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Article II Flood Damage Prevention

[Adopted 9-29-1988 (Ord. No. 10-055)]

§ 160-5 Statutory authorization, findings of fact, purpose and objectives.

- A. Statutory authorization. The Legislature of the State of Connecticut has in Section 7-148(c)(7) of the General Statutes delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry.
- B. Findings of fact.
- (1) The flood hazard areas of the Town of Thompson are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
 - (2) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to flood or hazardous to other lands which are inadequately elevated or floodproofed or otherwise unprotected from flood damages.
- C. Statement of purpose. It is the purpose of this article 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:
- (1) Restrict or prohibit 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;
 - (2) Require that uses vulnerable to floods, including facilities which 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 which are involved in the accommodation of floodwaters;
 - (4) Control filling, grading, dredging, and other development which may increase erosion or flood damage; and
 - (5) Prevent or regulate the construction of flood barriers which may increase flood hazard to other lands.
- D. Objectives. The objectives of this article are:
- (1) To protect human life and health;
 - (2) To minimize expenditures of public money for costly flood control projects;
 - (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - (4) To minimize prolonged business interruptions;
 - (5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone,

and sewer lines, streets and bridges located in floodplains;

- (6) To help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such manner as to minimize flood blight areas; and
- (7) To ensure that potential home buyers are notified that property is in a flood area.

§ 160-6 Definitions.

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

ADDITION (TO AN EXISTING BUILDING)

Any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

APPEAL

A request for a review of the Building Official's interpretation of any provision of this article or a request for a variance.

AREA OF SPECIAL FLOOD HAZARD

The land in the floodplain within a community subject to a 1% or greater chance flooding in any given year. . The Area of Special Flood Hazard is also called the Special Flood Hazard Area (SFHA). 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 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, A1-30, AE, AO, AH on a FIRM.

ASCE-24

American Society of Civil Engineers publication *Flood Resistant Design and Construction*.

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.

BASE FLOOD

The flood having a 1% chance of being equaled or exceeded in any given year, also referred to as the one hundred year (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).

BASEMENT

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

BREAKAWAY WALL

A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

BUILDING

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

COMMUNITY

The Town of Thompson.

COST

As related to substantial improvements, the cost of any reconstruction, rehabilitation, addition, alteration, repair or other improvement of a structure shall be established by a detailed written contractor's estimate. The estimate shall include, but not be 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 landscaping, sidewalks, fences, yard lights, irrigation systems, and detached structures such as garages, sheds, and gazebos.

DEVELOPMENT

Any man-made change to improved or unimproved real estate, including but not limited to the construction of buildings or other structures, the construction of additions, alterations or substantial improvements to buildings or structures, the placement of buildings or structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or storage of equipment, storage, deposition, or extraction of materials, and the installation, repair or removal of public private sewage disposal systems or water supply facilities.

ELEVATED BUILDING

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

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, as a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before November 1, 1984, the effective date of the floodplain management regulations adopted by the community.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION

The preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

The federal agency that administers the National Flood Insurance Program (NFIP).

FINISHED LIVING SPACE

As related to fully enclosed areas below the base flood elevation (BFE), a space that is, but is not limited to, heated and/or cooled, contains finished floors, 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. Unfinished enclosed areas below the BFE should comply with FEMA Technical Bulletin 2, Flood-Damage Resistant Materials Requirements.

FLOOD INSURANCE RATE MAP (FIRM)

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

FLOOD INSURANCE STUDY (FIS)

The official study of a community in which the Federal Emergency Management Agency has conducted an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations.

FLOOD or FLOODING

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

- A. The overflow of inland water.
- B. The unusual and rapid accumulation or runoff of surface waters from any source.

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 this article, the term "Regulatory Floodway" is synonymous in meaning with the term "Floodway".

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. The term includes only docking facilities, 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

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 § 160-9C(2).

MANUFACTURED HOME

A structure, transportable in one or more sections, which is built on a permanent chassis and designed to

be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, recreational vehicles and other similar vehicles or transportable structures placed on a site for 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 or more manufactured home lots for rent or sale.

MARKET VALUE

As related to substantial improvement and substantial damage, the market value of the structure shall be determined by the tax assessor's appraised value minus land value 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 (MLS)

The North American Vertical Datum, (NAVD) of 1988 or other datum, to which 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 November 1, 1984, the effective date of the ordinance that preceded the adoption of this article 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 November 1, 1984, the effective date of the ordinance that preceded the adoption of this article adopted by the community.

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) designed primarily not for use as a permanent dwelling but as a 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 the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or 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 that is principally above ground, including a manufactured home, a gas or liquid storage tanks, or other man-made facilities or infrastructures.

[Amended 5-30-2023]

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, alteration, rehabilitation, additions or other improvements to a structure taking place during the life of a structure in which the cumulative cost equals or exceeds 50% of the market value of the structure before the “start of construction” of the improvement. This term includes structures that have incurred “substantial damage”, regardless of the actual repair work performed.. The "market value" of the structure should be (1) the appraised value of the structure prior to the start of the initial repair or improvement or,(2) in the case of damage, the value of the structure prior to the damage occurring. For the 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 the 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 previously identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, provided that the alteration will not preclude the structure’s continued designation as a “historic structure” or (2) any alteration of a “historic structure”.

VARIANCE

A grant of relief from the requirements of this article which permits construction in a manner otherwise prohibited by this article where specific enforcement would result in unnecessary hardship.

VIOLATION

A failure of a structure or other development to be fully compliant with this article. A structure or other development without required permits, lowest floor elevation documentation, flood-proofing certificates or required floodway encroachment calculations is presumed 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.

§ 160-7 General provisions.

- A. Lands to which this article applies. This article shall apply to all areas of special flood hazard within the jurisdiction of the Town of Thompson.
- B. Basis for establishing the areas of special flood hazard. The areas of special flood hazard are identified by the Federal Emergency Management Agency (FEMA) in its scientific and engineering report entitled “Flood Insurance Study (FIS) for Windham County, Connecticut”, dated September 7, 2023, and accompanying Flood Insurance Rate Maps (FIRM), dated September 7, 2023, and other supporting data applicable to the Town of Thompson, and any subsequent revisions thereto are adopted by reference and declared to be part of this article. . Since mapping is legally adopted by reference into this regulation it must take precedence when more restrictive until such time as a map amendment or map revision is obtained from FEMA. The areas of special flood hazard include any area shown on the FIRM as Zones A, AE, AO, and AH, including areas designated as a floodway on a FIRM. Areas of special flood hazard 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 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. Also included are areas of potential, demonstrable or historical flooding,

including any area contiguous with but outside the areas of special flood hazard identified by FEMA, and where the land surface elevation is lower than the base flood elevation (BFE) as shown in the FIS, and the area is not protected from flooding by a natural or man-made feature. The FIRM and FIS are on file at the office of the Thompson Town Clerk, Thompson Town Hall, North Grosvenordale, Connecticut. **[Amended 5-30-2023]**

- C. Establishing of floodplain management administration. A development permit shall be required in conformance with the provisions of this article prior to the commencement of any development activities.
- D. Compliance. No structure or land shall hereafter be located, extended, converted, or structurally altered without full compliance with the terms of this article and other applicable regulations.
- E. Abrogation and greater restrictions. This article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this article and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- F. Interpretation. In the interpretation and application of this article all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under state statutes.
- G. Warning and disclaimer of liability. The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This article does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This article shall not create liability on the part of the Town of Thompson or an officer or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.

§ 160-8 **Administration.**

- A. Designation of administrator. The Building Official is hereby appointed to administer and implement the provisions of this article.
- B. Permit procedures.
 - (1) Application stage. Application for a development permit shall be made to the Building Official on forms furnished by him or her prior to any development activities and may include, but not be limited to, the following plans in duplicate drawn to scale, showing the nature, location, dimensions, and elevations of the area in question, existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:
 - (a) Elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures [**§ 160-9C(1)(a)**].
 - (b) Elevation in relation to mean sea level to which any nonresidential structure will be floodproofed {**§ 160-9C(1)(b)[2]**}.
 - (c) Description of the extent to which any watercourses will be altered or relocated as a result of proposed development. **[Amended 5-30-2023]**
 - (d) A statement as to whether or not the proposed alteration to an existing structure meets the criteria of the "substantial improvement" definition.
 - (e) A statement as to whether there will be a dry access to the structure during the 100-year storm event.

- (f) Where applicable the following certifications by a professional engineer or architect licensed to practice in Connecticut are required and must be provided to the Building Official. The design and method of construction must be certified to be in accordance with accepted standards of practice.
- [1] Nonresidential flood proofing. Certify the design meets the provisions of § **160-9C(1)(b)**.
- [2] Enclosed areas below the base flood elevation. If the minimum design criteria in § **160-9C(2)(a)** through (c) are not used, then the design and construction methods must be certified as explained in § **160-9C(2)(a)**. [Amended 5-30-2023]
- [3] No increase in floodway heights may be allowed. Certify any development in a floodway meets the provisions of § **160-9C(3)**.
- (h) Breakaway walls.
 - [1] Nonsupporting breakaway wall, lattice work, or mesh screening shall be allowed below the base flood elevation, provided it is not part of the structural support of the building and is designed so as to break away under abnormally high tides or wave action, without damage to the structural integrity of the building on which it is to be used, and provided the following design specifications are met:
 - [a] Design safe loading resistance of each wall shall not be less than 10 pounds per square foot or more than 20 pounds per square foot; or
 - [b] If more than 20 pounds per square foot, a professional engineer or architect licensed to practice in Connecticut shall certify that the design wall collapse would result from a water load less than that which would occur during base flood event, and the elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components during the base flood event. Maximum wind and water loading values to be used in this determination shall each have a 1% chance of being equaled or exceeded in any given year (100-year mean recurrence interval).
 - [2] If breakaway walls, lattice work, or screening is utilized, the resulting enclosed space shall not be designed to be used for human habitation but shall be designed to be used only for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises.
 - [3] Prior to construction, plans for any structures that will have breakaway walls, lattice work, or screening must be submitted to the Building Official for approval.
 - [4] Any alteration, repair, reconstruction, or improvement to a structure shall not enclose the space below the lowest floor except with breakaway walls, lattice work, or screening.
- (i) Structural anchoring. All new construction or substantial improvement shall be securely anchored on pilings or columns. All pilings and columns and the attached structures shall be anchored to resist flotation, collapse, and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. The anchoring and support system shall be designed with wind and water loading values which equal or exceed the 100-year mean recurrence interval (1%-annual-chance floods and winds). A professional engineer or architect licensed to practice in Connecticut shall review and/or develop structural design specifications and plans for the construction and shall certify that the design, specifications, and plans for construction are in accordance with acceptable standards.
- (j) An application fee shall be charged as set by the Board of Selectmen pursuant to § **33-4 Appendix 1 – Schedule of Fees and Fines**.
- (2) Construction stage.

- (a) Upon completion of the applicable portion of construction, the applicant shall provide verification to the Building Official of the following, as applicable:
 - [1] Lowest floor elevation. The elevation to be verified for:
 - [a] A structure in a numbered A Zone is the top of the lowest floor (including basement) [§ **160-9C(1)(a)**].
 - [b] A structure which has been floodproofed is the elevation to which the floodproofing is effective [§ **160-9C(1)(b)**].
 - (b) Deficiencies detected by the review of the above-listed shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby shall be cause to issue a stop-work order on the project.
- C. Duties and responsibilities of the Building Official. Duties of the Building Official shall include, but not be limited to:
 - (1) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding;
 - (2) Review all development permits to assure that the permit requirements of this article have been satisfied;
 - (3) Advise permittee that additional federal or state permits may be required, and if specific federal or state permit requirements are known, require that copies of such permits be provided and maintained on file with the development permit. Possible required permits include but are not limited to: Coastal Area Management Permit, Water Diversion, Dam Safety, and Corps of Engineers 404;
 - (4) Notify the Northeastern Connecticut Council of Governments and the affected municipality at least 35 days prior to public hearing if any change of regulation or use of a flood zone will affect an area within 500 feet of another municipality; [**Amended 5-30-2023**]
 - (5) Notify adjacent communities and the Department of Energy and Environmental Protection, Land and Water Resources Division prior to alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency; [**Amended 5-30-2023**]
 - (6) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished;
 - (7) Obtain and maintain a record of the elevation (in relation to mean sea level) of lowest floor (including basement) of all new or substantially improved structures, in accordance with § **160-9C(1)(a)**;
 - (8) Obtain and maintain a record of the elevation (in relation to mean sea level) to which the new or substantially improved structures have been floodproofed, in accordance with § **160-9C(1)(b)**;
 - (9) When floodproofing is utilized for a particular structure, the Building Official shall obtain certification from a professional engineer or architect licensed to practice in Connecticut, in accordance with § **160-9C(1)(b)**;
 - (10) Where interpretation is needed as to the exact location of 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 Building Official shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article;

- (11) When base flood elevation data or floodway data have not been provided, then the Building 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 the provisions of § **160-9**; and
- (12) All records pertaining to the provisions of this article shall be maintained in the office of the Building Official.

§ 160-9 Provisions for flood hazard reduction.

A. General standards. In an area of special flood hazard, the following provisions are required:

- (1) New construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;
- (2) New construction, substantial improvements and structures that have sustained substantial damage shall be constructed with materials and utility equipment that are flood-damage resistant and conform to the provisions of FEMA Technical Bulletin 2, Flood Damage-Resistant Material Requirements. This includes, but is not limited to, flooring, interior and exterior walls, wall coverings and other materials installed below the base flood elevation plus one (1.0) foot;
- (3) New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- (4) The bottom of all electrical, heating, plumbing, ventilation and air conditioning equipment, appliances, fixtures and components, HVAC duct work and duct systems, and any other utility service equipment, facilities, machinery, or connections servicing a structure shall be elevated at least one (1.0) foot above the base flood elevation (BFE). This includes, but is not limited to, furnaces, oil or propane tanks, air conditioners, heat pumps, hot water heaters, ventilation duct work, washer and dryer hook-ups, electrical junction boxes, and circuit breaker boxes. Connections or other equipment that must be located below the BFE plus one (1.0) foot elevation are permitted only when no other elevation alternative is available and provided they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of the base flood event. Electrical wiring systems that must be located below the BFE plus one (1.0) foot shall conform to the standards for wet locations;
- (5) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from the system into floodwaters;
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
- (8) Manufactured homes and recreational vehicles:
 - (a) In areas of special flood hazard, all manufactured (mobile) homes to be newly placed, undergoing a substantial improvement or repaired as a result of substantial damage, shall be elevated so that the bottom of the frame is located one (1.0) foot above the base flood elevation (BFE). The manufactured home must also meet all the construction standards per § **160-9A**. The foundation and anchorage of manufactured homes to be located in floodways shall be designed and constructed in accordance with ASCE-24. This includes areas of special flood hazard outside a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an existing manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or on a site in an

existing park which a manufactured home has incurred substantial damage as a result of a flood;

- (b) All manufactured (mobile) homes within areas of special flood hazard 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;
- (c) All manufactured (mobile) homes within an area of special flood hazard shall be installed using methods and practices which minimize flood damage:
 - [1] Adequate access and drainage should be provided; and
 - [2] Elevation construction standards include pilings, foundations placed no more than 10 feet apart, and reinforcement is provided for piers more than six feet above ground level;
- (d) Recreational vehicles placed on sites within an area of special flood hazard shall either (i) be on the site for fewer than 180 consecutive days, and (ii) be fully licensed and ready for highway use, OR (iii) meet all the general standards of § **160-9A** and the elevation and anchoring requirement of § **160-9A(8)(a), (b), and (c)** listed 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 devices, and has no permanently attached additions.
- (9) Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood. The bottom of above-ground storage tanks which are located outside or inside a structure must be elevated one (1.0) foot above the base flood elevation or shall be securely anchored to prevent flotation, collapse or lateral movement under conditions of the base flood. Where elevated on platforms, the platforms shall be cantilevered from or knee braced to the building or shall be supported on elevated foundations that conform to the standards for the particular flood zone as described in § **160-9C**. Anchored tanks must have the top of the fill pipe located at least one (1.0) foot above the BFE and have a screw fill cap that does not allow for the infiltration of flood water;
- (10) New construction, substantial improvements and repair to structures that have sustained substantial damage cannot be constructed or located entirely or partially over water unless they are a functionally dependent use or facility;
- (11) If any portion of a structure lies within the area of special flood hazard, the entire structure is considered to be located within the area of special flood hazard and must meet the construction requirements of the flood zone. The structure includes any structurally attached additions, garages, decks, porches, sunrooms, patios or any other structure attached to the main structure;
- (12) 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., structure must be built to the highest base flood elevation). The structure includes any structurally attached additions, garages, decks, porches, patios, sunrooms, or any other structure attached to the main structure;
- (13) Compensatory Storage. The water holding capacity of the floodplain, except those areas which are tidally influenced, 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 municipality; and

- (14) Equal Conveyance. Within the floodplain, except those areas which are tidally influenced, as designated on the Flood Insurance Rate Map (FIRM) for the community, 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 professional engineer licensed to practice in Connecticut demonstrating, with supporting hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that such encroachments shall not result in any (0.00 foot) 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 so as to cause an increase in flood stage or flood velocity.
- B. Standards for stream without established base flood elevations and/or flooding. The Building Official shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, including data developed pursuant to § **160-8C(11)** of this article, as criteria for requiring that new construction or substantial improvements, or other development in Zone A on the community's FIRM, meet the standards in §§ **160-9C** and **160-10**. [**Amended 5-30-2023**]
- (1) In Zone AE or A where base flood elevations have been determined, but before a floodway is designated, require that no new construction, substantial improvement, or other development (including fill) be permitted which will increase base flood elevations more than one foot at any point along the watercourse when all anticipated development is considered cumulatively with the proposed development.
 - (2) Should data be requested and/or provided, adopt a regulatory floodway based on the principal that the floodway must be able to convey the waters of the base flood without increasing the water surface elevation more than one foot at any point along the watercourse.
- C. Specific standards.
- (1) In all areas of special flood hazard, Zones AE and A, where base flood elevation data has been provided, as set forth in § **160-7B** or **160-8C(11)**, the following provisions are required:
 - (a) Residential construction. New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at least to one (1.0) foot above the base flood elevation.
 - (b) Nonresidential construction.
 - [1] New construction or substantial improvement of any commercial, industrial, or nonresidential structure located in Zones AE and A, shall have the lowest floor, including basement, elevated at least to one foot above the base flood elevation; or
 - [2] Nonresidential structures located in Zones AE and A may be dry flood-proofed to one (1.0) foot above the base flood elevation in lieu of being elevated, 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 use structural components having the capacity of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A professional engineer or architect licensed to practice in Connecticut 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 subsection. Such certification shall be provided to the Building Official as set forth in § **160-8B(1)(f)[1]**. [**Amended 5-30-2023**]

- (2) Elevated buildings. All new construction, substantial improvements, or repair to structures that have sustained substantial damage, whether residential or non-residential, that include fully enclosed areas formed by a foundation and other exterior walls shall have the lowest floor elevated to one (1.0) foot above the base flood elevation (BFE). The elevated building shall be designed to preclude finished living space below the lowest floor 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 either be certified by a registered professional engineer or architect as meeting the requirements of ASCE 24 Section 2.6.2.2, or meet the following minimum criteria listed in Sections (a)-(h) below:
- (a) 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. The enclosed area is measured on the exterior of the enclosure walls. These hydraulic openings must be located on at least two different exterior walls of each enclosed area. 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 (1.0) foot above the higher of either the final interior grade or floor elevation, or the finished exterior grade adjacent to the outside of the foundation wall. 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 or 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. These coverings must not block or impede the automatic flow of floodwaters into and out of the enclosed area. Other coverings may be designed and certified by a professional engineer licensed to practice in Connecticut or approved by the Building Official;
 - (d) Openings shall not be less than three (3) inches in any direction in the plane of the wall;
 - (e) 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;
 - (f) All interior walls, floor, and ceiling materials located below the base flood elevation plus one (1.0) foot elevation shall be unfinished and resistant to flood damage-resistant in accordance with FEMA Technical Bulletin 2, Flood Damage-Resistant Requirements
 - (g) 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 and dryer hook-ups, electrical junction boxes, circuit breaker boxes and food freezers) are prohibited in the fully enclosed area below the base flood elevation plus one (1.0) foot elevation. Utilities or service equipment located in this enclosed area, even if elevated one (1.0) foot above the base flood elevation in the space, will subject the structure to increased flood insurance rates; and

- (h) A residential building with a structurally attached garage having the floor slab below the base flood elevation is considered an enclosed area below the base flood elevation and must meet the standards of **§ 160-9C(2)**. A garage attached to a residential structure, constructed with the garage floor slab below the base flood elevation, 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. Garage doors that must be manually opened do not meet the flood vent opening requirements in **§ 160-9C(2)**. In addition to the automatic entry of floodwaters, the areas of the garage below the base flood elevation plus one (1.0) foot must be constructed with flood damage-resistant materials per the requirements of FEMA Technical Bulletin 2. Garages attached to non-residential structures must also meet the aforementioned requirements or be dry floodproofed as per the requirements of **§ 160-9C(1)(b)**.
- (3) Floodways. Located within areas of special flood hazard are areas designated as floodways on the community's Flood Insurance Rate Maps (FIRM). Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and has erosion potential, 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 professional engineer licensed to practice in Connecticut 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 published by FEMA. Buildings and structures meeting the standard above and located in whole or in part in the floodway shall be designed and constructed in accordance with ASCE 24. Fences in the floodway must be aligned with the flow and be of an open design. A permit may be given which allows encroachments resulting in increases in base flood elevations provided the community first obtains a conditional floodway revision by meeting the requirements of Federal Code of Regulations 44, Chapter 1, Subsection 65.12.

§ 160-10 Standards for subdivision proposals.

In all special flood hazard areas, the following requirements shall apply:

- A. All subdivision proposals shall be consistent with the need to minimize flood damage;
- B. All subdivision proposals 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 shall have adequate drainage provided to reduce exposure to flood hazards; and
- D. The Thompson Planning & Zoning Commission shall require the applicant to provide base flood elevation data for all subdivision proposals, including manufactured home parks and subdivisions. In all areas of special flood hazard where base flood elevation data is not available (Zone A), the applicant shall provide a hydrologic and hydraulic engineering analysis performed by a professional engineer licensed to practice in Connecticut that generates BFEs for all subdivision proposals and other proposed development, including manufactured home parks and subdivisions.

§ 160-11 Variance procedures; penalties for offenses.

- A. The Inland Wetlands Commission as established by the Town of Thompson shall hear and decide appeals and requests for variances from the requirements of this article.
- B. The Inland Wetlands Commission shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Building Official in the enforcement or administration of this article.
- C. Any person aggrieved by the decision of the Inland Wetlands Commission or any person owning land

which abuts or is within a radius of 100 feet of the land in question may appeal within 15 days after such decision to the State Superior Court as provided in Section 8-8 of the Connecticut General Statutes.

D. Specific situation variances.

- (1) Buildings on an historic register. Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this section, except for § **160-11E(3)(a)** through **(d)**, and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical character.
- (2) Preexisting small lot location. Variances may be issued by a community 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, in conformance with § **160-11E(3)(a)** through **(d)**.
- (3) Functionally dependent uses. Variances may be issued for new construction and substantial improvements and other development necessary for the conduct of a functionally dependent use, provided the structure or other development is protected by methods that minimize flood damage, create no additional threat to public safety and meet the requirements of § **160-11E(3)(a)** through **(d)**.
- (4) Floodway prohibition. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

E. Considerations for granting of variances.

- (1) In passing upon such applications, the Inland Wetlands Commission shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this article, and: **[Amended 5-30-2023]**
 - (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 damage;
 - (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 individual owner;
 - (e) The necessity of the facility to waterfront location, in the case of a functionally dependent facility;
 - (f) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (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 for 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 effect of wave action, if applicable, expected at the site; and
 - (k) The cost of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets

and bridges.

- (2) Upon consideration of the factors listed above, and the purposes of this article, the Inland Wetlands Commission shall attach such conditions to the granting of variances as it deems necessary to further the purposes of this article. **[Amended 5-30-2023]**
- (3) Conditions for variances.
 - (a) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief and, in the instance of a historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
 - (b) Variances shall only be issued upon:
 - [1] A showing of good and sufficient cause;
 - [2] A determination that failure to grant the variance would result in exceptional hardship; and
 - [3] A determination the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (c) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation up to amounts as high as \$25 for \$100 of insurance coverage.
 - (d) The Building Official shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.
- F. Penalties for offenses. Violations of the provisions of this article or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with granting of variances or special exceptions, shall constitute a misdemeanor. Any person who violates this article or fails to comply with any of its requirements shall, upon conviction thereof, be fined in accordance with **§ 33-4 Appendix 1 – Schedule of Fees and Fines** and, in addition, shall pay all costs and reasonable legal fees involved in the case. Nothing herein contained shall prevent the Town of Thompson from taking such other legal action as is necessary to prevent or remedy any violation. **[Amended 5-30-2023]**

§ 160-12 Severability; when effective.

- A. If any section, subsection, clause, or phrase of this article is, for any reason, found to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this article. **[Amended 5-30-2023]**
- B. This article shall become effective 15 days after publication as provided by law.