and one digital PDF copy¹ of a site plan prepared by a Connecticut licensed professional engineer (based on an A-2 survey prepared by a Connecticut licensed land surveyor), drawn to scale and showing the information on the Checklist found in Sec. 10.2.F of the zoning regulations, described in more detail below:
 - a. Base flood elevation (BFE) for the site in question as determined in the FEMA Flood Insurance Study (FIS) or Flood Insurance Rate Map (FIRM); [The FIS flood profiles provide more accurate BFE data than the FIRM.]; the extent of the 100-year floodplain and floodway must be depicted with a boundary line on any site plan and shown in relation to existing and proposed structures or development;
 - b. Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all new construction, substantial improvements or repairs to structures that have sustained substantial damage;
 - c. Elevation in relation to mean sea level to which any non-residential new construction, substantial improvements or repair to structures that have sustained substantial damage will be dry flood-proofed;
 - d. Description of the extent to which any watercourse will be altered or relocated as a result of the proposed development; computations by a licensed professional engineer must be submitted to demonstrate that the altered or relocated segment will provide equal or greater conveyance than the original stream segment, in accordance with Section 11.5.A.5 of these regulations; the applicant must submit any maps, computations or other materials required by the Federal Emergency Management Agency (FEMA) in order to officially amend or revise the Flood Insurance Rate Map; the applicant must pay any fees or other costs assessed by FEMA for this purpose; the applicant must also provide costs assessed by FEMA for this purpose; the applicant must also provide assurances that the conveyance capacity of the altered or relocated stream segment will be maintained;
 - e. A statement and supporting documentation (all costs of project, market value of structure, etc.) verifying that the proposed alterations to an existing structure meets or does not meet the criteria of the substantial improvement and/or substantial damage definition (Sec.11.2); if a development meets the definition of substantial improvement and/or substantial damage, the structure must be brought into compliance with all floodplain regulations as if it was new construction;
 - f. Where applicable, the following certifications confirming that the design methods of construction are in accordance with accepted standards of practice and the provisions

¹ 2020-049-A: Amended effective 10/30/2020 (digital submission requirements)

of Section 11.5.C shall be provided to the Planning and Zoning Commission or its designated agent by a Connecticut registered engineer or architect:

- i. Non-residential flood-proofing must meet the provisions of Section 11.5.C.2;
- ii. Fully enclosed areas below the base flood elevation (BFE) must meet the minimum design criteria in Section 11.5.C.3;
- iii. No (0.00) increase in floodway water surface elevations is allowed; any development in a floodway must meet the provisions of Section 11.5.C.5.

2. **Review by Commission.** Notwithstanding references to the duties of the Planning Director in Section 9.1.C of the zoning regulations, the Site Plan Application for Floodplain Development shall be reviewed by the Planning and Zoning Commission in accordance with the requirements of that section and pursuant to the requirements of these Floodplain Management Regulations, following the notice requirements and timetables found in Section 8-7d of the Connecticut General Statutes (CGS), as follows:

- a. The Commission may find that the nature of the proposed development and/or improvements is of a major size and intensity that may have an affect or may be of interest to neighboring and/or downstream property owners, and therefore a public hearing shall be scheduled in accordance with the notice requirements and timetables found in Section 8-7d(a) of the CGS; or
- b. The Commission may find that the nature of the proposed development and/or improvements is of a minor size and intensity that will not have an affect on neighboring and/or downstream property owners, and the review of the application shall proceed in accordance with the timetables in Section 8-7d(b) of the CGS.
- c. Flood Hazard Disclosure. For all Site Plan Approvals for Floodplain Development, the owner of the property shall file a copy of the approval on the Ridgefield Land Records.

3. **Certification of Completed Development.** Upon completion of the permitted development and prior to the issuance of a Zoning Certificate of Compliance, the applicant shall provide required as-built surveys and other documents listed as conditions of the Site Plan Approval, Zoning Permit, and/or these regulations; engineering or architectural certifications shall be provided demonstrating compliance with the issued Site Plan Approval for Floodplain Development and the standards of Section 11.5 of this regulation, including but not limited to the following:

- a. Verification of Elevation. Completion of a National Flood Insurance Program Elevation Certificate, prepared by a Connecticut licensed land surveyor based on a Class A-2 as-built survey; for residential structures and manufactured homes, such survey shall show the elevation of the top of the lowest floor (including basement); for non-residential structures, such survey shall show the elevation of the lowest floor (including basement) and/or the elevation to which such structures have been dry flood-proofed;
- b. Verification of Flood-proofing Measures. Where flood-proofing is used to satisfy the standards of these regulations, a Connecticut registered professional engineer or architect shall submit a written statement, signed and sealed, certifying that he/she has inspected the completed construction and that the structure or facility has been constructed to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the base flood, as specified in the Site Plan Approval for Floodplain Development and in accordance with the provisions of these regulations;

E. DUTIES AND RESPONSIBILITIES FOR ADMINISTRATION

Administration, implementation and enforcement of these regulations shall be the responsibility of the following agents and agencies:

1. **Director of Planning.** The Director of Planning and designated staff in the Planning and Zoning Department shall:
 - a. Review all proposed development activities to determine if the proposed activity is within a Special Flood Hazard Area (SFHA);
 - b. Review all permit applications to determine whether the proposed development and building sites will be reasonably safe from flooding.
 - c. Review all proposed plans with applicants to explain the provisions of this Section, identify any aspects of the proposed activity that may not conform, and suggest the type of professionals who can design modifications that would bring a project into conformance with the standards of these regulations;
 - d. Advise applicants of any known additional federal, state or local permits that may be required, and/or direct the applicant to federal, state and local sources who can provide that information; [It is the responsibility of the applicant/property owner to obtain all applicable, required permits.]
 - e. Issue written findings, recommendations and suggested conditions of approval to the Planning and Zoning Commission regarding any Site Plan Application for Floodplain Development and/or variance from the standards of these regulations;
 - f. Provide advice and assistance to the ZEO to ensure that approved and permitted activities are completed in conformance with the provisions of these regulations;
 - g. Assist the ZEO in notifying permit holders regarding any violation of the provisions of this Section, in the issuance of any Warning or Citation, and in the initiation of other enforcement actions as necessary;
 - h. Endorse the ZEO's issuance of a Certificate of Zoning Compliance upon final inspection and determination that the conditions of the Site Plan Approval for Floodplain Development have been met;
 - i. Maintain records pertaining to the provisions of this Section and any Site Plan Approval for Floodplain Development issued under these regulations.
 - j. Obtain, record and maintain the elevation (in relation to mean seal level) of the lowest floor (including basement) of all new construction, substantial improvement or repair to a structure that has sustained substantial damage.
 - k. Obtain, record and maintain the elevation (in relation to mean seal level) to which all new construction, substantial improvement or repair to a structure that has sustained substantial damage has been flood-proofed.

2. **Planning and Zoning Commission.** The Commission shall approve, approve with conditions, or disapprove all Site Plan Applications for Floodplain Development within the designated areas specified in these regulations.
 - a. The Commission or its designated agent shall provide notification to adjoining municipalities and the appropriate Regional Planning Agency not less than thirty-five (35) days prior to any scheduled public hearing or final action on any change of regulations or use of a flood zone any portion of which is within five hundred (500) feet of any adjoining municipality;
 - b. The Commission or its designated agent shall notify adjacent municipalities and the Connecticut Department of Environmental Protection Inland Water Resources Division no less than thirty-five (35) days prior to approval of any application to alter or relocate any watercourse designated within an SFHA, and shall submit evidence of such notification to the Federal Emergency Management Agency.
 - c. The Commission shall require that all permits issued for flood plain development shall expire unless construction has been initiated within one hundred eighty (180) days of the issue date.

3. **Zoning Enforcement Officer (ZEO).** The ZEO shall monitor and inspect construction and other development activities within the area approved for development in the Site Plan Approval for Floodplain Development, to ensure compliance with the standards of this

regulation and the conditions of the approval, and shall enforce any violations in the same manner as other violations of the Zoning Regulations.

- a. The ZEO shall not issue a Certificate of Zoning Compliance until a determination has been made that all conditions of the permit and any other zoning permit for construction have been met;
- b. The ZEO shall maintain records pertaining to the enforcement of the provisions of this regulation;
- c. The ZEO is authorized to inspect any property in a Special Flood Hazard Area (SFHA) where it appears that violations of these regulations may be taking place.

11.5 PROVISIONS FOR FLOOD HAZARD REDUCTION

A. GENERAL STANDARDS

In all Special Flood Hazard Areas (SFHAs), the following provisions are required:

1. **New Construction and Substantial Improvements.** New construction, substantial improvements and repair of structures that have sustained substantial damage shall comply with the following requirements:
 - a. Shall be constructed using methods and practices that minimize flood damage;
 - b. Shall be constructed with materials and utility equipment resistant to flood damage;
 - c. Shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic loads, including the effects of buoyancy;
 - d. Cannot be constructed or located entirely or partially over water unless they are a functionally dependent use or facility;
 - e. Electrical heating, ventilation, plumbing, air conditioning equipment, HVAC ductwork, and other service facilities, or any machinery or utility equipment or connections servicing a structure shall be elevated to the same or above the base floor elevation (BFE) to prevent water from entering or accumulating within the components during conditions of flooding; this includes, but is not limited to, furnaces, oil or propane tanks, air conditioners, heat pumps, hot water heaters, ventilation ductwork, washer and dryer hook-ups, electrical junction boxes, and circuit breaker boxes;
 - f. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
 - g. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters;
 - h. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
 - i. Above-ground storage tanks (oil, propane, etc.) which are located outside or inside of the structure must either be elevated above the base flood elevation (BFE) on a concrete pad, or be securely anchored with tie-down straps to prevent flotation or lateral movement, have the top of the fill pipe extended above the BFE, and have a screw fill cap that does not allow for the infiltration of flood water.
2. **Watercourse alteration.** In any portion of a watercourse that is altered or relocated, the flood carrying capacity must be maintained. As required in Section 11.4.E.2.b, The Commission shall notify adjacent communities and the Connecticut Department of Environmental Protection Inland Water Resources Division prior to any alteration or relocation of a watercourse.
3. **Portion of Structure in SFHA.** If any portion of a structure lies within the Special Flood Hazard Area (SFHA), the entire structure is considered to be in the SFHA. The entire

structure must meet the construction requirements of the flood zone. The structure includes any attached additions, garages, decks, sunrooms, or any other structure attached to the main structure. Decks or porches that extend into a more restrictive flood zone will require the entire structure to meet the standards of the more restrictive zone.

4. **Structure within Two or More Flood Zones.** If a structure lies within two or more flood zones, the construction standards of the most restrictive zone apply to the entire structure (i.e., V zone is more restrictive than A zone; structure must be built to the highest BFE). The structure includes any attached additions, garages, decks, sunrooms, or any other structure attached to the main structure. Decks or porches that extend into a more restrictive zone will require the entire structure to meet the requirements of the more restrictive zone.
5. **Equal Conveyance.** Within the floodplain as designated on the Flood Insurance Rate Map (FIRM) for Ridgefield, encroachments resulting from filling, new construction or substantial improvements involving an increase in footprint of the structure are prohibited unless the applicant provides certification by a registered professional engineer demonstrating, with supporting hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that such encroachments shall not result in any (0.00 feet) increase in flood levels (base flood elevation). Work within the floodplain and the land adjacent to the floodplain, including work to provide compensatory storage, shall not be constructed in such a way as to cause an increase in flood stage or flood velocity.
6. **Compensatory Storage.** The water holding capacity of the floodplain shall not be reduced. Any reduction caused by filling, new construction or substantial improvements involving an increase in footprint to the structure shall be compensated for by deepening and/or widening of the floodplain. Storage shall be provided on-site, unless easements have been gained from adjacent property owners; it shall be provided within the same hydraulic reach, and a volume not previously used for flood storage; it shall be hydraulically comparable and incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Compensatory storage can be provided off-site if approved by the Town of Ridgefield.

B. STANDARDS FOR WATERCOURSES WITHOUT ESTABLISHED BASE FLOOD ELEVATIONS (UN-NUMBERED A ZONE), ADOPTED FLOODWAYS AND/OR FLOOD MAPPING

1. **Un-numbered A Zones.** The Planning and Zoning Commission or its designated agent shall require base flood elevation (BFE) data to be provided with any application for new construction, substantial improvement, repair to structures which have sustained substantial damage or other development in Zone A without a FEMA-published BFE (un-numbered A Zone). The Commission or its designated agent shall obtain, review and reasonably utilize any BFE and floodway data available from a federal, state or other source, including data developed for subdivision proposals, as criteria for requiring that new construction, substantial improvements, repair to structures which have sustained substantial damage or other development in un-numbered A Zones on Ridgefield's Flood Insurance Rate Map (FIRM) meet the standards in Section 11.5 of these regulations. If no BFE can be determined, the lowest floor, including basement, must be elevated to two (2) feet above the highest adjacent grade next to the structure.
2. **No Floodway Designated.** When BFEs have been determined within Zone AE on Ridgefield's FIRM but a regulatory floodway has not been designated, the Planning and Zoning Commission or its designated agent shall require that no new construction, substantial improvements, repair to structures which have sustained substantial damage or other development, including fill, shall be permitted which will increase the water surface

elevation of the base flood more than one (1.0) foot at any point within the Town of Ridgefield when all existing and anticipated development is considered cumulatively with the proposed development.

3. **Request for Floodway Data.** The Planning and Zoning Commission or its designated agent may request floodway data of an applicant for watercourses without FEMA-published floodways. When such data is provided by an applicant or whenever such data is available from any other source (in response to the Commission's request or not), the Commission shall adopt a regulatory floodway based on the principle that the floodway must be able to convey the waters of the base flood without increasing the water surface elevation more than one (1.0) foot at any point within the community.
4. **Use of Data from Other Sources.** The Planning and Zoning Commission or its designated agent shall obtain, review and reasonably utilize any BFE and floodway data available from a federal, state or other source, as criteria for requiring that new construction, substantial improvements, repair to structures which have sustained substantial damage or other development in any area of potential, demonstrable or historical flooding within the community meet the standards in Section 11.5 of these regulations.
5. **Exception to 1.0 foot Limit in Increased BFE Elevation.** Under the provisions of 44 CFR Chapter 1, Section 65.12 of the National Flood Insurance Program regulations, a community may approve certain development in Zone AE on the community's FIRM which increases the water surface elevation of the base flood by more than one (1.0) foot, provided that the community first completes all of the provisions required by Section 65.12.

C. SPECIFIC STANDARDS

The following are specific **Construction Standards** for Special Flood Hazard Areas. These standards shall be implemented in the design of all development, in addition to the General Standards listed in Sec. 11.5.A of these regulations.

1. **Residential Construction.** All new construction, substantial improvements, and repair to structures that have sustained substantial damage which are residential structures shall have the bottom of the lowest floor, including basement, elevated to or above the base flood elevation (BFE). Electrical, plumbing, machinery or other equipment that service the structure must be elevated to the same level or above the BFE.
2. **Non-Residential Construction.** All new construction, substantial improvements, and repair to structures that have sustained substantial damage which are commercial, industrial or non-residential structures shall:
 - a. Have the bottom of the lowest floor, including basement, elevated to the same or above the base flood elevation (BFE); or
 - b. In lieu of being elevated, non-residential structures may be dry flood-proofed to one (1) foot above the BFE, provided that together with all attendant utilities and sanitary facilities, the areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, and provided that such structures are composed of structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A Connecticut registered professional engineer or architect shall review and/or develop structural design specifications and plans for the construction, and shall certify that the design and methods of construction are in accordance with acceptable standards of practice for meeting the provisions of this section. Such certification shall be provided to the Planning and Zoning Commission on the FEMA Flood-proofing Certificate, Form 81-65.

- c. Electrical, plumbing, machinery or other utility equipment that service the structure must be elevated to or above the BFE.

3. **Elevated Buildings and Fully Enclosed Areas Below the Base Flood Elevation.** All new construction, substantial improvements, or repair of substantial damage to residential or non-residential structures that include fully enclosed areas formed by a foundation and other exterior walls below the base flood elevation (BFE) of an elevated building shall be designed to preclude finished living space and be designed to allow for the entry and exit of flood waters to automatically equalize hydrostatic flood forces on exterior walls (wet flood-proofing). Designs for complying with this requirement must be certified by a Connecticut registered professional engineer or architect, or meet the following minimum criteria listed in sections (a)-(g) below:

- a. Equalization of Hydrostatic Forces. Provide a minimum of two (2) openings (hydraulic flood vents) having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding. These hydraulic openings must be located on at least two different walls. Only the area (square footage) that lies below the BFE can be used in the calculation of net area of vents required. If the structure has more than one enclosed area, openings must be installed in the exterior walls of each enclosed area so that flood waters can enter directly from the outside.
- b. The bottom of all openings shall be no higher than one (1) foot above grade. At least one side of the structure's fully enclosed area must be at or above grade. Fill placed around the foundation walls must be graded so that the elevation inside the enclosed area is equal to or higher than the adjacent outside elevation on at least one side of the building. The finished floor of the enclosed area shall be no lower than the bottom of the foundation openings. The foundation slab of a residential structure, including the slab of a crawlspace, must be set equal to the outside finished grade on at least one side of the building.
- c. The openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic entry and exit of flood waters in both directions without any external influence or control such as human intervention, including the use of electrical and other non-automatic mechanical means. Other coverings may be designed and certified by an engineer, and must be approved by the Planning and Zoning Commission and any other applicable Town agent (such as the Building Inspector).
- d. Unfinished living space. The area cannot be used as finished living space. Use of the enclosed area shall be the minimum necessary and shall only be used for the parking of vehicles, building access or limited storage. Access to the enclosed area shall be the minimum necessary to allow for the parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator). The enclosed area shall not be used for human habitation or partitioned into separate rooms.
- e. All interior wall, floor and ceiling materials located below the BFE shall be unfinished and resistant to flood damage.
- f. Utilities above minimum elevation standard. Electrical, plumbing, HVAC ductwork, machinery or other utility equipment and connections that service the structure (including, but not limited to, furnaces, oil or propane tanks, air conditioners, heat pumps, hot water heaters, ventilation, washers, dryers, electrical junction boxes, circuit breaker boxes and food freezers) are prohibited in the fully enclosed area below the BFE. Utilities or service equipment located in this enclosed area, even if elevated

above the BFE in the space, will subject the structure to increased flood insurance rates.

- g. Garage space. A residential building with a structurally attached garage having the floor slab below the BFE is considered an enclosed area below the BFE and must meet the standards of Section 11.5.C.3(a)-(f). A garage attached to a residential structure constructed with the garage floor slab below the BFE must be designed to allow for the automatic entry and exit of floodwaters in both directions. Flood openings or vents are required in the exterior walls of the garage or in the garage doors. The human intervention necessary to open garage doors when flooding occurs is not an acceptable means of meeting the openings requirements. In addition to the automatic entry of floodwaters, the areas of the garage below BFE must be constructed with flood resistant materials. Garages attached to non-residential structures must also meet the aforementioned requirements or be dry flood-proofed as per the requirements of Section 11.5.C.2.
4. **Manufactured (Mobile) Homes and Recreational Vehicles (RVs).** Manufactured and mobile homes, including parks and subdivisions for these homes, are prohibited in all Special Flood Hazard Areas (SFHAs). In all SFHAs, any manufactured (mobile) homes undergoing a substantial improvement or repaired as a result of substantial damage, shall be elevated so that the bottom or the lowest floor is at or above the base flood elevation (BFE). The manufactured home must also meet all the construction standards per Section 11.5.C.

 - a. All manufactured (mobile) homes within a SFHA shall be placed on a permanent foundation which itself is securely anchored and to which the structure is securely anchored so that it will resist flotation, lateral movement and hydrostatic pressures. Anchoring may include, but not be limited to, the use of over-the-top or frame ties to ground anchors.
 - b. All manufactured (mobile) homes within a SFHA shall be installed using methods and practices which minimize flood damage. Adequate access and drainage shall be provided. Elevation construction standards include piling foundations placed no more than ten (10) feet apart, and reinforcement provided for piers more than six (6) feet above ground level.
 - c. Recreational vehicles placed on sites within a SFHA shall either (1) be on the site for fewer than 180 consecutive days, and (2) be fully licensed and ready for highway use, OR (3) meet all the general standards of Section 11.5 and the elevation and anchoring requirements in this sub-section (above). A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devised, and has no permanently attached additions.
5. **Floodways.** Floodways are located within Special Flood Hazard Areas (SFHAs) and are designated on the Flood Insurance Rate Maps (FIRM) Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris and potential projectiles, and since there is high potential for erosion, the following provisions shall apply:

 - a. No encroachments, including fill, new construction, substantial improvements, repairs to substantially damaged structures and other developments shall be permitted unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating, through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any (0.00 feet) increase in flood levels during occurrence of the base flood discharge.
 - b. Fences in the floodway must be aligned with the flow and be of an open design.

- c. A permit may be given which allows encroachments resulting in increases in base flood elevations provided the community first obtains conditional floodway revision by meeting the requirements of CFR 44, Chapter 1, Subsection 65.12.
- d. Prohibited uses: Within any delineated Regulatory Floodway, the placement of manufactured homes, manufactured home parks, Manufactured home subdivision, recreational vehicles, new or substantially improved uses and facilities used for the storage or production of dangerous materials and new or substantially modified underground storage facilities containing or proposed to contain dangerous materials shall be prohibited.

11.6 DESIGN STANDARDS FOR SUBDIVISION PROPOSALS

All subdivision proposals within the Town of Ridgefield shall be designed to be consistent with the need to minimize flood damage and reduce threats to public health and safety. The following requirements shall apply to all subdivision proposals:

1. Public utilities and facilities such as sewer, gas, telephone, electrical and water systems shall be located, elevated (where possible) and constructed to minimize the change of impairment during a flood.
2. Adequate storm water drainage shall be provided to reduce exposure to flood hazards.
3. A subdivision shall not be approved unless home sites and related facilities are designed, located and constructed so that at any time during the occurrence of the base flood, all building sites can be safely accessed and evacuated.
4. All proposed subdivisions which contain land within a Special Flood Hazard Area shall include the base flood data on the record plan. Where the BFE is not available on the FIRM, the applicant shall provide a hydrologic and hydraulic engineering analysis performed by a Connecticut licensed professional engineer to generate the BFE.

11.7 VARIANCE PROCEDURES

A. ESTABLISHMENT OF VARIANCE PROCESS

Except as limited in paragraphs B and C below, and in accordance with Connecticut General Statutes Sections 8-6 and 8-7, the Ridgefield Zoning Board of Appeals shall hear and decide any appeal of this regulation and any Appeal of an Order issued by the Zoning Enforcement Officer in conjunction with enforcement of these regulations. [Authorization and procedures for the Zoning Board Appeals are found in the State statutes and are summarized in Section 9.5 of the zoning regulations of the Town of Ridgefield.] Considerations for granting variances (as provided by the Connecticut Department of Environmental Protection for Floodplain Management) are listed in paragraph C, below.

B. VARIANCES PROHIBITED

1. No variance shall be issued within any designated Regulatory Floodway if the proposal would result in any increase in flood levels during the base flood discharge (i.e., discharge from a flood have a one percent change of being equaled or exceeded in any given year, also referred to as the 100-year flood).

2. No variance shall be issued within any Special Flood Hazard Area (SFHA) if the proposal would result in an increase in the base flood elevation (BFE) in excess of one-tenth of one foot (0.1 feet).

C. VARIANCES FOR SPECIAL SITUATIONS

Historic Structures. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places, the State Inventory of Historic Places, or located within Town of Ridgefield Historic District (with proof and documentation of the local historic value) without regard to the procedures set forth in the remainder of this section, except that:

1. There shall be no violation of the prohibitions listed in 11.7.B (1 and 2), above;
2. No reconstruction, rehabilitation, renovation or alteration shall be permitted without due consideration and effort to incorporate design concepts which, while preserving the historical character of the building, will also serve to reduce the potential for future flood damage and threat to human life and property;
3. The proposed reconstruction, rehabilitation or restoration shall not result in the structure losing its historical character and designation.

D. CONSIDERATIONS FOR GRANTING OF VARIANCES

In granting variance applications, the Zoning Board of Appeals shall consider all technical evaluations, relevant factors and standards specified in other sections of these regulations, and the items listed below. Upon consideration of these factors and the purpose of these floodplain management regulations, the ZBA may attach such conditions to the granting of variances as it deems necessary to further the purposes of this regulation, including consideration for:

1. The danger that materials may be swept onto other lands, to the injury of others;
2. The danger to life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The availability of alternative locations not subject to flooding or erosion damage for the proposed use;
6. The compatibility of the proposed use with existing and anticipated development;
7. The relationship of the proposed use to the Comprehensive Plan and the Floodplain Management Program for that area;
8. The safety of access to the property in times of flood for ordinary and emergency vehicles;
9. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site; and
10. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities, infrastructure and facilities such as sewer, gas, electrical and water systems, streets and bridges.

E. NOTIFICATION OF EFFECT OF VARIANCE ON FLOOD INSURANCE RATES

Any application to whom a variance is granted to allow the lowest floor elevation to be below the base flood elevation (BFE) shall be given written notice by the Planning and Zoning Office that the cost of insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

11.8 ENFORCEMENT

1. **Planning and Zoning Commission.** The Commission may suspend or revoke a Site Plan Approval for Floodplain Development if it is found that the applicant has not complied with the terms, conditions or limitations set forth in the permit or has exceeded the scope of work as set forth in the application.
 - a. Prior to revoking or suspending any permit, the Commission shall issue a Notice of Intent to Revoke (or Suspend) the permit, and shall send the notice by Certified Mail, Return Receipt Requested, setting forth the facts or conduct that warrants the proposed action, and shall offer the applicant the opportunity, within ten days of the issuance of the Notice, to appear before the Commission to answer to the Notice.
 - b. In the event that violations or obstructions are not promptly removed from the Special Flood Hazard Area (SFHA), the Commission or its designated agent may cause such removal and remediation work to be performed utilizing bond money, if such bond was imposed as a condition of approval of the Site Plan Application for Floodplain Development, or, the Town may direct the Director of Public Services to cause such work to be done and to place a lien against the property.
2. **Zoning Enforcement Officer.** The Zoning Enforcement Officer shall have the authority to enforce these regulations in the same manner as any other zoning regulation, pursuant to Section 8-12 of the Connecticut General Statutes, Section 9.4 of the Zoning Regulations of the Town of Ridgefield and Article 24, Chapter 1 of the Code of Ordinances of the Town of Ridgefield (Citation Ordinance). [See also 11.4.E.3, under "Administration".]