

ARTICLE XVI - Floodways, Floodplains, Drainage, and Erosion

Part 1. Flood Damage Prevention Ordinance

§ 152-251. Statutory Authorization; Findings of Facts; Purpose; Objectives and Name.

(A) Statutory Authorization. The Legislature of the State of North Carolina has in G.S. Chpt. 143, Art. 21, Part 6; Chpt. 160A, Art. 19, Parts 3, 5, and 8; and Chpt. 160A, Art. 8, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the Board of Commissioners does ordain and adopt the Flood Prevention Ordinance contained herein.

(B) Findings of Fact.

(1) The flood prone areas within the jurisdiction of the Town of Aberdeen 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.

(2) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by the occupancy in flood prone areas of uses vulnerable to floods or other hazards.

(C) Statement of Purpose. It is the purpose of this ordinance to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions within flood prone areas by provisions designed to:

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

(2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;

(4) Control filling, grading, dredging, and all other development that may increase erosion or flood damage; and

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

(D) Objectives. The objectives of this ordinance are:

- (1) To protect human life and health;
 - (2) To minimize expenditure of public money for costly flood control projects;
 - (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - (4) To minimize prolonged business losses and interruptions;
 - (5) To 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 flood prone areas;
 - (6) To help maintain a stable tax base by providing for the sound use and development of flood prone areas; and
 - (7) To ensure that potential buyers are aware that property is in a Special Flood Hazard Area.
- (E) Unified Development Ordinance Art. XVI, Part 1 shall be referred to herein as the "Flood Damage Prevention Ordinance."

§ 152-252. Definitions.

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

(1) **Accessory Structure (Appurtenant Structure).** A structure 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.

(2) **Addition (to an existing building).** An extension or increase in the floor area or height of a building or structure.

(3) **Appeal.** A request for a review of the Floodplain Administrator's interpretation of any provision of this ordinance.

(4) **Area of Shallow Flooding.** A designated Zone AO on the town's Flood Insurance Rate Map ("FIRM") with base flood depths determined to be from one (1) to three (3) 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.

(5) **Area of Special Flood Hazard.** See "Special Flood Hazard Area (SFHA)."

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

(7) **Base Flood.** The flood having a one (1) percent chance of being equaled or exceeded in any given year.

(8) **Base Flood Elevation (hereafter "BFE").** A determination of the water surface elevations of the base flood as published in the Flood Insurance Study. When the BFE has not been provided in a "Special Flood Hazard Area," it may be obtained from engineering studies available from a Federal or State or other source using FEMA approved engineering methodologies. This elevation, when combined with the "Freeboard," establishes the "Regulatory Flood Protection Elevation."

(9) **Building.** See "Structure."

(10) **Certified Local Government (hereafter "CLG") Program.** A program approved by the U.S. Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the State Historic Preservation Officer as having met the requirements of the National Historic Preservation Act of 1966, as amended in 1980.

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

(12) **Development.** Any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

(13) **Disposal.** As defined 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.

(14) **Elevated Building.** A non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

(15) **Encroachment.** 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.

(16) **Existing Manufactured Home Park or Manufactured Home Subdivision.** A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before the initial effective date of the floodplain management regulations adopted by the town, which is _____. See also in this section, "Manufactured Home Park or Subdivision."

(17) **Federal Emergency Management Agency (hereafter “FEMA”).** The Federal agency that coordinates floodplain mapping and planning.

(18) **Flood or Flooding.** A general and temporary condition of partial or complete inundation of normally dry land areas from:

(a) The overflow of inland waters (i.e. creeks, streams, lakes, rivers etc.); and/or

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

(19) **Flood Boundary and Floodway Map (hereafter “FBFM”).** An official map of the town, 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.

(20) **Flood Hazard Boundary Map (hereafter “FHBM”).** An official map of the town, issued by the Federal Emergency Management Agency, where the boundaries of the Special Flood Hazard Areas have been defined as Zone A.

(21) **Flood Insurance.** The insurance coverage provided under the National Flood Insurance Program.

(22) **Flood Insurance Rate Map (hereafter “FIRM”).** An official map of the town, 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.

(23) **Flood Insurance Study (hereafter “FIS”).** An examination, evaluation, and determination of flood hazards, corresponding water surface elevations (if appropriate), flood hazard risk zones, and other flood data in the town issued by the Federal Emergency Management Agency. The Flood Insurance Study report includes Flood Insurance Rate Maps and Flood Boundary and Floodway Maps (hereafter “FBFMs”), if published.

(24) **Floodplain.** Any land area susceptible to being inundated by water from any source.

(25) **Flood Prone Area.** See “Floodplain.”

(26) **Floodplain Administrator.** The individual appointed to administer and enforce the Flood Damage Prevention ordinance. See section 152-254(A).

(27) **Floodplain Development Permit.** Any type of permit that is required in conformance with the provisions of the Flood Damage Prevention Ordinance, prior to the commencement of any development activity.

(28) **Floodplain Management.** The operation of an overall program of corrective and preventive measures for reducing flood damage and preserving 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.

(29) **Floodplain Management Regulations.** The Flood Damage Prevention Ordinance and other provisions of the Aberdeen Unified Development Ordinance, building codes, health regulations, special purpose ordinances, and other applications of police power which control development in flood-prone areas. This term describes federal, state, or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

(30) **Floodproofing.** Any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

(31) **Floodway.** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

(32) **Flood Zone.** 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.

(33) **Freeboard.** The height added to the Base Flood Elevation to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions such as wave action, bridge openings, and the hydrological effect of urbanization on the watershed. The Base Flood Elevation plus the freeboard establishes the "Regulatory Flood Protection Elevation."

(34) **Functionally Dependent Facility.** A facility which 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, sales, or service facilities.

(35) **Hazardous Waste Facility.** A facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste, as defined in N.C.G.S. Chpt. 130A, Art. 9.

(36) **Highest Adjacent Grade (hereafter "HAG").** The highest natural elevation of the ground surface, prior to construction, immediately next to the proposed walls of the structure.

(37) **Historic Structure.** Any structure that is:

- (i) 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;

- (ii) 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;
- (iii) Individually listed on a local inventory of historic landmarks in communities with a “Certified Local Government Program”; or
- (iv) Certified as contributing to the historical significance of a historic district designated by a community with a “Certified Local Government Program”.

(38) **Lowest Adjacent Grade (hereafter “LAG”).** The elevation of the ground, sidewalk, or patio slab immediately next to the building, or deck support, after completion of the building.

(39) **Lowest Floor.** The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or limited storage in an area other than a basement area, is not considered a building's lowest floor, provided that such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of the Flood Damage Prevention Ordinance.

(40) **Manufactured Home.** A structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term “manufactured home” does not include a “recreational vehicle.”

(41) **Manufactured Home Park or Subdivision.** A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale. See also in this section, “Existing Manufactured Home Park or Manufactured Home Subdivision.”

(42) **Market Value.** The building value, not including the land value and that of any accessory structures or other improvements on the lot. Market value may be established by independent certified appraisal, replacement cost depreciated for age of building and quality of construction (i.e. using the Actual Cash Value method) or adjusted tax assessed values.

(43) **Mean Sea Level.** For purposes of this ordinance, the National Geodetic Vertical Datum (hereafter “NGVD”), as corrected in 1929; the North American Vertical Datum (hereafter “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 shown on a FIRM are referenced. Refer to each FIRM panel to determine datum used.

(44) **New Construction.** Structures for which the start of construction commenced on or after the effective date of the initial floodplain management regulations of the town, which is _____, and includes any subsequent improvements to such structures. See also in this section, “Start of Construction.”

(45) **Non-Encroachment Area.** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot as designated in the Flood Insurance Study report.

(46) **Post-FIRM.** Construction or other development for which the start of construction occurred on or after the effective date of the initial Flood Insurance Rate Map, which is _____. See also in this section, "Start of Construction."

(47) **Pre-FIRM.** Construction or other development for which the start of construction occurred before the effective date of the initial Flood Insurance Rate Map, which is _____. See also in this section, "Start of Construction."

(48) **Principally Above Ground.** At least 51% of the actual cash value of the structure is above ground.

(49) **Public Safety and/or Nuisance.** Anything which 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, river, bay, stream, canal, or basin.

(50) **Recreational Vehicle (hereafter "RV").** A vehicle, which is:

(i) Built on a single chassis;

(ii) 400 square feet or less when measured at the largest horizontal projection;

(iii) Designed to be self-propelled or permanently towable by a light duty truck; and

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

(51) **Reference Level.** The bottom of the lowest horizontal structural member of the lowest floor, excluding the foundation system, for structures within all Special Flood Hazard Areas.

(52) **Regulatory Flood Protection Elevation.** The Base Flood Elevation plus the Freeboard. In Special Flood Hazard Areas where Base Flood Elevations have been determined, this elevation shall be the Base Flood Elevation plus three (3) feet of freeboard. In Special Flood Hazard Areas where no Base Flood Elevation has been established, this elevation shall be at least three (3) feet above the highest adjacent grade.

(53) **Remedy a Violation.** To bring the structure or other development into compliance with State and town floodplain management regulations, or, if this is 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 or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

(54) **Riverine.** Relating to, formed by, or resembling a river (including tributaries), stream, brook, or other similar waterway.

(55) **Salvage Yard.** Any non-residential property used for the storage, collection, and/or recycling of any type of equipment, including but not limited to vehicles, appliances, and related machinery.

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

(57) **Solid Waste Disposal Site.** As defined in G.S. § 130A-290(a)(36), any place where solid wastes are disposed of by incineration, sanitary landfill, or any other method.

(58) **Special Flood Hazard Area (hereafter "SFHA").** The land in the floodplain subject to a one (1) percent or greater chance of being flooded in any given year, as determined in subsection 152-253(B).

(59) **Start of Construction.** 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 on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the 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.

(60) **Structure.** A walled and roofed building, a manufactured home, or a gas, liquid, or liquefied gas storage tank that is principally above ground.

(61) **Substantial Damage.** 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 fifty (50) percent of the market value of the structure before the damage occurred. See also in this section, "Substantial Improvement."

(62) **Substantial Improvement.** Any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period for which the cost equals or exceeds fifty (50) percent of the market value of the structure before the start of construction of the improvement. This term includes structures which have

incurred substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

- (i) Any correction of existing violations of State or local health, sanitary, or safety code specifications which have been identified by the Town of Aberdeen code enforcement official and which are the minimum necessary to assure safe living conditions; or,
- (ii) Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

See also in this section, "Start of Construction" and "Substantial Damage."

(63) **Variance.** A grant of relief from the requirements of the Flood Damage Prevention Ordinance.

(64) **Violation.** The failure of a structure or other development to be fully compliant with the Flood Damage Prevention Ordinance. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in sections 152-254 and 152-255 is presumed to be in violation until such time as that documentation is provided.

(65) **Water Surface Elevation (hereafter "WSE").** The height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

(66) **Watercourse.** A lake, river, creek, stream, wash, channel, or other topographic feature on or over which waters flow at least periodically. Watercourses include specifically designated areas in which substantial flood damage may occur.

§ 152-253. General Provisions.

(A) **Lands to Which this Ordinance Applies.** The Flood Damage Prevention Ordinance shall apply to all Special Flood Hazard Areas within the jurisdiction of the Town of Aberdeen, including its extraterritorial jurisdiction, and within the jurisdiction of any other community whose governing body agrees, by resolution, to such applicability.

(B) **Basis of Establishing the Special Flood Hazard Areas.** The Special Flood Hazard Areas are those identified under the Cooperating Technical State ("CTS") agreement between the State of North Carolina and FEMA in its Flood Insurance Study and its accompanying Flood Insurance Rate Maps, for Moore County dated October 17, 2006, which are adopted by reference and declared to be a part of this ordinance.

(C) **Establishment of Floodplain Development Permit.** A floodplain development permit shall be required in conformance with the provisions of the Flood Damage Prevention Ordinance prior to the commencement of any development activities within Special Flood Hazard Areas, as determined in accordance with subsection 152-253(B).

(D) Compliance. No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of the Flood Damage Prevention Ordinance and any other applicable regulations.

(E) Abrogation and Greater Restrictions. The Flood Damage Prevention Ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(F) Interpretation. In the interpretation and application of this ordinance, all provisions shall be:

- (1) Considered as minimum requirements,
- (2) Liberally construed in favor of the governing body, and
- (3) Deemed neither to limit nor repeal any other powers granted under State statutes.

(G) Warning and Disclaimer of Liability. The degree of flood protection required by the Flood Damage Prevention Ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Actual flood heights may be increased by man-made or natural causes. The Flood Damage Prevention Ordinance does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Town of Aberdeen or by any officer or employee thereof for any flood damages that result from reliance on the Flood Damage Prevention Ordinance or any administrative decision lawfully made hereunder.

(H) Penalties for Violation.

(1) Violation of the provisions of the Flood Damage Prevention Ordinance or failure to comply with any of its requirements, including violation of stop-work orders or conditions and safeguards established in connection with grants of variances or special exceptions, shall constitute a Class 1 misdemeanor, as provided for in G.S. § 143-215.58.

(2) In addition to subsection (1) above, the provisions of section 152-115, "Penalties and Remedies for Violations," shall apply to the enforcement of the Flood Damage Prevention Ordinance.

(3) Each day a violation continues shall be considered a separate offense.

(4) Nothing herein contained shall prevent the Town of Aberdeen from taking such other lawful action as is necessary to prevent or remedy any violation.

§ 152-254. Administration.

(A) Designation of Floodplain Administrator. The Land Use Administrator, or his or her designee, is hereby designated as the Floodplain Administrator and is hereby appointed to administer and implement the provisions of the Flood Damage Prevention Ordinance.

(B) Floodplain Development Application, Permit, and Certification Requirements.

(1) Application Requirements. Application for a floodplain development permit shall be made to the Floodplain Administrator prior to any development activities located within Special Flood Hazard Areas. The following items shall be presented to the Floodplain Administrator to apply for a floodplain development permit:

(a) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:

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

(2) The boundary of the Special Flood Hazard Area as delineated on the FIRM or other flood map, as determined in subsection 152-253(B), or a statement that the entire lot is within the Special Flood Hazard Area;

(3) Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map, as determined in subsection 152-253(B);

(4) The boundary of the floodway(s) or non-encroachment area(s), as determined in subsection 152-253(B);

(5) The Base Flood Elevation where provided as set forth in subsection 152-253(B); subsection 152-254(C)(11) or (12); or subsection 152-255(D);

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

(7) Certification of the plot plan by a registered land surveyor or professional engineer;

(b) Proposed elevation and method thereof, of all development within a Special Flood Hazard Area including, but not limited to:

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

- (2) Elevation in relation to mean sea level to which any non-residential structure in Zone AE, A, or AO will be flood-proofed; and
- (3) Elevation in relation to mean sea level to which any proposed utility systems will be elevated or flood-proofed;
- (c) If floodproofing, a Floodproofing certificate shall be required with supporting data, and an operational plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures;
- (d) A foundation plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of the Flood Damage Prevention Ordinance are met. These details include, but are not limited to:
 - (1) The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls);
 - (2) Openings to facilitate equalization of hydrostatic flood forces on walls in accordance with subsection 152-255(B)(4)(d), when solid foundation perimeter walls are used in Zones A, AO, AE, and A1-30;
- (e) Usage details of any enclosed areas below the regulatory flood protection elevation.
- (f) 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;
- (g) Copies of all other local, State, and Federal permits required prior to floodplain development permit issuance (Wetlands, Endangered Species, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.);
- (h) Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure the requirements of subsections 152-255(B)(6) and (7) are met; and
- (i) A description of proposed watercourse alteration or relocation, when applicable, including 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.

(2) Permit Requirements. The Floodplain development permit shall include, but not be limited to:

- (a) A description of the development to be permitted under the floodplain development permit;
- (b) The Special Flood Hazard Area determination for the proposed development, per available data specified in subsection 152-253(B);
- (c) The regulatory flood protection or flood of record elevation required for the reference level and all attendant utilities;
- (d) The regulatory flood protection or flood of record elevation required for the protection of all public utilities;
- (e) All certification submittal requirements with timelines;
- (f) A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable;
- (g) The flood openings requirements, if in Zones A, AO, AE or A1-30; and
- (h) Limitations of below BFE enclosure uses, if applicable (i.e., parking, building access, and limited storage only).

(3) Certification Requirements.

(a) Elevation Certificates.

- (1) An Elevation Certificate (FEMA Form 81-31) is required prior to the actual start of any new construction. 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 mean sea level. The Floodplain Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit.
- (2) An Elevation Certificate (FEMA Form 81-31) is required after the reference level is established. Within seven (7) 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 mean sea level. Any work done within the seven (7) 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 work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

- (3) A final as-built Elevation Certificate (FEMA Form 81-31) is required after construction is completed and prior to certificate of occupancy issuance. 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. 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 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 required corrections shall be cause to withhold the issuance of a certificate of occupancy.
- (b) Floodproofing Certificate. If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a floodproofing certificate (FEMA Form 81-65), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the flood-proofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect, and certified by the same. The Floodplain Administrator shall review the certificate data, operational plan and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. 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 occupancy.
- (c) If a manufactured home is placed within Zone A, AO, AE, or A1-30 and the elevation of the chassis is more than thirty-six (36) inches in height above grade, an engineered foundation certification is required in accordance with the provisions of subsection 152-255(B)(3)(b).
- (d) If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation, a professional engineer's certified 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.

(e) Certification Exemptions. The following structures, if located within Zone A, AO, AE or A1-30, are exempt from the elevation/floodproofing certification requirements specified in subsections 152-254(B)(3)(a) and (b):

(i) Recreational Vehicles meeting the requirements of subsection 152-255(B)(6)(a);

(ii) Temporary Structures meeting the requirements of subsection 152-255(B)(7); and

(iii) Accessory Structures less than 150 square feet meeting the requirements of subsection 152-255(B)(8).

(C) Duties and Responsibilities of the Floodplain Administrator. The Floodplain Administrator shall perform, but not be limited to, the following duties and shall have, but not be limited to, the following responsibilities:

(1) Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas to assure that the requirements of the Flood Damage Prevention Ordinance have been satisfied;

(2) Review all proposed development within Special Flood Hazard Areas to assure that all necessary Local, State and Federal permits have been received and that copies of such permits have been 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 FEMA;

(4) Assure that maintenance is provided within the altered or relocated portion of the aforementioned watercourse so that the flood-carrying capacity is not diminished;

(5) Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of subsection 152-255(F) are met;

(6) Obtain actual elevation (in relation to mean sea level) of the reference level (including basement) and all attendant utilities of all new or substantially improved structures, in accordance with subsection 152-254(B)(3);

(7) Obtain actual elevation (in relation to mean sea level) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with subsection 152-254(B)(3);

(8) Obtain actual elevation (in relation to mean sea level) of all public utilities, in accordance with subsection 152-254(B)(3);

(9) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect, in accordance with subsections 152-254(B)(3) and 152-255(B)(2);

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

(11) When BFE data has not been provided in accordance with subsection 152-253(B), obtain, review, and reasonably utilize any BFE data, along with floodway data or non-encroachment area data available from a Federal, State, or other source, including data developed pursuant to subsection 152-255(D)(2)(b), in order to administer the provisions of the Flood Damage Prevention Ordinance;

(12) When BFE data is provided but no floodway nor non-encroachment area data has been provided in accordance with subsection 152-253(B), obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a Federal, State, or other source in order to administer the provisions of this ordinance;

(13) When the lowest floor and the lowest adjacent grade of a structure or the lowest elevation of a parcel in a Special Flood Hazard Area is above the BFE, advise the property owner of the option to apply for a Letter of Map Amendment ("LOMA") from FEMA, and should such a letter be issued, maintain a copy of the LOMA in the floodplain development permit file;

(14) Permanently maintain all records that pertain to the administration of this ordinance and make these records available for public inspection, unless such public inspection is prohibited by State or Federal law, including the U.S. Privacy Act of 1974, as amended (5 U.S.C. § 552a);

(15) 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 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) Issue stop-work orders as required. Whenever a building, or part thereof, is being constructed, reconstructed, altered, or repaired in violation of the Flood Damage Prevention Ordinance, 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 or in charge of 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) Revoke floodplain development permits as required. The Floodplain Administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing, which writing shall include 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) Make periodic inspections throughout all Special Flood Hazard Areas within the jurisdiction of the town. The Floodplain Administrator and each member of the Planning and 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;

(19) Follow through with the corrective procedures of subsection 152-254(D);

(20) Review, provide input, and make recommendations for variance requests;

(21) Maintain a current map repository to include, but not be limited to, the FIS Report, FIRM and other official flood maps and studies adopted in accordance with subsection 152-253(B), including any revisions thereto including Letters of Map Change, issued by FEMA;

(22) Notify the State and FEMA of the mapping needs of the town; and

(23) Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill ("LOMR-F") and Letters of Map Revision ("LOMR").

(D) Corrective Procedures.

(1) Violations to be Corrected. When the Floodplain Administrator finds violations of applicable State and local laws, it shall be his or her duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations cited in such notification.

(2) Actions in Event of Failure to Take Corrective Action. If the owner of a building or property shall fail 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:

- (a) That the building or property is in violation of the Flood Damage Prevention Ordinance;
- (b) That 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 by counsel and to present arguments and evidence pertaining to the matter; and
- (c) That following the hearing, the Floodplain Administrator may issue an order to alter, vacate, or demolish the building or to remove fill, as applicable.

(3) Order to Take Corrective Action. If, upon a hearing held pursuant to the notice prescribed above, the Floodplain Administrator shall find that the building or development is in violation of the Flood Damage Prevention Ordinance, he or she shall issue an order in writing to the owner, requiring the owner to remedy the violation within a specified time period, not less than sixty (60) calendar days nor more than one-hundred eighty (180) calendar days from the date of the order. Where the Floodplain Administrator finds that there is imminent danger to life or other property, he or she may order that corrective action be taken in such lesser period as may be feasible.

(4) Appeal. Any owner who has received an order to take corrective action may appeal the order to the Board of Commissioners by giving a notice of appeal in writing to both 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. The Board of Commissioners shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.

(5) Failure to Comply with Order. If the owner of a building or property fails to comply with an order to take corrective action for which no appeal has been made, or fails to comply with an order of the governing body following an appeal, the owner shall be guilty of a misdemeanor and the town shall be permitted to take such steps as are authorized by subsection 152-253(H).

(E) Variance Procedures.

(1) The Board of Adjustment shall hear and decide requests for variances from the requirements of the Flood Damage Prevention Ordinance in accordance with the provisions of this section.

(2) Variances may be issued for:

- (a) 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 that the variance is the

minimum necessary to preserve the historic character and design of the structure;

- (b) Functionally dependant facilities, if determined to meet the definition as stated in section 152-252, provided the provisions of subsection 152-254(E)(9)(b), (c), and (e) have been satisfied and that such facilities are protected by methods that minimize flood damages during the base flood and create no additional threats to public safety; and
- (c) Any other type of development, provided it meets the requirements stated in this section.

(3) In passing upon variances, the Board of Adjustment shall consider all technical evaluations, all relevant factors, all standards specified in the Flood Damage Prevention Ordinance, and the following:

- (a) The danger that materials may be swept onto other lands to the injury of others;
- (b) The danger to life and property due to flooding or erosion damage;
- (c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (d) The importance of the services provided by the proposed facility to the community;
- (e) The necessity to the facility of a waterfront location as a functionally dependant facility, as defined in section 152-252 and where applicable;
- (f) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- (g) The compatibility of the proposed use with existing and anticipated development;
- (h) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- (i) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (j) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and

- (k) 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.

(4) A written report, sealed by an engineer licensed in the State of North Carolina, addressing each of the above factors shall be submitted with the application for a variance.

(5) Upon consideration of the factors listed above and the purposes of the Flood Damage Prevention Ordinance, the Board of Adjustment may attach such conditions to the granting of a variance as it deems necessary to further the purposes and objectives of the Flood Damage Prevention Ordinance.

(6) 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 that such construction below the BFE increases risks to life and property, and that the issuance of a variance to construct a structure below the BFE will result in increased premium rates for flood insurance up to twenty-five dollars (\$25) per one hundred dollars (\$100) of insurance coverage. Such notification shall be maintained with a record of all variance actions, including justification for their issuance.

(7) The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to FEMA and the State of North Carolina upon request.

(8) Conditions for Variances:

- (a) Variances shall not be issued when the variance will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.
- (b) Variances shall not be issued within any designated floodway or non-encroachment area if the variance would result in any increase in flood levels during the base flood discharge.
- (c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (d) Variances shall only be issued prior to development permit approval.
- (e) Variances shall only be issued upon:
 - (1) A showing of good and sufficient cause;
 - (2) A determination that failure to grant the variance would result in exceptional hardship; and
 - (3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or

extraordinary public expense, the creation of a nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

(9) A variance may not be issued for hazardous waste management facilities, salvage yards, and chemical storage facilities. A variance may be issued for solid waste disposal facilities that are located in Special Flood Hazard Areas, provided that all of the following conditions are met:

- (a) The use serves a critical need in the community;
- (b) No feasible location exists for the use outside the Special Flood Hazard Area;
- (c) The reference level of any structure is elevated or flood-proofed to at least the regulatory flood protection elevation or flood of record contour elevation;
- (d) The use complies with all other applicable Federal, State, and local laws; and
- (e) The town has notified the Secretary of the North Carolina Department of Crime Control and Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance.

(10) The following provisions, in addition to standards outlined in subsections 152-255(A) and (B), shall apply to all development within floodways or non-encroachment zones:

- (a) No encroachments, including fill, new construction, substantial improvements and other developments, shall be permitted unless it has been demonstrated that:
 - (1) The proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Floodplain Administrator prior to issuance of a floodplain development permit, or
 - (2) A Conditional Letter of Map Revision (“CLOMR”) has been approved by FEMA. A Letter of Map Revision must also be obtained upon completion of the proposed encroachment.

(b) If subsection 152-254(E)(11)(a) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of the Flood Damage Prevention Ordinance.

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

(1) The anchoring and the elevation standards of subsection 152-255(B)(3), and

(2) The “no encroachment” standard of subsection 152-255(E).

§ 152-255. Provisions for Flood Hazard Reduction.

(A) General Standards. In all Special Flood Hazard Areas, the following provisions are required:

(1) All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure;

(2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;

(3) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages;

(4) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the regulatory flood protection elevation. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, appliances (washers, dryers, refrigerators, freezers, etc.), hot water heaters, and electric outlets/switches;

(5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

(6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into flood waters;

(7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;

(8) Any alteration, repair, reconstruction, or improvements to a structure, which is in compliance with the provisions of this ordinance, shall meet the requirements for new construction as contained in the Flood Damage Prevention Ordinance;

(9) Nothing in the Flood Damage Prevention Ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of the Flood Damage Prevention Ordinance and located totally or partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of the Flood Damage Prevention Ordinance;

(10) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, except by variance as specified in subsection 152-254(E)(9). 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 flood-proofed to at least the regulatory flood protection elevation and certified according to subsection 152-254(B)(3);

(11) All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage;

(12) All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

(13) All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards;

(14) 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;

(15) 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.

(16) When a structure is located in multiple flood hazard zones or in a flood hazard risk zone with multiple base flood elevations, the provisions for the more restrictive flood hazard risk zone and the highest base flood elevation shall apply.

(B) Specific Standards. In all Special Flood Hazard Areas where BFE data has been provided, as set forth in subsection 152-253(B) or subsection 152-255(D), the following provisions, in addition to those of subsection 152-255(A), are required:

(1) Residential Construction. New construction and 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, as defined in section 152-252;

(2) Non-Residential Construction. New construction and 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 or flood of record elevation, as defined in section 152-252. Structures located in A, AE, AO and A1-30 zones may be floodproofed to the regulatory flood protection elevation in lieu of elevation, provided that all areas of the structure, together with attendant utility and sanitary facilities, below the regulatory 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. For AO Zones, the floodproofing elevation shall be in accordance with subsection 152-255(G)(2). A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in subsection 152-254(B)(3), along with the operational and maintenance plans;

(3) Manufactured Homes:

- (a) 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 or flood of record elevation, as defined in section 152-252.
- (b) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by engineer certification, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to G.S. § 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis thirty-six (36) inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above thirty-six (36) inches in height, an engineering certification is required.
- (c) All enclosures or skirting below the lowest floor shall meet the requirements of subsection 152-255(B)(4).
- (d) 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 flood prone areas. This plan shall be filed with and approved by the Floodplain Administrator and the local Emergency Management Coordinator.

(4) Elevated Buildings. Fully enclosed areas of new construction and substantially improved structures, which are below the lowest floor:

- (a) 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;
- (b) Shall be constructed entirely of flood resistant materials at least to the regulatory flood protection elevation;
- (c) Shall include, in Zones A, AO, AE, and A1-30, 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;
 - (1) A minimum of two (2) flood openings on different sides of each enclosed area subject to flooding;
 - (2) 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;
 - (3) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;
 - (4) The bottom of all required flood openings shall be no higher than one (1) foot above the adjacent grade;
 - (5) Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and
 - (6) 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.

(5) Additions/Improvements.

- (a) Additions and/or improvements to pre-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
 - (1) Not a substantial improvement, then the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure; or
 - (2) A substantial improvement, then both the existing structure and the addition and/or improvements must comply with the standards for new construction.
- (b) Additions to post-FIRM structures with no modifications to the existing structure other than a standard door in the common wall shall require only the addition to comply with the standards for new construction.
- (c) Additions and/or improvements to post-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:
 - (1) Not a substantial improvement, then the addition and/or improvements only must comply with the standards for new construction; or
 - (2) A substantial improvement, then both the existing structure and the addition and/or improvements must comply with the standards for new construction.

(6) Recreational Vehicles. Recreational vehicles shall 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).

(7) Temporary Non-Residential Structures. Prior to the issuance of a floodplain development permit for a temporary structure, the applicant must submit to the Floodplain Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood, or other type of flood warning notification. The following information shall be submitted in writing to the Floodplain Administrator for review and written approval:

- (a) A specified time period for which the temporary use will be permitted. Time specified may not exceed three (3) months, renewable up to one (1) year;
- (b) The name, 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., minimum of seventy-two (72) hours before landfall of a hurricane or immediately upon flood warning notification);
- (d) A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and
- (e) A designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.

(8) Accessory Structures. When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

- (a) Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking, or restroom areas);
- (b) Accessory structures shall not be temperature-controlled;
- (c) Accessory structures shall be designed to have low flood damage potential;
- (d) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
- (e) Accessory structures shall be firmly anchored in accordance with subsection 152-255(A)(1);
- (f) All service facilities such as electrical shall be installed in accordance with subsection 152-255(A)(4); and
- (g) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below regulatory flood protection elevation in conformance with subsection 152-255(B)(4)(c).

An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with subsection 152-255(4)(B)(3).

(C) Reserved.

(D) Standards for Floodplains Without Established Base Flood Elevations.

Within the Special Flood Hazard Areas where no Base Flood Elevation (BFE) data has been provided as set forth in subsection 152-253(B) or 152-255(D), the following provisions, in addition to subsections 152-255(A) and (B), shall apply:

(1) No encroachments, including fill, new construction, substantial improvements, or new development, shall be permitted within a distance of twenty (20) feet each side from top of bank or five (5) 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.

(2) The BFE used in determining the regulatory flood protection elevation shall be determined based on one of the following criteria set in order from highest to lowest priority:

(a) If 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 the Flood Damage Prevention Ordinance and shall be elevated or flood-proofed in accordance with standards in subsections 152-255(A) and (B).

(b) When floodway data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway areas shall also comply with the requirements of subsections 152-255(B) and (F).

(c) All subdivision, manufactured home park, or other development proposals shall provide Base Flood Elevation (BFE) data if the development is greater than five (5) acres or has more than fifty (50) lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference, per subsection 152-253(B), to be utilized in implementing the Flood Damage Prevention Ordinance.

(d) When Base Flood Elevation (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 section 152-252. All other applicable provisions of subsection 152-255(B) shall also apply.

(E) Standard for Riverine Floodplains With BFE but Without Established Floodways or Non-Encroachment Areas.

Along rivers and streams where BFE data is provided by FEMA or is available from another source, but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

(1) Standards outlined in subsections 152-255(A) and (B), and

(2) Until a regulatory floodway or non-encroachment area is designated, 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 (1) foot at any point within the town.

(F) Floodways and Non-Encroachment Areas. Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in subsection 152-253(B). 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. The following provisions, in addition to standards outlined in subsections 152-155(A) and (B), shall apply to all development within such areas:

(1) No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless:

- (a) It is demonstrated that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Floodplain Administrator prior to issuance of a floodplain development permit, or
- (b) A Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment.

(2) If subsection 152-155(F)(1) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.

(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 of subsection 152-255(B)(3); and
- (b) The no encroachment standard of subsection 152-255(F)(1).

(G) Standards for Areas of Shallow Flooding (Zone AO). Located within the Special Flood Hazard Areas established in subsection 152-253(B) are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to subsection 152-255(A), all new construction and substantial improvements in an AO zone shall meet the following requirements:

(1) The reference level shall be elevated at least as high as the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, plus a freeboard of three (3) feet, above the highest adjacent grade; or at least two (2) feet above the highest adjacent grade plus a freeboard of one (1) foot if no depth number is specified.

(2) Non-residential structures may, in lieu of elevation, be floodproofed to the same level as required in subsection 152-255(G)(1) so that the structure, together with attendant utility and sanitary facilities, below that level shall be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. Certification is required in accordance with subsection 152-254(B)(3).

(3) Adequate drainage paths shall be provided around structures on slopes to guide floodwaters around and away from proposed structures.

§ 152-256. Legal Status Provisions.

(A) Effect on Rights and Liabilities Under the Existing Flood Damage Prevention ordinance.

This ordinance in part comes forward by re-enactment of some of the provisions of the Flood Damage Prevention Ordinance enacted June 10, 1991, as amended, and this Flood Damage Prevention Ordinance is not intended to repeal but rather to reenact and continue to enforce without interruption such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit, or proceeding instituted or pending. All provisions of the Flood Damage Prevention Ordinance of the Town of Aberdeen enacted on June 10, 1991, as amended, which are not reenacted herein are repealed.

The date of the initial flood damage prevention ordinance for each municipal jurisdiction within Moore County is as follows:

(B) Effect Upon Outstanding Floodplain Development Permits.

Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a floodplain development permit has been granted by the Floodplain Administrator, or his or her authorized agents, before the time of passage of this Flood Damage Prevention Ordinance, provided, however, that when construction is not begun under such outstanding permit within a period of six (6) months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this ordinance.

§ 152-257 through §152-260. Reserved

Part 2. Drainage, Erosion Control and Stormwater Management

§ 152-261. Natural Drainage System Utilized to Extent Feasible.

To the extent practicable, all development shall conform to the natural contours of the land, and natural and preexisting man-made drainage ways shall remain undisturbed.

§ 152-262. Developments Must Drain Properly.

(A) All developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the development site. Surface water shall not be regarded as unduly retained if:

(1) The retention results from a technique, practice or device deliberately installed as part of an approved sedimentation or stormwater runoff control plan; or

(2) The retention is not substantially different in location or degree than that experienced by the development site in its predevelopment stage, unless such retention presents a danger to health or safety.

(B) No surface water may be channeled or directed into a sanitary sewer.

(C) Whenever practicable, the drainage system of a development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or streets.

(D) Use of drainage swales rather than curb and gutter and storm sewers in subdivisions is provided for in section 152-217, "Street Width, Sidewalk, and Drainage Requirements in Subdivisions." Private roads and access ways within unsubdivided developments shall utilize curb and gutter and storm drains to provide adequate drainage if the grade of such roads or access ways is too steep to provide drainage in another manner or if other sufficient reasons exist to require such construction.

(E) Construction specifications for drainage swales, curbs and gutters, and storm drains are contained in appendix C.

§ 152-263. Stormwater Management.

(A) All developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such developments. More specifically:

(1) No development may be constructed or maintained so that such development unreasonably impedes the natural flow of water from higher adjacent properties across such development, thereby unreasonably causing substantial damage to such higher adjacent properties; and

(2) No development may be constructed or maintained so that surface waters from such development are unreasonably collected and channeled onto lower adjacent properties at such locations or at such volumes as to cause substantial damage to such lower adjacent properties.

(B) The development site plan must provide plans for stormwater management. The stormwater plan must address hydrology, low-impact development design strategies and erosion sediment control. All proposed stormwater designs shall consider and, where possible, integrate the following stormwater management practices:

Design Factor	Bioretention	Dry Well	Filter/Buffer Strip	Grass Swales and Level Spreaders	Infiltration Trench
Space Required	Minimum surface area range: 50-200 square feet. Minimum width: 5-10 feet. Minimum length: 10-20 feet. Minimum depth: 2-4 feet.	Minimum surface area range: 820 square feet. Minimum width: 24 feet. Minimum length: 4-8 feet. Minimum depth: 4-8 feet.	Minimum length: 15-20 feet.	Bottom width: 2 feet minimum, 6 feet maximum.	Minimum surface area range: 8-20 square feet. Minimum width: 2-4 feet. Minimum length: 4-8 feet.
Soils	Permeable soils with infiltration rates > 0.27 inches/hour shall be used. Soil limitations can be overcome with use of underdrains.	Permeable soils with infiltration rates > 0.27 inches/hour shall be used.	Permeable soils perform better, but soils not a limitation.	Permeable soils provide better hydrologic performance, but soils not a limitation. Selection of type of swale - grassed, infiltration, or wet is influenced by soils.	Permeable soils with infiltration rates 0.52 inches/hour shall be used.
Slopes	Not a limitation, but a design consideration.	Not a limitation, but a design consideration. Must locate down gradient of building and foundations.	Not a limitation, but a design consideration.	Swale side slopes: 3:1 or flatter. Longitudinal slope: 1.0% minimum; maximum based on permissible	Not a limitation, but a design consideration. Must locate down gradient of buildings and foundations.

				velocities.	
Water Table	2 – 4 foot clearance above water table/bedrock recommended.	2 – 4 foot clearance above water table recommended.	Generally not a constraint.	Generally not a constraint.	2 – 4 foot clearance.
Proximity to Build Foundations	Minimum distance of 10 feet down gradient from buildings and foundations recommended.	Minimum distance of 10 feet down gradient from buildings and foundations recommended.	Minimum distance of 10 feet down gradient from buildings and foundations recommended.	Minimum distance of 10 feet down gradient from buildings and foundations recommended.	Minimum distance of 10 feet down gradient from buildings and foundations recommended.
Maximum Depth	2 – 4 foot depth depending on soil type.	6 – 10 foot depth depending on soil type.	Not applicable.	Not applicable.	6 – 10 foot depth depending on soil type.

§ 152-264. Sedimentation and Erosion Control.

(A) No zoning, special-use, or conditional-use permit may be issued and final plat approval for subdivisions may not be given with respect to any development that would cause land disturbing activity subject to the jurisdiction of the North Carolina Division of Land Resources, unless the Division has certified to the town, either that:

(1) An erosion control plan has been submitted to and approved by the Division; or

(2) The Division has examined the preliminary plans for the development and it reasonably appears that an erosion control plan can be approved upon submission by the developer of more detailed construction or design drawings. However, in this case, construction of the development may not begin (and no building permits may be issued) until the Division approves the erosion control plan.

(B) For purposes of this section, land disturbing activity means any use of the land by any person in residential, industrial, educational, institutional, or commercial development, and highway and road construction and maintenance that results in a change in the natural cover or topography and that may cause or contribute to sedimentation. Sedimentation occurs whenever solid particulate matter, mineral or organic, is transported by water, air, gravity, or ice from the site of its origin.

§ 152-265. Additional Drainage Requirements for Subdivisions.

In addition to the other standards set forth in this Part, the following requirements shall apply to subdivisions:

(A) To the extent practicable, lot boundaries shall be made to coincide with natural and preexisting man-made drainage ways within subdivisions to avoid the creation of lots that can be built upon only by altering such drainage ways.

(B) Where a proposed subdivision is traversed by a stream or drainage way, an easement shall be provided conforming to the lines of such stream and of sufficient width as will be adequate for the purpose of drainage.

(C) The subdivider shall provide a surface water drainage system constructed to the standards of the North Carolina State Department of Transportation, as reflected in the manual entitled *Subdivision Roads, Minimum Construction Standards* and any other applicable standards established by Department.

(D) The surface water drainage system shall also be subject to review by the Town of Aberdeen Consulting Engineer.

(E) Where an existing surface water drainage system cannot feasibly be extended to the subdivision, a surface drainage system shall be designed to protect the proposed development from water damage.

(F) Surface drainage courses shall have side slopes of at least three (3) feet of horizontal distance for each one (1) foot of vertical distance and courses shall be of sufficient size to accommodate the drainage area without flooding and designed to comply with the standards and specifications for erosion control as established in G.S. Ch. 113A, Art. 4, 15A N.C.A.C. Ch. 4 and any locally adopted erosion and sedimentation control ordinances.

(G) The minimum grade along the bottom of a surface drainage course shall be a vertical fall of at least one (1) foot in each 200 feet of horizontal distance.

(H) Stream banks and channels downstream from any land disturbing activity shall be protected from increased degradation by accelerated erosion caused by increased velocity of runoff from the land disturbing activity in accordance with G.S. Ch. 113A, Art. 4, 15A N.C.A.C. Ch. 4 and any locally adopted erosion and sedimentation control ordinances.

(I) Anyone constructing a dam or impoundment within a subdivision must comply with the State Dam Safety Law of 1967 and 15A N.C.A.C. subch. 2K and must receive approval from the North Carolina Division of Land Resources.

(J) In all areas of special flood hazards, all subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

§ 152-266 through § 152-269. Reserved.