Town of Beaufort, NC
701 Front St. - P.O. Box 390 - Beaufort, N.C. 28516
252-728-2141 - 252-728-3982 fax - www.beaufortnc.org

Town of Beaufort UDO Steering Committee Meeting
9:30 AM Friday, May 15, 2026 - Virtual via Zoom

Call to Order

Minutes Approval

UDO Steering Committee Draft Minutes 10.20.25

Items for Discussion and Consideration

Draft UDO Article 6: Flood Damage Prevention

Adjourn

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Town of Beaufort UDO Steering Committee Meeting
2:00 PM Monday, October 20, 2025 - Virtual via Zoom
Minutes

Call to Order

Planner Eitner called the meeting to order at approximately 2:00pm. Those in attendance were: John LoPiccolo, Town Commissioner (UDO Steering Committee Member), Ryan Neve, Planning Board Chairman (UDO Steering Committee Member), Vic Fasolino, Planning Board Member (UDO Steering Committee Member), Kelly Cousino, White Smith Cousino (UDO Consultant), Sean Scoopmire, White Smith Cousino (UDO Consultant), Kyle Garner, Planning Director (Town Staff), and Michelle Eitner, Planner (Town Staff).

Minutes Approval

1. UDO Steering Committee Draft Minutes 8.18.25

   The UDO Steering Committee meeting minutes from August 18, 2025, were approved by consensus without any changes.

Items for Discussion and Consideration

1. Review of Preliminary Discussion Draft - Landscaping & Tree Preservation

Michelle Eitner (Town Planner) opened the meeting, noting that John LoPiccolo would be running late and they were still waiting for Ryan Neve and possibly Paula Gillikin to join. The committee proceeded with the discussion of the draft plant list and landscaping standards.

Sean Scoopmire outlined his planned approach for the discussion, proposing to cover tree preservation authority in North Carolina, a general orientation to the document, and specific questions and comments. At Vic Fasolino's suggestion, they decided to postpone the discussion on legal authority until Ryan Neve arrived, as he had expressed particular interest in that topic.

Sean Scoopmire provided an overview of the document's purpose, explaining it was designed to consolidate all existing standards for plants and trees in one place rather than having them spread across Sections 14, 15, and 19 of the current LDO. He clarified that the draft plant list was not comprehensive of all native plants in North Carolina or Beaufort, but rather derived from Larry Mellichamp's book *Native Plants of the Southeast*, which rates plants on a 1-4 star system for landscaping suitability. The North Carolina Audubon Society created an Excel spreadsheet based on this book, which Scoopmire had further refined by removing species only found in the Piedmont and mountain regions.

Vic Fasolino raised concerns about commercial availability of some native plants on the list, particularly noting that native hollies are difficult to find in nurseries. Scoopmire acknowledged this challenge and indicated that while some plants might not be readily available, others on the list would be.

Michelle Eitner informed the committee that the trees and landscaping component, which had been moved to Module 1 with resilience ordinances, would be moved back to Module 3 as originally planned. She explained this decision was due to timing constraints with the year-end, election season, and holidays approaching, which would limit opportunities for meaningful public input on this important topic. The material would be revisited in the second half of next year as part of Module 3, which covers related site features like lighting and parking.

The committee then discussed buffer requirements. Scoopmire asked whether zoning districts or uses should determine buffer requirements. Ryan Neve expressed support for the current use-based approach, noting it was more workable and what people were accustomed to. The consensus was that the responsibility for buffering should fall on whoever develops their property second, as making existing property owners retroactively install buffers would create practical and political challenges.

Ryan Neve pointed out that current Type A buffers, intended to "exclude all visual contact between uses," were inadequate in practice. He cited the CVS at Live Oak Street and Campen Road as an example where the buffer failed to screen the commercial development from adjacent residential properties. The committee discussed how to improve buffer effectiveness, with suggestions to calibrate density requirements and consider which trees would be appropriate, especially since many native trees are deciduous rather than evergreen.

The discussion turned to fence locations in buffers, with concerns raised about developments building on mounds (i.e., fill) that render fences ineffective as visual barriers. Kyle Garner suggested they might need to reconsider whether fences should be allowed in certain grading situations or if landscaping alone should be required instead.

Regarding Type C buffers, currently used only for screening outdoor storage, the committee agreed to maintain this as a specific screening requirement rather than a general buffer type, while coordinating with use regulations for other situations that might require similar screening.

The committee addressed the maintenance of buffers, confirming that current property owners should be responsible for maintaining plantings, and discussed placement of dumpsters and their screening requirements, which would be discussed further in Module 3.

On the topic of tree planting distances from roads and sidewalks, the committee discussed separation distances of trees from streets and sidewalks. The propsed planting distance implies an 8 foot planting strip. Kyle Garner reported that current standards require planting islands of 8 feet for parking areas. Ryan Neve suggested that the distance could vary by species, as some trees are more compatible with urban infrastructure than others.

The committee reviewed sections on town and property owner responsibilities for trees in rights-of-way. Kyle Garner suggested consulting with the Public Works Director on these provisions, as they involve coordination with maintenance operations and debris pickup services. Ryan Neve noted concerns about potential conflicts with utility companies' tree pruning practices.

Significant discussion focused on the definition and protection of public trees. Sean Scoopmire clarified that a "public tree" would need to meet both criteria in the applicability section: being listed in Table 4.3.14-3 AND located on town property. The committee discussed the appropriate diameter threshold for requiring approval before removal (currently 8 inches) and the need for clear penalties for unauthorized removal of public trees.

Regarding tree preservation on private property, Sean Scoopmire noted potential legal uncertainties under North Carolina law about requiring preservation of trees on private property without specific local

legislation, which Beaufort currently lacks. Ryan Neve suggested consulting the town attorney and potentially bringing the question to the Board of Commissioners to determine their appetite for risk in this area.

The committee discussed mitigation requirements when protected trees are removed, though they did not come to a consensus on whether replacement trees should be in addition to other required landscaping rather than counted toward those requirements. Vic Fasolino noted that the 18-inch diameter threshold for protected trees means only truly large specimens would trigger these requirements.

On species requirements, the committee discussed whether to maintain the current encouragement that 20% of trees be live oaks. Ryan Neve suggested creating a "greatest hits" list of recommended native species that do well in Beaufort's conditions, particularly those that are salt and wind tolerant.

Kelly Cousino concluded the meeting by noting that they would incorporate all feedback into the document for future consideration when it returns in Module 3. She mentioned that the team would begin working on their drafting schedule for Module 2 (zoning districts and uses) and informed the committee that staff and the consultant team would be meeting with the Board of Commissioners the following Monday about the coastal resilience overlay district.

The meeting adjourned with the understanding that the trees and landscaping provisions would be revisited in 2026 as part of Module 3 of the UDO development process.

Adjourn

The meeting adjourned by consensus at about 3:35pm.

_____

_____ Committee Staff – Approved _____

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Town of Beaufort UDO Steering Committee Meeting
9:30 AM Friday, May 15, 2026 – Virtual via Zoom

AGENDA CATEGORY: Items for Discussion and Consideration

SUBJECT: Draft UDO Article 6: Flood Damage Prevention

SUMMARY:

The UDO Project has been on hiatus for a couple of months, but given recent direction by the Board of Commissioners to proceed with subdivision and flood damage prevention ordinances, the UDO Steering Committee is back to make initial technical review of the proposed amendments to Article 6: Flood Damage Prevention.

The Flood Damage Prevention Ordinance (FDPO) is the only component of the future UDO that is not part of the current LDO. The FDPO is based on federal regulations and largely drafted verbatim from NC Department of Emergency Management's Model Flood Damage Prevention Ordinance for coastal communities. The model ordinance provides areas for optional language for higher standards, but otherwise is intended to be adopted as-is to ensure compliance with state and federal floodplain regulations.

The Town's Building Inspector and Floodplain Manager Jeremy Ganey coordinated with NCEM's National Flood Insurance Program (NFIP) Planner Eryn Futral in 2024 to present a draft of amendments to our FDPO based on the 2024 version of the state's model FDPO for coastal communities. Given the upcoming creation of the UDO, the draft amendments were provided to the consultants for inclusion in the project instead of adoption at the time.

Now that the Town & White Smith Cousino are working on the FDPO, Jeremy & Eryn's amended model ordinance has been adapted to match the formatting and organization of the UDO document and is presented to the UDO Steering Committee as draft Article 6. A new 2026 version of the coastal model FDPO (can be found online here) was released recently and has not been considered in drafting, but Eryn is reviewing our Article 6 and may make recommendations based on the 2026 model FDPO to include.

Given that there are so few options to take from the model ordinance into ours, Jeremy has outlined that the only optional language that's been added to the draft Article 6 are the following:

- 6.2.2 Elevated Buildings D1 (p.11)
- 6.2.7 Breakaway Walls B1a1 (p.20)
- 6.3.2 Certificate Requirements B2c (p.35)

One big change that the public will understand is the update from one foot of freeboard to two feet, found in the definition for Regulatory Flood Protection Elevation (page 49). Freeboard is optional, but one foot is required to maintain the CRS Class 7 we have. The benefits of an additional foot of freeboard are extensive and we plan on addressing them at least briefly in the meeting.

Jeremy also offers that other items that may still need to be considered, depending on any additional feedback or suggestions Eryn may have, include:

- Tiny Homes/Park Models: Optional language clarifying that tiny homes and park models not meeting RV standards must comply as residential structures.
- CRS-related Elevation Certificate procedures: The model ordinance includes optional but state recommended procedures, of which the FDPO currently only includes excerpts. We may want to consider incorporating those sections in full.
- Floodproofing operational and maintenance plan requirements: This would help close a common enforcement gap for dry floodproofed commercial structures and could also provide another opportunity for CRS credit points.

These amendments could also be adopted prior to creation of the UDO, as they are currently part of a stand-alone ordinance. Several components of the amendments, like establishment of Coastal A zones, will be relevant upon adoption of preliminary Flood Insurance Rate Maps (FIRMs).

We look forward to discussing these amendments with the Steering Committee.

REQUESTED ACTION:

Presentation on Article 6: Flood Damage Prevention and proposed updates

Discussion of amendments and recommendations

EXPECTED LENGTH OF PRESENTATION:

60 Minutes

SUBMITTED BY:

Michelle Eitner

Town Planner

BEAUFORT NC
UNIFIED DEVELOPMENT ORDINANCE

Article 6: Flood Damage Prevention

UDO Steering Committee Review Draft | May 1, 2026

6

Article 6: Flood Damage Prevention 3

Article 6: Flood Damage Prevention[1]

6.1. General Provisions

6.1.1. Purpose & Objectives[2]

A. ~~It is t~~The purpose of this ~~chapter~~ Article is to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions within floodprone areas by provisions designed to:

1. Restrict or prohibit uses ~~which~~ that are dangerous to health, safety, and property due to water or erosion hazards, or ~~which~~ that result in damaging increases in erosion, flood heights, or velocities;

2. Require that uses vulnerable to floods, including facilities ~~which~~ 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, which are involved in the accommodation of flood waters;

4. Control filling, grading, dredging, and all other development ~~which~~ that may increase erosion or flood damage; and

5. Prevent or regulate the construction of flood barriers ~~which~~ that will unnaturally divert floodwaters or ~~which~~ that may increase flood hazards to other lands.

B. The objectives of this ~~chapter~~ Article are to:

1. ~~To p~~Protect human life and health;

2. ~~To m~~Minimize expenditure of public money for costly flood control projects;

[1] This Article carries forward and reorganizes the Town's current Flood Damage Prevention Ordinance (Town Code Chapter 151) with proposed revisions shown in redline. The reorganization is proposed for consistency with other UDO articles (e.g., purpose statement first, followed by authority, then applicability; administrative procedures and definitions at the end). Proposed formatting and style changes are consistent with the UDO Drafting Rules & Style Guide. Most of the substantive edits are suggested by North Carolina Emergency Management.

[2] Carries forward and consolidates Sec. 151.03, Statement of purpose, and Sec. 151.04, Objectives, with minor edits to correct the use of which vs. that, add commas for consistency with UDO formatting, to revise punctuation for clarity, and change the reference from "chapter" to "article."

3. ~~To m~~Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

4. ~~To m~~Minimize prolonged business losses and interruptions;

5. ~~To m~~Minimize damage to public facilities and utilities (i.e., water and gas mains~~;~~; electric, telephone, cable, and sewer lines~~;~~; streets and bridges) that are located in floodprone areas;

6. ~~To h~~Help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize flood blight areas; ~~and~~

7. ~~To i~~Ensure ~~that~~ potential home buyers are notified that property is in a Special Flood Hazard Area;~~.~~

8. Minimize damage to private and public property due to flooding.

9. Make flood insurance available to the community through the National Flood Insurance Program.

~~7.~~10. Maintain the natural and beneficial function of floodplains.[3]

6.1.2. Findings of Fact[4]

A. The floodprone areas within the jurisdiction of the Town of Beaufort are subject to periodic inundation which results in loss of life~~;~~, property, health, and safety hazards~~;~~; disruption of commerce and governmental services~~;~~; extraordinary public expenditures of flood protection and relief~~;~~; and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

B. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities~~,~~ and by the occupancy in floodprone areas by uses vulnerable to floods or hazardous to other lands ~~which~~ that are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

6.1.3. Authority[5]

~~(A) *Municipal.* The Legislature of the State of North Carolina has in G.S. Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of~~

[3] NCEM recommends the addition of these three objectives.
[4] Carries forward Sec. 151.02, Findings of fact, with minor edits to punctuation for clarity and to correct the use of which vs. that.
[5] Carries forward Sec. 151.01, Statutory authorization. Deletes paragraph (B) since it establishes authority for counties (this text is from NCEM's Model Flood Damage Prevention Ordinance and likely was not intended for inclusion in municipal ordinances).

~~Chapter 160A, delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry.~~

~~(B) *County.* The Legislature of the State of North Carolina has in G.S. Part 6, Article 21 of Chapter 143; Parts 3 and 4 of Article 18 of Chapter 153A; and Part 121, Article 6 of Chapter 153A, delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry.~~

The Legislature of the State of North Carolina has in N.C.G.S. Chapter 143, Article 21, Part 6, ~~Article 21 of Chapter 143~~Floodway Regulation; ~~Article 6 of Chapter 153A; Article 8 of~~ Chapter 160A, Article 8, Delegation and Exercise of the General Police Power; and Chapter 160D, Article~~s~~ 7, Zoning Regulation, Article 9, Regulation of Particular Uses and Areas, and Article 11, Building Code Enforcement ~~of Chapter 160D of the North Carolina General Statutes~~, delegated to local governmental units the authority to adopt regulations designed to promote the public health, safety, and general welfare.

~~A. Therefore, the Board of Commissioners of the Town of Beaufort, North Carolina, does ordain as follows:~~

6.1.4. Applicability[6]

This ~~chapter shall apply~~Article applies to all special flood hazard areas within the jurisdiction of the Town of Beaufort, including its extra~~-~~territorial jurisdiction~~s~~ (ETJ) ~~if applicable, of Town of Beaufort~~ and within the jurisdiction of any other community whose governing body agrees, by resolution, to the applicability.

6.1.5. Special Flood Hazard Areas[7]

A. ~~The Special Flood Hazard Areas are those identified by the Federal Emergency Management Agency (FEMA) or produced under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Hazard Boundary Map (FHBM) or Flood Insurance Study (FIS) dated December 6, 2020, for Carteret County and its accompanying flood maps such as theassociated DFIRM panels, Flood Insurance Rate Map(s) (FIRM) and/or the Flood Boundary Floodway Map(s) (FBFM), for Town of Beaufort dated July 16, 2003, including any digital data development as part of the FIS, which with accompanying supporting data, and any revision thereto, including Letters of Map Amendment or Revision, are adopted by reference and declared to be a part of this chapter, and all revisions thereto.~~ The Special Flood Hazard Areas

[6] Carries forward a portion of Sec. 151.06, Lands to which ordinance applies. This text is from NCEM's Model Flood Damage Prevention Ordinance, and the text proposed for deletion likely was intended for customization by the adopting municipality.
[7] Carries forward Sec. 151.07, Basis for establishing the special flood hazard areas, as revised by Ordinance 25-002 (adopted March 10, 2025).

(SFHAs) are those areas identified by the Federal Emergency Management Agency (FEMA) or produced under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in the Flood Insurance Study (FIS) for Carteret County dated December 6, 2020, and its accompanying flood maps, including the associated Digital Flood Insurance Rate Map (DFIRM) panels, Flood Insurance Rate Map(s) (FIRM), and/or Flood Boundary and Floodway Map(s) (FBFM) for the Town of Beaufort dated July 16, 2003, including any digital data developed as part of the FIS and all revisions thereto, including Letters of Map Amendment (LOMA) or Letters of Map Revision (LOMR). These studies, maps, and accompanying supporting data are hereby adopted by reference and declared to be a part of this Article.

~~A.~~B. The ~~Special Flood Hazard Areas~~SFHAs also include those areas defined through standard engineering analysis for private developments or by governmental agencies, but ~~which~~ that have not yet been incorporated into the effective FIRM. This includes, but is not limited to, detailed flood data~~,~~ generated as a requirement ~~hereof~~of this Article~~;~~, preliminary FIRMS where more stringent than the effective FIRM~~;~~, or post-disaster flood recovery maps.

~~B.~~C. In addition, upon annexation to Town of Beaufort or inclusion in the ~~Extra-Territorial Jurisdiction (~~ETJ~~)~~, the ~~special flood hazard areas~~SFHAs identified ~~by the Federal Emergency Management Agency (FEMA) and/or produced~~ under the ~~c~~Cooperating ~~t~~Technical ~~s~~State (CTS) agreement between the State of North Carolina and FEMA as stated above for the Unincorporated Areas of Carteret County, with accompanying maps and other supporting data, and any revision thereto, are adopted by reference and declared to be a part of this ~~chapter~~Article.

6.1.6. Floodplain Development Permit[8]

A floodplain development permit ~~shall be~~is required in conformance with the provisions of this ~~chapter~~ Article prior to the commencement of any development activities within ~~special flood hazard areas~~SFHAs as determined in accordance with § ~~151.4107~~ 6.1.5, Special Flood Hazard Areas.

6.1.7. Compliance[9]

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this ~~chapter~~ Article and other applicable regulations.

[8] Carries forward Sec. 151.08, Floodplain development permit.
[9] Carries forward Sec. 151.09, Compliance.

6.1.8. Abrogation and Greater Restrictions[10]

This ~~chapter~~ Article is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ~~chapter~~ Article and~~,~~ another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

6.1.9. Interpretation[11]

In the interpretation and application of this ~~chapter~~Article, all provisions shall be:

A. Considered as minimum requirements;

B. Liberally construed in favor of the governing body; and

C. Deemed neither to limit nor repeal any other powers granted under state statutes.

6.1.10. Warning and Disclaimer of Liability[12]

A. The degree of flood protection required by this ~~chapter~~ Article is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions.

B. Actual flood heights may be increased by human-made or natural causes.

C. This ~~chapter~~ Article does not imply that land outside the ~~special flood hazard areas~~SFHAs or uses permitted within such areas will be free from flooding or flood damages.

D. This ~~chapter~~ Article shall not create liability on the part of Town of Beaufort or by any officer or employee thereof for any flood damages that result from reliance on this ~~chapter~~ Article or any administrative decision lawfully made hereunder.

6.2. Flood Hazard Reduction

6.2.1. General Standards[13]

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

[10] Carries forward Sec. 151.10, Abrogation and greater restrictions.
[11] Carries forward Sec. 151.11, Interpretation.
[12] Carries forward Sec. 151.12, Warning and disclaimer of liability.
[13] Carries forward Chapter 151, Sec. 151.40, General standards.

A. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, ~~or~~ and lateral movement of the structure.

B. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

C. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damages.

D. Electrical, heating, ventilation, plumbing, air conditioning equipment, duct systems, and other building utility systems, equipment, and service facilities shall be ~~designed and/or~~ located at or above the Regulatory Flood Protection Elevation (RFPE) and/or specially designed ~~so as~~ to prevent water from entering or accumulating within the components ~~-~~and installed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence ~~conditions~~ of the base flood~~ing~~. ~~These~~ Utility systems, equipment, and service facilities include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric meter panels/boxes, utility/cable boxes, appliances (~~i.e.~~e.g., washers, dryers, refrigerator and the like), ~~hot~~ water heaters, fuel tanks, and electric outlets/switches.

E. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

F. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.

G. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

~~H. Any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this chapter, shall meet the requirements of new construction as contained in this chapter.~~

~~I.~~H. Non-conforming structures or other development may not be enlarged, replaced, or rebuilt unless such enlargement or reconstruction is accomplished in conformance with ~~the provisions of~~ this ~~chapter~~Article. Provided, however, nothing in this ~~chapter~~ Article shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ~~chapter~~ Article and located totally or partially within the floodway, non-encroachment area, or stream setback, ~~provided that~~if the bulk of the building or structure below the Regulatory Flood Protection Elevation in the floodway, non-encroachment area, or stream setback is not increased and ~~provided that~~ the repair, reconstruction, or replacement meets all of the other requirements of this ~~chapter~~Article.

I. New solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted in Special Flood Hazard Areas. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the Regulatory Flood Protection Elevation and certified in accordance with § 6.3.2.B, Certification Requirements.~~.~~

J. When a structure is partially located in a Special Flood Hazard Area, the entire structure shall meet the requirements for new construction and substantial improvements.

~~J.~~K. When a building or structure is located in more than one flood zone or in a flood zone with multiple base flood elevations, the provisions for the most restrictive flood zone and the highest BFE shall apply.

6.2.2. Specific Standards[14]

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in §~~ 151.40~~6.2.1, General Standards, the following provisions are required:

A. **Residential Construction**. New construction or substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation.

B. **Non-Residential Construction**. New construction or substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the Regulatory Flood Protection Elevation.

1. Structures located in A, AO, AH, AE, and A99~~I-30~~ Zones may be floodproofed to the Regulatory Flood Protection Elevation in lieu of elevation ~~provided that~~if all areas of the structure below the required flood protection elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy.

~~1.~~2. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the ~~official as set forth herein~~Floodplain Administrator.

[14] Carries forward Chapter 151, Sec. 151.41, Specific standards.

~~B.~~C. **Manufactured Homes**.

1. ~~-~~New or replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the Regulatory Flood Protection Elevation.

2. Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement in accordance with the *State of North Carolina Regulations for Manufactured/Mobile Homes*, 1995 Edition, and any revision thereto adopted by the Commissioner of Insurance pursuant to N.C.G.S. § 143-143.15 or a certified engineered foundation.

   (a) Additionally, when the elevation would be met by an elevation of the chassis 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength.

   ~~(a)~~(b) When the elevation of the chassis is above 36 inches in height, an engineering certification is required.

~~2.~~3. All foundation enclosures or skirting ~~shall be in accordance herewith~~must comply with FEMA P-85, *Protecting Homes from Floods and Other Hazards*.

~~3.~~4. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved, or substantially damaged manufactured home parks or subdivisions located within floodprone areas. This plan shall be filed with and approved by the Floodplain Administrator and the local Emergency Management coordinator.

~~C.~~D. **Elevated Buildings**. ~~New construction or substantial improvements of elevated buildings that include fully enclosed areas that are below the regulatory flood protection elevation 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, be constructed entirely of flood resistant materials below the regulatory flood protection level and meet the following design criteria~~ Fully enclosed area~~,~~ of new construction and substantially improved structures~~, which~~that is below the lowest floor (in A, AE, AO, AH, and A99 zones) or below the lowest horizontal structural member (in VE and Coastal A zones):

~~1.~~ Shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. ~~-~~Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door), ~~or~~ limited storage of maintenance equipment (standard

exterior door), or entry to the living area (stairway or elevator). -The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;~~In A, AO, AE, and A1-30 zones:~~

~~(a) *Measures.* Measures for complying with this requirement shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. To meet this requirement, the foundation must either be certified by a professional engineer or architect or meet the following minimum design criteria:~~

~~1. Provide a minimum of two openings on different sides of each enclosed area subject to flooding.~~

~~2. The total net area of all openings must be at least one square inch for each square foot of each enclosed area subject to flooding.~~

~~3. If a building has more than one enclosed area, each area must have openings on exterior walls to allow floodwater to directly enter;~~

~~4. The bottom of all required openings shall be no higher than one foot above the adjacent grade; and~~

1. ~~5. Openings may be equipped with screens, louvers, or other opening coverings or devices provided they permit the automatic flow of floodwaters in both directions;~~

Shall not be temperature-controlled or conditioned; ~~(OPTIONAL, but strongly encouraged. IF YOU CHOOSE TO REMOVE THIS SENTENCE PLACE A "RESERVED" FOR (b) OR ALL REFERENCES BACK TO THIS SECTION WILL NEED TO BE REVISED.)~~*~~Foundation enclosures.~~*

~~1. Vinyl or sheet metal skirting is not considered an enclosure for regulatory and flood insurance rating purposes. Therefore such skirting does not require hydrostatic openings as outlined above.~~

~~2. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires hydrostatic openings as outlined above to comply with this chapter.~~

2. ~~3. Access to the enclosed area shall be the minimum necessary to allow for 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 interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.~~

~~(1)~~ Shall be constructed entirely of flood resistant materials at least to the Regulatory Flood Protection Elevation; and ~~In Coastal High Hazard Areas (VE and V1-30 zones):~~

~~(a) *Breakaway walls, lattice work or decorative screening.* Breakaway walls, lattice work or decorative screening shall be allowed below the regulatory flood protection elevation provided they are not part of the structural support of the building and are designed so as to breakaway, under abnormally high tides or wave action, without damage to the structural integrity of the building on which they are to be used and provided the following design specifications are met:~~

~~1. Material shall consist of open wood lattice or mesh insect screening; or~~

~~2. Breakaway walls meeting the following design specifications:~~

~~(2)~~ ~~a. Design safe loading resistance of each wall shall be not less than ten nor more than 20 pounds per square foot; or~~

3. ~~b. If more than 20 pounds per square foot, a registered professional engineer or architect shall certify that the design wall collapse would result from a water load less than that which would occur during the 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 (structural and non-structural). The water loading values used shall be those associated with the base flood. The wind loading values used shall be those required by the North Carolina State Building Code.~~

4. Shall include flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. ~~-~~To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum design criteria:

(a) A minimum of two flood openings on different sides of each enclosed area subject to flooding;

(b) The total net area of all flood openings must be at least one ~~(1)~~ square inch for each square foot of enclosed area subject to flooding;

(c) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;

(d) The bottom of all required flood openings shall be no higher than one ~~(1)~~ foot above the higher of the interior or exterior adjacent grade;

(e) Flood openings may be equipped with screens, louvers, or other coverings or devices, ~~provided~~if they permit the automatic flow of floodwaters in both directions; and

~~i.~~(f) Enclosures made of flexible skirting are not considered enclosures for regulatory purposes~~,~~ and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

E. **Additions/Improvements**.

1. Additions and/or improvements to pre-FIRM structures where~~as~~ the addition and/or improvements in combination with any interior modifications to the existing structure:

(a) Are not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.

(b) ~~a~~Are a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

2. Additions to post-FIRM structures, except in Coastal High Hazard Areas and Coastal A zones, with no modifications to the existing structure shall require only the addition to comply with the standards for new construction.

3. Additions and/or improvements to post-FIRM structures where~~as~~ the addition and/or improvements in combination with any ~~interior~~ modifications to the existing structure:

~~(c)~~(a) Are not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction.

~~(d)~~(b) Are a substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

~~Where a fire wall or independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be~~

~~considered a separate building and only the addition must comply with the standards for new construction.~~

~~D.~~F. **Recreational Vehicles**. Recreation vehicles placed on sites within a Special Flood Hazard Area shall either:

1. Be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (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 has no permanently attached additions); or

2. Meet all the requirements for new construction, including anchoring and elevation requirements ~~hereof~~ 44 CFR 60.3.

~~E.~~G. **Temporary Structures**. Prior to the issuance of a floodplain development permit for a temporary structure, the following requirements must be met:

1. Applicants must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane or flash flood warning notification. The plan must include the following information:

   (a) A specified time period for which the temporary use will be permitted;

   (b) The name, address, email address, and phone number of the individual responsible for the removal of the temporary structure;

   (c) The time-frame prior to the event at which a structure will be removed (~~i.e.~~ e.g., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);

   (d) A copy of the contract or other suitable instrument with a trucking company to ~~insure~~ ensure the availability of removal equipment when needed; and

   (e) Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area to which the temporary structure will be moved.

2. The above information shall be submitted in writing to the Floodplain Administrator for review and written approval.

~~F.~~H. **Accessory Structures**. When accessory structures (e.g., sheds, detached garages ~~and the like~~) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

1. Accessory structures shall not be used for human habitation (including work, sleeping, living, cooking, or restroom areas);

2. Accessory structures shall be designed to have low flood damage potential;

3. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;

4. Accessory structures shall be firmly anchored to resist floating ~~in accordance herewith~~;

5. All service facilities, such as electrical and heating equipment, shall be installed in accordance ~~here~~with NC Residential Code Section R322.1.6 or NC Building Code, Appendix G, Section 1001.6, Protection of mechanical, plumbing and electrical systems, as applicable; and FEMA Technical Bulletin 2;

~~5.~~6. Openings on at least two sides to relieve hydrostatic pressure during a flood shall be provided below Regulatory Flood Protection Elevation in conformance ~~here~~with NFIP Technical Bulletin 1;

7. A~~n a~~ccessory structures in A, AO, AH, AE, and A99 zones with a footprint less than ~~150~~ 200 square feet do~~es~~ not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance ~~herewith~~ with § 6.3.2.B, Certification Requirements.~~.~~

8. Accessory structures ~~S~~shall, in Coastal High Hazard Areas and Coastal A zones, also meet the requirements of § ~~151,46~~6.2.7, Coastal High Hazard Areas (Zone VE).

I. **Tanks**. ~~-~~When gas and liquid storage tanks are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

1. *Underground tanks*. ~~-~~Underground tanks ~~in flood hazard areas~~ shall be anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty~~;~~.

2. *Above-Ground Tanks, Elevated*. ~~-~~Above-ground tanks ~~in flood hazard areas~~ shall be elevated to or above the Regulatory Flood Protection Elevation on a supporting structure that is designed to prevent flotation, collapse, or lateral movement during conditions of the design flood. ~~-~~Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area~~;~~.

3. *Above-Ground Tanks, Not Elevated*. -Above-ground fuel tanks that do not meet the elevation requirements of Article 5, Section B (2) of this ordinance shall not be permitted in VE ~~or~~and Coastal A Zones. -Fuel tanks may be permitted in other flood hazard areas~~,~~ and septic tanks may be permitted in any flood-hazard area, provided the tanks are designed, constructed, installed, and anchored to resist all flood-related and other loads, including the effects of buoyancy, during conditions of the design flood and without release of contents in the floodwaters or infiltration by floodwaters into the tanks. -Tanks shall be designed, constructed, installed, and anchored to resist the potential buoyant and other flood forces acting on an empty tank during design flood conditions.

4. *Tank Inlets and Vents*. -Tank inlets, fill openings, outlets, and vents shall be:

   (a) At or above the Regulatory Flood Protection Elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and

   (b) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

6.2.3. Subdivisions, Manufactured Home Parks, & Major Developments[15]

All subdivision, manufactured home park, and major development proposals located within Special Flood Hazard Areas shall:

A. Be consistent with the need to minimize flood damage;

B. Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

C. Have adequate drainage provided to reduce exposure to flood hazards; and

D. All subdivision proposals and other development proposals shall have received all necessary permits from those governmental agencies for which approval is required by federal or state law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.~~Have Base Flood Elevation (BFE) data provided if development is greater than the lesser of five acres or 50 lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference per these provisions to be utilized in implementing this code~~.

[15] Carries forward Chapter 151, Sec. 151.42, Subdivisions, manufactured home parks and major developments.

6.2.4. Standards for Floodplains Without Established Base Flood Elevations[16]

Within the Special Flood Hazard Areas established herein~~,~~ where no Base Flood Elevation (BFE) data has been provided, the following provisions ~~shall apply~~, in addition to the provisions of § ~~151.40~~6.2.1, General Standards, and § ~~151.41~~6.2.2, Specific Standards, shall apply:

A. No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of 20 feet each side from top of bank or five times the width of the stream, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

B. The BFE used in determining the Regulatory Flood Protection Elevation shall be determined based on the following criteria:~~If § 151.42 is satisfied and Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this chapter and shall be elevated or floodproofed in accordance with elevations established in accordance herewith. When Base Flood Elevation (BFE) data is not available from a federal, state or other source, the reference level, including basement, shall be elevated at least two feet above the highest adjacent grade. (Two feet is minimum but a state standard, greater than two feet is optional.)~~

1. When BFE data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this ordinance and shall be elevated or floodproofed in accordance with standards in § ~~151.40~~6.2.1, General Standards, and § ~~151.41~~6.2.2, Specific Standards.

2. When floodway or non-encroachment data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway and non-encroachment areas shall also comply with the requirements of § ~~151.41~~6.2.2, Specific Standards, and § ~~151.45~~6.2.6, Floodways & Non-Encroachment Areas.

3. All subdivision, manufactured home park, and other development proposals shall provide BFE data if development is greater than five ~~(5)~~ acres or has more than ~~fifty (~~50~~)~~ lots/manufactured home sites. ~~-~~Such BFE data shall be adopted by reference in accordance with § ~~151.07~~6.1.5, Special Flood Hazard Areas, and utilized in implementing this ~~ordinance~~Article.

[16] Carries forward Chapter 151, Sec. 151.43, Standards for floodplains without established base flood elevations.

4. When BFE data is not available from a Federal, State, or other source as outlined above, the reference level shall be elevated or floodproofed (nonresidential) to or above the Regulatory Flood Protection Elevation, as defined in § ~~151.05~~6.4, Definitions. All other applicable provisions of § ~~151.40~~6.2.1, General Standards, and § ~~151.41~~6.2.2, Specific Standards shall also apply.

6.2.5. Standards for Floodplains With BFE but Without Established Floodways or Non-Encroachment Areas[17]

Along rivers and streams where Base Flood Elevation (BFE) data is provided but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS, the following requirements shall apply to all development within such areas:

A. Standards of § ~~151.40~~6.2.1, General Standards and § ~~151.41~~6.2.2, Specific Standards; and

~~A.~~B. No ~~no~~ encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

6.2.6. Floodways & Non-Encroachment Areas[18]

A. Located within the Special Flood Hazard Areas established herein are areas designated as floodways or non-encroachment areas. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles.

B. The following provisions shall apply to all development within such areas:

1. No encroachments, including fill, new construction, substantial improvements, ~~and~~ or other developments shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data

[17] Carries forward Chapter 151, Sec. 151.44, Standards for floodplains with BFE but without established floodways or non-encroachment areas.
[18] Carries forward Chapter 151, Sec. 151.45, Floodways and non-encroachment areas.

shall be presented to the Floodplain Administrator prior to issuance of floodplain development permit.

2. If these provisions are satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ~~chapter~~Article.

3. No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or subdivision provided the following provisions are met:

   (a) The anchoring and the elevation standards ~~hereof the no encroachment standards hereof~~in § 6.2.2.C, Manufactured Homes, are met.

   (b) The no encroachment standards of ~~subsection (B)(1)~~§ 6.2.6.B.1 above are met.

6.2.7. Coastal High Hazard Areas (Zone VE ~~and V1-30 Zones~~) and Coastal A Zones (CAZ)[19]

Coastal High Hazard Areas and Coastal A zones are Special Flood Hazard Areas established herein~~, and designated as Zones VE or V1-30~~. These areas have special flood hazards associated with high velocity waters from surges and, therefore, in addition to meeting all provisions in this ~~chapter~~Article, the following provisions shall apply to all new construction, substantial improvements, and all other development:

A. **All Development**. All development shall:

1. ~~All development shall b~~Be located landward of the reach of mean high tide;

2. Be located landward of the first line of stable natural vegetation~~, and~~;

3. Comply with all applicable CAMA setback requirements~~.~~; and

~~B.~~4. ~~All development shall b~~Be elevated so that the bottom of the lowest supporting horizontal member (excluding pilings or columns) is located no lower than the Regulatory Flood Protection Elevation. Floodproofing ~~may~~ shall not be utilized on any structures in Coastal High Hazard Areas or Coastal A zones to satisfy the Regulatory Flood Protection Elevation (RFPE) requirements.

B. **All New Construction and Substantial Improvements**.

[19] Carries forward Chapter 151, Sec. 151.46, Coastal high hazard areas (VE and V1-30 Zones).

~~C.~~1. All new construction and substantial improvements shall have the space below the bottom of the lowest horizontal structural member of the lowest floor either ~~be~~ free of obstruction or constructed with breakaway walls, open wood latticework, or insect screening, ~~provided~~if they are not part of the structural support of the building and are designed ~~so as~~ to breakaway~~,~~ under abnormally high tides or wave action without causing damage to the elevated portion of the building or supporting foundation system or otherwise jeopardizing the structural integrity of the building. The following design specifications shall be met:~~All space below the regulatory flood protection elevation shall be open so as not to impede the flow of water~~.

(a) Material shall consist of open wood or plastic lattice having at least 4~~0 percent~~% ~~-~~of its area open, or ~~Open wood lattice work or mesh insect screening may be permitted below the regulatory flood protection elevation for aesthetic purposes only and must be designed to wash away in the event of abnormal wave action and in accordance with § 151.41(D)(2). Design plans shall be submitted in accordance with § 151.26(A)(3)(c)~~.

(b) Insect screening; or

(c) Breakaway walls shall meet~~ing~~ the following design specifications:

(1) Breakaway walls shall have flood openings that allow for the automatic entry and exit of floodwaters to minimize damage caused by hydrostatic loads, per § 151.41 (D) (2); ~~(OPTIONAL, but required per the NC Building Code and NC Residential Code)~~ and

(2) Design safe loading resistance shall be not less than 10 nor more than 20 pounds per square foot; or

(3) Breakaway walls that exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by State or local codes) shall be certified by a registered professional engineer or architect that the breakaway wall will collapse from a water load less than that which would occur during the 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 (structural and non-structural).

i. The water loading values used shall be those associated with the base flood.

~~(1)~~ii. The wind loading values used shall be those required by the North Carolina State Building Code or North Carolina Residential Code.

2. ~~All development shall be securely anchored on pilings or columns~~ All new construction and substantial improvements shall be securely anchored to pile or column foundations. ~~-~~All pilings and columns and the structure attached thereto 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.~~-~~

(a) The ~~W~~water loading values used shall be those associated with the base flood.

(b) The ~~W~~wind loading values used shall be those required by the current edition of the North Carolina State Building Code.

~~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.~~

C. **Swimming Pools and Spas**.

1. ~~For s~~Swimming pools and spas~~, the following is required~~ must:

(a) Be designed to withstand all flood-related loads and load combinations~~.~~;

(b) Be elevated so that the lowest horizontal structural member is elevated above the RFPE; or

(c) Be designed and constructed to break away during design flood conditions without producing debris capable of causing damage to any structure; or

(d) Be sited to remain in the ground during design flood conditions without obstructing flow that results in damage to any structure.

2. Registered design professionals must certify to local officials that a pool or spa beneath or near a V or Coastal A Zone building will not be subject to flotation or displacement that will damage building foundations or elevated portions of the building or any nearby buildings during a coastal flood.

3. Pool equipment shall be located above the RFPE whenever practicable. Pool equipment shall not be located beneath an elevated structure.

D. **Elevators, Vertical Platform Lifts, Chair Lifts, and Similar Elements**. All elevators, vertical platform lifts, chair lifts, ~~etc.,~~and similar elements must meet the following ~~is~~ required~~d~~ments:

1. Elevator enclosures must be designed to resist hydrodynamic and hydrostatic forces as well as erosion, scour, and waves.

2. Utility equipment in Coastal High Hazard Areas (VE and Coastal Zones) must not be mounted on, pass through, or be located along breakaway walls.

3. The cab, machine/equipment room, hydraulic pump, hydraulic reservoir, counter weight and roller guides, hoist cable, limit switches, electric hoist motor, electrical junction box, circuit panel, and electrical control panel ~~are all required to~~must be above RFPE. When this equipment cannot be located above the RFPE, it must be constructed using flood damage-resistant components.

4. Elevator shafts/enclosures that extend below the RFPE shall be constructed of reinforced masonry block or reinforced concrete walls and located on the landward side of the building to provide increased protection from flood damage. Drainage must be provided for the elevator pit.

5. Flood damage-resistant materials shall be used inside and outside the elevator cab. Use only stainless-steel doors and door frames below the BFE. Grouting~~-~~in of door frames and sills is recommended.

6. If an elevator is designed to provide access to areas below the BFE, it shall be equipped with a float switch system that will activate during a flood and send the elevator cab to a floor above the RFPE.

~~D.~~E. **Certification Required**. A registered professional engineer or architect shall certify that the design, specifications, and plans for construction are in compliance with the provisions contained in § ~~151.26 (C)(3)~~ 6.3.2.B.3, V-Zone/Breakaway Wall Certification, and § ~~151.41(C) and (D)~~6.2.2.C, Manufactured Homes, and § 6.2.2.D, Elevated Buildings~~(A) and subsections (D), (E) and (H)~~.

F. **Use of Fill**.

1. ~~There shall be no f~~Fill shall not be used as structural support.

2. Nonstructural fill may be used around the perimeter of a building for landscaping/aesthetic purposes ~~provided~~ if the fill will wash out from storm surge, thereby rendering the building free of obstruction prior to generating excessive loading forces, ramping effects, or wave deflection.

~~E.~~3. Design plans shall be submitted in accordance with § ~~151.26(A)(34)(c)~~6.3.2.A.5(c). The Floodplain Administrator may approve design plans for landscaping/aesthetic fill only after the applicant has provided an analysis by an engineer, architect, ~~and/~~or soil scientist ~~which~~ that demonstrates ~~that~~ the following factors have been fully considered:

~~1.~~(a) Particle composition of fill material does not have a tendency for excessive natural compaction;

~~2.~~(b) Volume and distribution of fill will not cause wave deflection to adjacent properties; and~~,~~

~~3.~~(c) Slope of fill will not cause wave run-up or ramping.

~~F.~~G. **Alteration of Sand Dunes**. There shall be no alteration of sand dunes, which would increase potential flood damage.

~~G.~~H. **Manufactured Homes**. ~~No m~~Manufactured homes shall not be permitted except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision ~~provided~~ if the anchoring and elevation standards ~~are in compliance~~ comply with ~~this section of code~~§ 6.2.2.C, Manufactured Homes.~~.~~

I. **Recreational Vehicles**. Recreational vehicles ~~shall be permitted~~are allowed in coastal high hazard areas and Coastal A zones ~~provided that~~if they meet the recreational vehicle criteria of § ~~151.41(EF)(1)~~6.2.2.F, Recreational Vehicles ~~and the temporary structure provisions of § 151.41(F)~~.

J. **Development Activities Other Than Buildings and Structures**.

1. In coastal high hazard areas, development activities other than buildings and structures ~~shall be permitted~~are allowed only if:

(a) ~~also a~~Authorized by the appropriate state or local authority;

(b) ~~if l~~Located outside the footprint of, and not structurally attached to, buildings and structures; and

(c) ~~if a~~Analyses prepared by qualified registered design professionals demonstrate no harmful diversion of floodwaters or wave runup and wave reflection that would increase damage to adjacent buildings and structures.

2. Such other development activities include, but are not limited to:

(a) Bulkheads, seawalls, retaining walls, revetments, and similar erosion control structures; and

~~1.~~(b) Solid fences and privacy walls, and fences prone to trapping debris, unless designed and constructed to fail under flood conditions less than the design flood or otherwise function to avoid obstruction of floodwaters.

6.2.8. Standards for Areas of Shallow Flooding (AO Zones)[20]

A. Located within the Special Flood Hazard Areas established herein, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate.

B. The following provisions ~~shall~~ apply within such areas:

1. All new construction and substantial improvements of all structures shall have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least to the Regulatory Flood Protection Elevation as defined for the Special Flood Hazard Areas where no ~~BYE~~ BFE has been established.

2. All new construction and substantial improvements of non-residential structures shall have the option to, in lieu of elevation, be completely floodproofed together with attendant utilities and sanitary facilities to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as per § ~~§ 151.26(C)~~6.3.2.B, Certification Requirements, and § ~~151.41(B)~~6.2.2.B, Non-Residential Construction.

~~2.~~3. Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

6.3. Administration

6.3.1. Floodplain Administrator[21]

A. The Building Inspector, hereinafter referred to as the Floodplain Administrator, is hereby appointed to administer and implement the provisions of this chapter. In instances where the Floodplain Administrator receives assistance from others to

[20] Carries forward Chapter 151, Sec. 151.47, Standards for areas of shallow flooding (AO zones).
[21] Carries forward Chapter 151, Sec. 151.25, Floodplain administrator.

complete tasks to administer and implement this ordinance, the Floodplain Administrator shall be responsible for the coordination and community's overall compliance with the National Flood Insurance Program and the provisions of this ordinance. [22]

B. Duties of the Floodplain Administrator ~~shall~~ include, but are not ~~be~~ limited to:

1. Review all floodplain development applications and issue permits for all proposed development with~~-~~in floodprone areas to ~~assure~~ ensure ~~that~~ the requirements of this ~~chapter~~ Article have been satisfied;

2. Advise permittees that additional Federal or State permits (~~i.e.~~e.g., Wetlands, Erosion and Sedimentation Control, CAMA, Riparian Buffers, Mining~~, etc.~~) may be required, and, if specific federal or state permits are known, require that copies of such permits be provided and maintained on file with the floodplain development permit;

~~3.~~ Notify adjacent communities and the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse~~;~~, ~~and~~ submit evidence of such notification to the Federal Emergency Management Agency; and

~~4.~~3. ~~Assure~~ ensure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished;

~~5.~~4. Prevent encroachments within floodways and non-encroachment areas unless the certification and flood hazard reduction provisions in § ~~151.454~~6.2.6, Floodways & Non-Encroachment Areas, are met;

~~6.~~5. Obtain actual elevation (in relation to ~~mean sea level~~NAVD 1988) of the reference level (including basement) of all attendant utilities of all new or substantially improved structures~~, in accordance herewith~~;

~~7.~~6. Obtain the actual elevation (in relation to ~~mean sea level~~NAVD 1988) to which the new or substantially improved structures and all utilities have been floodproofed ~~in accordance herewith~~;

~~8.~~7. Obtain actual elevation (in relation to ~~mean sea level~~NAV~~C~~D 1988) of all public utilities~~, in accordance herewith~~;

[22] NCEM recommends this addition.

~~9.~~8. When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect ~~in accordance herewith~~;

~~10.~~9. Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary ~~shall~~ must be given a reasonable opportunity to appeal the interpretation as provided in this ~~chapter~~Article;

~~11.~~10. When Base Flood Elevation (BFE) data has not been provided ~~in accordance herewith~~, obtain, review, and reasonably utilize any ~~Base Flood Elevation (~~BFE~~)~~ data, along with floodway data and/or non-encroachment area data available from a Federal, State, or other source, including data developed ~~pursuant hereto~~for this purpose, in order to administer the provisions of this ~~chapter~~Article;

~~12.~~11. When ~~Base Flood Elevation (~~BFE~~)~~ data is provided but no floodway nor non-encroachment area data has been provided ~~in accordance herewith~~, obtain, review, and reasonably utilize any floodway data, and/or non-encroachment area data available from a federal, state, or other source in order to administer the provisions of this ~~chapter~~Article;

~~13.~~12. When the exact location of boundaries of the Special Flood Hazard Areas conflict with the current, natural topography information at the site, the property owner may apply and be approved for a Letter of Map Amendment (LOMA) by FEMA. A copy of the Letter of Map Amendment issued from FEMA will be maintained by the Floodplain Administrator in the floodplain development permit file;

~~14.~~13. Permanently maintain all records that pertain to the administration of this ~~chapter~~ Article and make these records available for public inspection;

~~15.~~14. Make on-site inspections of work in progress. As the work pursuant to a floodplain development permit progresses, the Floodplain Administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of ~~the local ordinance~~this Article and the terms of the permit. In exercising this power, the Floodplain Administrator has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action;

~~16.~~15. Issue stop-work orders as required. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this chapter, the Floodplain Administrator may order the work to be

immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor;

~~17.~~16. ~~Revocation of~~Revoke floodplain development permits as ~~required~~necessary. The Floodplain Administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any floodplain development permit mistakenly issued in violation of an applicable state or local law may also be revoked;

~~18.~~17. Make periodic inspections throughout all ~~special flood hazard areas~~SFHAs within the Town's jurisdiction ~~of the community~~. The Floodplain Administrator and each member of ~~his or her~~their inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action; ~~and~~

18. Follow through with corrective procedures ~~hereof~~pursuant to § 6.3.3, Corrective Procedures~~151.27.~~;

19. Review, provide input, and make recommendations for variance requests~~.~~;

20. Maintain a current map repository to include, but not be limited to, historical and effective FIS Reports~~,~~ and historical and effective FIRM and other official flood maps and studies adopted in accordance with the provisions of ~~Article 3, Section B of this ordinance~~§ 6.1.5, Special Flood Hazard Areas, including any revisions thereto, including Letters of Map Change, issued by FEMA~~.~~;

21. Notify the State and FEMA of mapping needs~~.~~;

22. Conduct ~~S~~substantial improvement and post event damage assessments and determinations, including:

(a) ~~Conduct d~~Damage assessments for damaged structures located within the SFHA or Community Flood Hazard Area (if applicable).

(b) ~~Complete s~~Substantial improvement/damage determinations in accordance with the provisions of § ~~151.26(D)~~6.3.2.C, Substantial

Improvement/Damage Determinations for Existing Buildings and Structures.[23]

6.3.2. Floodplain Development Permit and Certification Requirements[24]

A. **Floodplain Development Permits**.

1. Application for a floodplain development permit shall be made to the Floodplain Administrator on forms furnished by ~~him or her~~them prior to any development activities proposed ~~to be located~~ within floodprone areas.

~~A.~~2. The following items/information shall be presented to the Floodplain Administrator to apply for a floodplain development permit~~.~~:

~~1.~~(a) A plot plan, drawn to scale, prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. The plot plan ~~which~~ shall include, ~~but shall not be limited to~~at a minimum, the following specific details of the proposed floodplain development:

~~(a)~~(b) The nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures~~,~~; and the location of utility systems, proposed grading/pavement areas, fill materials, storage areas, drainage facilities, and other proposed development;

~~(b)~~(c) The boundary of the ~~special flood hazard area~~SFHA as delineated on the FIRM or other flood map ~~as determined herein~~ or a statement that the entire lot is within the ~~special flood hazard area~~SFHA;

~~(c)~~(d) Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map ~~as determined herein~~;

~~(d)~~(e) The boundary of the floodway(s) or non-encroachment area(s) ~~as determined herein~~;

~~(e)~~(f) The ~~Base Flood Elevation (~~BFE~~)~~ where provided ~~as set forth herein~~;

[23] NCEM recommends the additions in 19, 20, 21, and 22.
[24] Carries forward the floodplain development permit requirements in Chapter 151, Sec. 151.26, Floodplain development permit and certification requirements. Certification requirements are moved to their own section below.

~~(f)~~(g) The old and new location of any watercourse that will be altered or relocated as a result of proposed development;

~~(g)~~(h) The boundary and effective date of the Coastal Barrier Resource System (C~~o~~BR~~A~~S) ~~zone~~area or Otherwise Protected Areas (OPA), if applicable~~; and (Optional).~~

~~(h) Preparation of the plot plan by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. (Optional)~~

~~2.~~3. Proposed elevation~~, and method thereof,~~ of all development within a ~~special flood hazard area~~SFHA including, but not limited to:

(a) Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;

(b) Elevation in relation to mean sea level to which any non-residential structure will be floodproofed;

(c) Elevation in relation to mean sea level to which any proposed utility systems will be elevated or floodproofed;

~~(d)~~4. If floodproofing, a floodproofing certificate and back-up plans from a registered professional engineer or architect certifying that the non-residential floodproofed development will meet the floodproofing criteria ~~herein~~in this Article.

~~3.~~5. A foundation plan drawn to scale which shall include details of the proposed foundation system to ensure all provisions of this ~~chapter~~ Article are met. These details include, but are not limited to:

(a) Proposed method of elevation, if applicable (~~i.e.~~e.g., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/piers);

(b) Should solid foundation perimeter walls be used in floodplain ~~other than coastal high hazard~~ areas, details of sufficient openings to facilitate the unimpeded movements of floodwaters in accordance herewith;[25]

(c) In Coastal High Hazard Areas and Coastal A zones,[26] the following must also be submitted ~~prior to~~with the floodplain

[25] NCEM recommends this deletion.
[26] New text recommended by NCEM.

development permit ~~issuance~~application~~.~~: ~~Specific requirements are detailed herein.~~

(1) V-zone certification form with accompanying plans and specifications verifying the engineered structure and breakaway wall designs ~~as set forth herein~~;

(2) Plans for any structures that will have lattice work or decorative screening, if applicable. Plans for any structures that will have lattice work or decorative screening must be submitted to the Floodplain Administrator for approval prior to floodplain development permit issuance;

(3) Plans for placement of non-structural fill, if applicable~~.~~ ~~Plans for placement of any non-structural fill must be submitted to the Floodplain Administrator for approval prior to floodplain development permit issuance. Requirements are detailed herein~~;

(4) Usage details of any enclosed space below the regulatory flood protection elevation;

(5) Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage;

(6) Copy of all other local, state, and federal permits required prior to floodplain development permit issuance (~~i.e.~~ e.g., Wetlands, Erosion and Sedimentation Control, CAMA, Riparian Buffers, Mining, and the like);

(7) If the floodplain development permit is issued for placement of recreational vehicles and/or temporary structures, documentation to ensure provisions of this ~~code~~ Article are met~~.~~;

(8) If a watercourse ~~is~~ proposed to be altered and/or relocated, a description of the extent of watercourse alteration or relocation~~;~~, an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream~~;~~, and a map (if not shown on plot plan) showing the

location of the proposed watercourse alteration or relocation.

~~B.~~6. The following information, at a minimum, shall be provided ~~at a minimum~~ on the floodplain development permit to ensure compliance with this code~~.~~:

~~1.~~(a) A complete description of all the development to be permitted under the floodplain development permit including a cost estimate for such work (e.g. house, garage, pool, septic, bulkhead, cabana, pier, bridge, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials, etc.)~~ssuance.~~;[27]

~~2.~~(b) The ~~special flood hazard area~~SFHA determination for the proposed development per available data specified herein~~.~~;

~~3.~~(c) The regulatory flood protection elevation required for the reference level and all attendant utilities~~.~~;

~~4.~~(d) The regulatory flood protection elevation required for the protection of all public utilities~~.~~;

~~5.~~(e) All certification submittal requirements with timelines~~.~~;

~~6.~~(f) A ~~State~~ statement that no fill material shall encroach into the floodway or non-encroachment area of any watercourse, if applicable~~.~~;

~~7.~~(g) ~~If in an A, AO, AE or A1-30 zone, s~~Specify the minimum foundation opening requirements. ~~(Optional)~~

~~8.~~(h) State limitations of below BFE enclosure uses (if applicable). (i.e., Parking, Building Access and Limited Storage only). ~~(Optional)~~

~~1.~~(i) If in a VE ~~or V1-30~~ Coastal A zone, state that there shall be no alteration of sand dunes which would increase potential flood damage. ~~(Optional)~~

~~2.~~(j) If in a VE or ~~V1-30~~Coastal A zone, state that there shall be no ~~fill used as structural~~structural fill for support. ~~(Optional)~~ [28]

B. **Certification Requirements**.

[27] NCEM recommends this addition.
[28] NCEM recommends the revisions in paragraphs 7, 8, 9, and 10.

1. *Elevation Certificates.*

(a) ~~An elevation certificate (FEMA Form 81-31) or floodproofing certificate (FEMA Form 81-65) is required after the reference level is completed. Within 21 calendar days of establishment of the reference level elevation, or floodproofing, by whatever construction means, whichever is applicable, it shall be the duty of the permit holder to submit to the floodplain Administrator a certification of the elevation of the reference level, or floodproofed elevation, whichever is applicable in relation to mean sea level. The certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When floodproofing is utilized, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work done within the 21-day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the certification or failure to make said corrections required shall be cause to issue a stop-work order for the project. (State recommended but optional)~~ An Elevation Certificate (FEMA Form FF-206-FY-22-152) is required after the reference level is established.

(1) Within 21 calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the elevation of the reference level, in relation to NAVD 1988. Any work done within the 21-day calendar period and prior to submission of the certification shall be at the permit holder's risk.

(2) The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed.

(3) Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

(b) A final Finished Construction Elevation Certificate (FEMA Form FF-206-FY-22-152) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance.

(1) It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities.

(2) The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction.

(3) Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

~~A final as-built elevation certificate (FEMA Form 81-31) or floodproofing certificate (FEMA Form 81-65) is required after construction is completed and prior to certificate of compliance/occupancy issuance. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of final as-built constriction of the elevation or floodproofed elevation of the reference level and all attendant utilities. The certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When floodproofing is utilized, the certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to certificate of compliance/occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make the corrections required shall be cause to withhold the issuance of a certificate of compliance/occupancy. (FEMA forms are optional for floodplain management but recommended. The use of the FEMA elevation certificates is mandatory for CRS communities.)~~

2. *Floodproofing Certificate*.

(a) If non-residential floodproofing is used to meet the Regulatory Flood Protection Elevation requirements, a Floodproofing Certificate (FEMA Form FF-206-FY-22-153), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the actual start of any new construction.

(1) It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same.

(2) The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval.

(3) Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

(b) A final Finished Construction Floodproofing Certificate (FEMA Form FF-206-FY-22-153), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the issuance of a Certificate of Compliance/Occupancy.

(1) It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certificate shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same.

(2) The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to Certificate of Occupancy.

(3) Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to deny a Certificate of Compliance/Occupancy.

(c) ~~***OPTIONAL LANGUAGE:***~~ In addition, prior to the Certificate of Compliance/Occupancy issuance, a registered professional engineer or architect shall certify the finished construction is

compliant with the design, specifications and plans for VE and Coastal A Zone construction.

3. *V-Zone/Breakaway Wall Certification.* A V-Zone/breakaway wall certification is required prior to issuance of a floodplain development permit within coastal high hazard areas and Coastal A zones. It shall be the duty of the permit applicant to submit to the Floodplain Administrator the certification to ensure the design standards of this chapter are met. A registered professional engineer or architect shall develop or review the structural design, plans, and specifications for construction and certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of this chapter. This certification is not a substitute for an elevation certificate.

4. *Manufactured Homes in A, AO, AH, AE, and A99 Zones.* If a manufactured home is placed within an A, AO, AH, AE, or A99~~-30~~ zone and the elevation of the chassis is above 36 inches in height, an engineered foundation certification is required ~~herein~~.

5. *Watercourse Alteration or Relocation.* If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior to issuance of a floodplain development permit.

6. *Exemptions.* The following structures, if located within A, AO, AE, or ~~A-30~~A99 zones, are exempt from the elevation/floodproofing certification requirements specified in § ~~subsections (A) and (B) above~~6.3.2.B.2(a) and § 6.3.2.B.2(b) above:

   (a) Recreational vehicles meeting the requirements ~~hereof~~of § 6.2.2.F;

   (b) Temporary structures meeting the requirements of § 6.2.2.G ~~hereof~~; and

   (c) Accessory structures less than ~~150~~ 200 square feet meeting the requirements ~~hereof~~of § 6.2.2.H.

~~—~~**Substantial Improvement/Damage Determinations for Existing Buildings and Structures**.

C. ~~—~~For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements,

repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

1. Estimate the market value or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work~~;~~. ~~i~~In the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;

2. Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;

3. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and

4. Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the NC Building Code and this ~~ordinance~~Article is required.

6.3.3. Corrective Procedures[29]

A. **Violations to be Corrected**. When the Floodplain Administrator ~~funds~~ finds violations of applicable state and local laws, it shall be ~~his or her~~their duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law pertaining to their property.

B. **Actions in Event of Failure to Take Corrective Action**. If the owner of a building or property ~~shall~~ fails to take prompt corrective action, the Floodplain Administrator shall give the owner written notice, by certified or registered mail to the owner's last known address or by personal service, stating that:

1. T~~hat t~~he building or property is in violation of ~~the~~ UDO Article 6, Flood Damage Prevention ~~Ordinance~~;

2. ~~That a~~A hearing will be held before the Floodplain Administrator at a designated place and time, not later than ~~ten~~ 10 days after the date of the notice, at which time the owner shall be entitled to be heard in person or

[29] Carries forward Chapter 151, Sec. 151.27, Corrective procedures.

by counsel and to present arguments and evidence pertaining to the matter; and

3. ~~That f~~Following the hearing, the Floodplain Administrator may issue such order to alter, vacate, or demolish the building; or to remove fill as appears appropriate.

C. **Order to Take Corrective Action**.

1. If, upon a hearing held pursuant to the notice prescribed above, the Floodplain Administrator ~~shall~~ finds that the building or development is in violation of ~~the Flood Damage Prevention Ordinance~~this Article, ~~he or she~~they shall make an order in writing to the owner, requiring the owner to remedy the violation within a specified time period, not less than 60 days~~,~~ nor more than 180 calendar days.

~~C.~~2. Where the Floodplain Administrator finds that there is imminent danger to life or other property, ~~he~~ they may order that corrective action be taken in such lesser period as may be feasible.

D. **Appeal**.

1. Any owner who has received an order to take corrective action may appeal the order to the local elected governing body by giving notice of appeal in writing to the Floodplain Administrator and the Town Clerk within ~~ten~~ 10 days following issuance of the final order. In the absence of an appeal, the order of the Floodplain Administrator shall be final.

~~D.~~2. The ~~local governing body~~Board of Commissioners shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.

E. **Failure to Comply with Order**. If the owner of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the ~~governing body~~Board of Commissioners following an appeal, ~~he~~ they shall be guilty of a misdemeanor and shall be punished in the discretion of the court.

6.3.4. Variance Procedures[30]

A. The Board of Adjustments ("Appeal Board"), as established by the Town of Beaufort, ~~hereinafter referred to as the Appeal Board,~~ shall hear and decide requests for variances from the requirements of this ~~chapter~~Article.

[30] Carries forward Chapter 151, Sec. 151.28, Variance procedures. All or portions of this Section may be consolidated with Article 7: Administration & Procedures.

B. Any person aggrieved by the decision of the Appeal Board may appeal such decision to the Court, as provided in N.C.G.S. Chapter 7A.

C. Variances may be issued for the repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

D. In passing upon variances, the Appeal Board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ~~chapter~~Article, and:

1. The danger that materials may be swept onto other lands to the injury of others;

~~1.~~2. T ~~t~~he danger to life and property due to flooding or erosion damage;

~~2.~~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;

~~3.~~5. ~~t~~The necessity to the facility of a waterfront location, where applicable;

~~4.~~6. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

~~5.~~7. The compatibility of the proposed use with existing and anticipated development;

~~6.~~8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

~~7.~~9. The safety of access to the property in times of flood for ordinary and emergency vehicles;

~~8.~~10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and

~~9.~~11. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

E. A written report addressing each of the above factors shall be submitted with the application for a variance.

F. Upon consideration of the factors listed above and the purposes of this ~~chapter~~Article, the Appeal Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ~~chapter~~Article.

~~G. Variances shall not be issued within any designated floodway or non-encroachment area if any increase in flood levels during the base flood discharge would result.~~

~~H.~~G. ~~Conditions for v~~Variances shall:

1. ~~Variances may n~~Not be issued when the variance will ~~make~~ cause the structure ~~in violation of~~to violate other federal, state, or local laws, regulations, or ordinances.

~~1.~~2. ~~Variances shall n~~Not be issued within any designated floodway or non-encroachment area if any increase in flood levels during the base flood discharge would result.

3. ~~Variances shall o~~Only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

~~2.~~4. ~~Variances shall o~~Only be issued prior to development permit approval.

~~3.~~5. ~~Variances shall o~~Only be issued upon:

(a) A showing of good and sufficient cause;

(b) A determination that failure to grant the variance would result in exceptional hardship; and

(c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

H. Any applicant to whom a variance is granted shall be given written notice specifying the difference between the Base Flood Elevation (BFE) and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced reference level elevation. Such notification shall be maintained with a record of all variance actions.

I. The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency and the State of North Carolina upon request.

~~I.~~J. ~~A variance may be issued~~ A floodplain development permit may be issued for solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities that are located in Special Flood Hazard Areas ~~provided that~~if a variance is granted and all of the following conditions are met~~.~~: ~~A floodplain development permit may be issued for such development only if a variance is granted.~~

1. The use serves a critical need in the community.

2. No feasible location exists for the use outside the special flood hazard area.

3. The reference level of any structure is elevated or floodproofed to at least the regulatory flood protection level.

4. The use complies with all other applicable federal, state, and local laws.

5. The Town of Beaufort ~~(community)~~ has notified the Secretary of the North Carolina Department of ~~Crime Control and~~ Public Safety of its intention to grant a variance at least 30 calendar days prior to granting the variance.

6.3.5. Penalty[31]

A. Violation of the provisions of this ~~chapter~~ Article or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor.

B. Any person who violates this ~~chapter~~ Article or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than $500.00 or imprisoned for not more than 30 days, or both. Each day such violation continues shall be considered a separate offense.

C. Nothing herein contained shall prevent Town of Beaufort from taking such other lawful action as is necessary to prevent or remedy any violation.

[31] Carries forward Chapter 151, Sec. 151.99, Penalty. Increases fine from $50 to $500.

6.4. Definitions[32]

For the purpose of this ~~chapter~~Article, the following definitions ~~shall~~ apply unless the context clearly indicates or requires a different meaning.

(A, B, C)

Accessory Structure (Appurtenant Structure). ~~means a~~A structure ~~which~~ that is located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Garages, carports, and storage sheds are common urban accessory structures. Pole barns, hay sheds, and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building.

Addition (to an Existing Building). ~~means a~~An extension or increase in the floor area or height of a building or structure.

Appeal. ~~means a~~A request for a review of the Floodplain Administrator's interpretation of any provision of this ~~chapter~~Article.

Area of Shallow Flooding. ~~means a~~A designated AO Zone on a community's Flood Insurance Rate Map (FIRM) with base flood depths determined to be from one to three feet. These areas are located where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of Special Flood Hazard. See Special Flood Hazard Area (SFHA).

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

Base Flood. ~~means t~~The flood having a one percent chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE). ~~means a~~A determination as published in the Flood Insurance Study of the water surface elevations of the base flood.

Breakaway Wall. ~~means a~~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

[32] Carries forward Chapter 151, Sec. 151.05, Definitions, with revisions proposed by NCEM and staff. These may be consolidated with all other definitions in Article 12, although some definitions will remain in this article if they conflict with the general zoning definition of the term.

loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

Building. See Structure.

CAMA (North Carolina's Coastal Area Management Act). This act, along with the Dredge and Fill Law and the federal Coastal Zone Management Act, is managed through North Carolina Department of Environmental ~~and Natural Resources'~~Quality (NCDEQ~~NR~~) Division of Coastal Management (DCM).

Chemical Storage Facility. ~~means a~~A building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

Coastal A Zone (CAZ). ~~means a~~An area within a Special Flood Hazard Area, landward of a V zone or landward of an open coast without mapped V zones. ~~-~~In a Coastal A Zone, the principal source of flooding must be astronomical tides, storm surges, seiches, or tsunamis, not riverine flooding. During the base flood conditions, the potential for wave heights shall be greater than or equal to 1.5 feet. Coastal A Zones are not normally designated on FIRMs. ~~(s~~See also ~~definition of "~~Limit of Moderate Wave Action (LiMWA).~~).~~

Coastal High Hazard Area. ~~means a~~A Special Flood Hazard Area extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on a FIRM~~,~~ or other adopted flood map as determined in § ~~151.46~~6.2.7, Coastal High Hazard Areas (Zone VE).

Community Rating System (CRS). ~~means a~~A program developed by the Federal Insurance Administration to provide incentives for those communities in the Regular Program that have gone beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.

(D, E, F)

Development. ~~means a~~Any human-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

Digital Flood Insurance Rate Map (DFIRM). ~~means t~~The digital official map of a community, issued by the Federal Emergency Management Agency (FEMA), on which both the Special Flood Hazard Areas and the risk premium zones applicable to the community are delineated.

***Disposal*.** ~~means, a~~As defined ~~as~~ in N.C.G.S. § 130A-290(a)(6).~~.~~ the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

***Dry Floodproofing*.** ~~means a~~A combination of measures that make a building and attendant utilities and equipment watertight and substantially impermeable to floodwater, with structural components having the capacity to resist flood loads. ~~Please refer to~~See FEMA's NFIP Technical Bulletin 3, Requirements for the Design and Certification of Dry Floodproofed Non-Residential and Mixed-Use Buildings, ~~and available from the FEMA~~.

***Elevated Building*.** ~~means a~~A non-basement building ~~which~~ that has its reference level raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

***Encroachment*.** ~~means t~~The advance or infringement of uses, fill, excavation, buildings, permanent structures, or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

***Existing Building and Existing Structure*.** ~~means a~~Any building and/or structure for which the "start of construction" commenced before the initial Flood Insurance Rate Map (FIRM) for the community, dated December 1, 1972.

Existing Manufactured Home Park *or* ***Manufactured Home Subdivision*.** ~~means a~~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 ~~pre-FIRM~~completed before the effective date of the floodplain management regulations adopted by the ~~community~~Town, ~~dated~~ February 25, 1975.

***Flood or Flooding*.** ~~means~~

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

   ~~1.~~(a) The overflow of inland or tidal waters; ~~and~~

   (b) The unusual and rapid accumulation of runoff of surface waters from any source~~.~~;

   (c) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth

is carried by a current of water and deposited along the path of the current.

2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

~~***Flood boundary and floodway map (FBFM)*** means an official map of a community, issued by the Federal Emergency Management Agency, on which the Special Flood Hazard Areas and the floodways are delineated. This official map is a supplement to and shall be used in conjunction with the Flood Insurance Rate Map (FIRM).~~

Flood Hazard Boundary Map (FHBM). ~~means a~~An official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the Special Flood Hazard Areas have been defined as Zone A.

Flood Insurance. ~~means t~~The insurance coverage provided under the National Flood Insurance Program.

Flood ~~insurance~~ Insurance ~~r~~Rate ~~m~~Map (FIRM). ~~means a~~An official map of a community, issued by the Federal Emergency Management Agency, on which both the special flood hazard areas and the risk premium zones applicable to the community are delineated.

Flood ~~I~~insurance ~~s~~Study (FIS). ~~means a~~An examination, evaluation, and determination of flood hazard areas, corresponding water surface elevations (if appropriate), flood insurance risk zones, and other flood data in a community issued by FEMA. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), if published.

Floodplain or ***Floodprone Area***. ~~means a~~Any land area susceptible to being inundated by water from any source.

Floodplain Management. ~~means t~~The operation of an overall program of corrective and preventive measures for reducing flood damage and preventing and enhancing, where possible, natural resources in the floodplain, including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

Floodplain Administrator. ~~means t~~The individual appointed to administer and enforce the floodplain management regulations.

Floodplain Regulations. ~~means t~~This ~~chapter~~ Article and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances,

and other applications of police power ~~which~~ that control development in flood-prone areas. This term~~,~~ describes federal, state, or local regulations in any combination ~~thereof; which~~that provide standards for preventing and reducing flood loss and damage.

Floodproofing. ~~means a~~Any combination of structural and nonstructural additions, changes, or adjustments to structures~~, which~~ that reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitation facilities, or structures with their contents.

Floodprone Area. See Floodplain.

Flood-Resistant Material. ~~means a~~Any building product ~~[~~(material, component or system~~]~~) capable of withstanding direct and prolonged contact (minimum 72 hours) with floodwaters without sustaining damage that requires more than low-cost cosmetic repair. ~~-~~Any material that is water-soluble or is not resistant to alkali or acid in water, including normal adhesives for above-grade use, is not flood-resistant. ~~-~~Pressure-treated lumber or naturally decay-resistant lumbers are acceptable flooring materials. ~~-~~Sheet-type flooring coverings that restrict evaporation from below and materials that are impervious, but dimensionally unstable are not acceptable. ~~-~~Materials that absorb or retain water excessively after submergence are not flood-resistant. ~~Please refer to~~See FEMA ~~-~~NFIP Technical Bulletin 2, Flood Damage-Resistant Materials Requirements~~, and available from the FEMA~~. ~~-~~Class 4 and 5 materials, referenced therein, are acceptable flood-resistant materials.

Floodway. ~~means t~~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 foot.

Flood Zone. ~~means a~~A geographical area shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

Floor. See Lowest Floor.

Freeboard. ~~means t~~The additional amount of height added to the Base Flood Elevation (BFE) to account for uncertainties in the determination of flood elevations. See also Regulatory Flood Protection Elevation.

Functionally Dependent Facility. ~~means a~~A facility ~~which~~ that cannot be used for its intended purpose unless it is located in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, or ship repair. The term does not include long-term storage, manufacture~~e~~ing, sales, or service facilities.

(G, H, I)

Hazardous Waste Management Facility. ~~means a~~A facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste as defined in N.C.G.S. Chapter 130A, Article 9 ~~of Chapter 130A~~, Solid Waste Management.

Highest Adjacent Grade (HAG). ~~means t~~The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

Historic Structure. ~~means a~~Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register;

~~2.~~3. Certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

~~3.~~4. Individually listed on a State inventory of historic places;

~~4.~~5. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified:

~~(a)~~(d) By an approved state program as determined by the Secretary of Interior; or

(e) Directly by the Secretary of Interior in states without approved programs.

(J, K, L)

Landscape Fill. ~~means a~~A non-compacted, loosely placed material often containing substantial organic content ~~such as~~ to promote the growth and survival of plantings, sod, or other greenscape installations.

Light Duty Truck. ~~means a~~Any motor vehicle rated at 8,500 pounds Gross Vehicular Weight Rating or less which has a vehicular curb weight of 6,000 pounds or less and which has a basic vehicle frontal area of 45 square feet or less as defined in 40 CFR 86.082-2 and is:

6. Designed primarily for purposes of transportation of property or is a derivation of such a vehicle~~.~~; or

7. Designed primarily for transportation of persons and has a capacity of more than 12 persons; or

8. Available with special features enabling off-street or off-highway operation and use.

Limit of Moderate Wave Action (LiMWA). ~~means t~~The boundary line developed by FEMA on coastal map studies marking the approximate landward extent of the 1.5 foot breaking wave of the Coastal A Zones (CAZ).

Lowest Adjacent Grade (LAG). ~~means t~~The lowest elevation of the ground, sidewalk, patio slab, or deck support immediately next to the building after completion of the building. For Zone A and AO, use the natural grade elevation prior to construction.

Lowest Floor. ~~means t~~The subfloor, top of slab, or grade of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or limited storage in an area other than a basement area, is not considered a building's lowest floor ~~provided that~~ if such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ~~chapter~~Article.

(M, N, O)

Manufactured Home. ~~means a~~A structure, transportable in one or more sections, ~~which~~ that 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 *manufactured home* does not include a recreational vehicle.

Map Repository. ~~means t~~The location of the official flood hazard data to be applied for floodplain management. ~~-~~It is a central location in which flood data is stored and managed; in North Carolina, FEMA has recognized that the application of digital flood hazard data products carry the same authority as hard copy products. ~~-~~Therefore, the NCEM's Floodplain Mapping Program websites house current and historical flood hazard data. ~~-~~For effective flood hazard data, the NC FRIS website (http://FRIS.NC.GOV/FRIS) is the map repository, and for historical flood hazard data the FEMA Map Service Center website (https://msc.fema.gov/portal/home) is the map repository.

Market Value. ~~means t~~The building value, excluding the land (as agreed to between a willing buyer and seller), as established by what the local real estate market will bear. *Market value* can be established by independent certified appraisal, replacement cost depreciated by age of building (Actual Cash Value), or adjusted assessed values.

~~***Mean sea level*** means, for purposes of the NFIP, the National Geodetic Vertical Datum (NGVD) as corrected in 1929, the North American Vertical Datum (NAVD) as corrected~~

~~in 1988 or other vertical control datum used as a reference for establishing varying elevations within the floodplain, to which Base Flood Elevations (BFEs) shown on a FIRM are referenced. Refer to each FIRM panel to determine datum used.~~

New ~~construction~~ Construction. ~~means s~~Structures for which the start of construction commenced on or after the effective date of the original version of this ~~chapter~~ Article (December 1, 1972) and includes any subsequent improvements to such structures.

Nonconforming Building or Development. ~~means a~~Any legally existing building or development ~~which~~ that fails to comply with the current provisions of this ~~chapter~~Article.

Non-Eencroachment aArea (NEA). ~~means t~~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 foot as designated in the Flood Insurance Study report.

Obstruction. This term includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation, or other material in, along, across, or projecting into any watercourse ~~which~~ that may alter, impede, retard, or change the direction and/or velocity of the flow of water~~,~~ or, due to its location, its propensity to snare or collect debris carried by the flow of water~~,~~ or its likelihood of being carried downstream.

(P, Q, R)

Post-FIRM. ~~means c~~Construction or other development ~~which~~ that started on or after ~~January 1, 1975~~December 1, 1972, ~~or on or after the effective~~ the date of the initial Flood Insurance Rate Map for the area~~, whichever is later~~.

Pre-FIRM. ~~means c~~Construction or other development ~~which~~ that started before ~~January 1, 1975~~December 1, 1972, ~~or before the effective~~ the date of the initial Flood Insurance Rate Map for the area~~, whichever is later~~.

Primary Frontal Dune. ~~means a~~A continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and over-topping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

Public Safety and/or Nuisance. ~~means a~~Anything ~~which~~ that is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons,

or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, ~~or~~ river, bay, stream, canal, or basin.

Recreational Vehicle (RV) means a vehicle~~, which~~ that is:

1. Built on a single chassis;

~~5.~~9. Four hundred square feet or less when measured at the largest horizontal projection;

~~6.~~10. Designed to be self-propelled or permanently towable by a light duty truck; and

11. Designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

12. Is fully licensed and ready for highway use.

13. Has no attached deck, porch, or shed, and

14. Has quick-disconnect sewage, water, and electrical connectors.

Reference Level. ~~means t~~The portion of a structure or other development that must be compared to the regulatory flood protection elevation to determine regulatory compliance of the building. Within Special Flood Hazard Areas designated as zones A1-A30, AE, A, A99, AO, or AH, the reference level is the top of the lowest floor. Within Special Flood Hazard Areas designated as zones VE or ~~V1-V30~~Coastal A, the reference level is the bottom of the lowest horizontal structural member.

Regulatory Flood Protection Elevation. ~~means the elevation to which all structures and other development located within the Special Flood Hazard Areas must be elevated or floodproofed, if non-residential. Within areas where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE plus one foot of freeboard. In areas where no BFE has been established, all structures and other development must be elevated or floodproofed, if non-residential, to two feet above the highest adjacent grade.~~ The Base Flood Elevation plus the Freeboard. In Special Flood Hazard Areas where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE plus two feet of freeboard. In areas where no BFE has been established, all structures and other development must be elevated or floodproofed, if non-residential, to three feet above the highest adjacent grade~~Two feet is minimum but a state standard, greater than two feet is optional.~~ [33]

Remedy a Violation. ~~means~~ An action to bring the structure or other development into compliance with state or community floodplain management regulations~~,~~ or, if this is

[33] Proposed here is to increase required freeboard from one foot to two feet, as recommended in the Comprehensive & CAMA Land Use Plan, Action 2.3.1.3, and to increase the elevation requirement for areas without a BFE from two feet to three feet.

not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of ~~the ordinance~~this Article or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

Repetitive Loss. ~~means f~~Flood-related damages sustained by a structure on two separate occasions during any ~~ten~~10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 ~~percent~~% of the market value of the structure before the damage occurred.

Repetitive Loss (RL) Property. ~~is a~~Any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling 10-year period~~,~~ since 1978. At least two of the claims must be more than ~~ten~~10 days apart but, within ~~ten~~10 years of each other. A RL property may or may not be currently insured by the NFIP.

Retrofitting. ~~means m~~Measures, such as floodproofing, elevation, construction of small levees, and other modifications, taken on an existing building or its yard to protect it from flood damage.

Riverine. ~~means r~~Relating to, formed by, or resembling a river (including tributaries), stream, brook, and the like.

(S, T, U)

Salvage Yard. ~~means p~~Property used for the storage, collection, and/or recycling of any type of equipment whatsoever, whether industrial or noncommercial, and including, but not limited to, vehicles, appliances, and related machinery.

Special ~~f~~Flood ~~h~~Hazard ~~a~~Area (SFHA). ~~means t~~The land in the floodplain subject to a one percent or greater chance of being flooded in any given year as determined herein.

Solid Waste Disposal Facility. ~~means a~~Any facility involved in the disposal of solid waste, as defined in N.C.G.S. § 130A-290(a)(35).

Solid Waste Disposal Site. ~~means, a~~As defined in N.C.G.S. § 130A-290(a)(36), ~~and~~any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

Start of Construction. ~~i~~Includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure (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 the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

Structural Fill. ~~means s~~Screened earthen material used to create a strong, stable base. It is typically compacted to support structures such as buildings, bridges, roads, and concrete pads to include driveways, sidewalks, etc.

Structure. ~~means a~~A walled and roofed building, a manufactured home, or a gas, ~~or liquid~~liquid or liquified storage tank that is principally above ground.

Substantial Damage. ~~means d~~Damage of any origin sustained by a structure during any one-year period whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 ~~percent~~% of the market value of the structure before the damage occurred. See ~~definition of~~ Substantial Improvement. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a ~~ten~~10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 ~~percent~~% of the market value of the structure before the damage occurred. ~~(Last sentence is OPTIONAL)~~

Substantial Improvement. ~~means a~~Any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure~~,~~ taking place during any one-year period whereby the cost of which equals or exceeds 50 ~~percent~~% of the market value of the structure before the start of construction of the improvement. This term includes structures ~~which~~ that have incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

1. Any correction of existing violations of state or community health, sanitary, or safety code specifications ~~which~~ that have been identified by the ~~community~~ Town's code enforcement official and ~~which~~ that are the minimum necessary to assure safe living conditions; or

~~7.~~15. Any alteration of a historic structure, ~~provided that~~if the alteration will not preclude the structure's continued designation as a historic structure and the alteration is approved by variance issued pursuant to § ~~151.28 of this ordinance~~6.3.4, Variance Procedures.

(V, W, X, Y, Z)

Variance. ~~means a~~A grant of relief from the requirements of this ~~chapter~~Article.

Violation. ~~means t~~The failure of a structure or other development to be fully compliant with the ~~community's~~ Town's floodplain management regulations. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required by § ~~151.26~~ 6.3.2, Floodplain Development Permit and Certification Requirements, is presumed to be in violation until such time as that documentation is provided.

Watercourse. ~~means a~~A lake, river, creek, stream, wash, channel, or other topographic feature on or over which waters flow at least periodically. *Watercourse* includes specifically designated areas in which substantial flood damage may occur.

Water Surface Elevation (WSE). ~~means t~~The height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.