

Chapter 9. Floodplain Regulations

155.901. General Provisions.

- A. TITLE. The regulations set out in this Chapter 9 shall be known and may be cited as the "floodplain regulations of Matthews, North Carolina" or "the floodplain regulations." **[formerly known as § 151.01]**
- B. AUTHORITY. The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare. **[formerly known as § 151.02]**
- C. FINDINGS OF FACT.
1. The flood hazard areas of Matthews and Matthews land use jurisdiction are subject to periodic inundation which results in loss of life, increased health and safety hazards, destruction of property, and disruption of commerce and governmental services. Inundation from flood waters results in public expenditures for flood protection, flood disaster relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
 2. These flood losses are created by the cumulative effect of obstructions in floodplains, causing increases in flood heights and velocities and by the occupancy in flood hazard areas by uses vulnerable to floods or hazards to other lands which are inadequately elevated, flood-proofed or otherwise unprotected from flood damages. **[formerly known as § 151.03]**
- D. PURPOSE. It is the purpose of the floodplain regulations to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:
1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;
 2. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
 3. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of flood waters;
 4. Control filling, grading, dredging and other development which may increase erosion or flood damage; and



5. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands. **[formerly known as § 151.04]**

E. OBJECTIVES.

1. The regulations of the Special Flood Hazard Areas herein set forth are intended to protect areas of designated floodplains subject to and necessary for regulating flood waters and to permit and encourage the retention of open-land uses which will be so located and designed as to constitute a harmonious and appropriate part of the physical development of the Town as provided in the comprehensive plans as such are adopted and amended from time to time.
2. The specific intent in establishing Special Flood Hazard Areas composed of floodways and flood fringe areas includes the following:
 - a. To control uses such as fill dumping, storage of materials, structures, buildings and any other works which, acting alone or in combination with other existing or future uses, would cause damaging flood heights and velocities by obstructing flows and reducing floodplain storage;
 - b. To protect human life and health;
 - c. To minimize the expenditure of public money for costly flood-control projects;
 - d. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - e. To permit certain uses which can be appropriately located in flood hazard areas and to assure such permitted uses will not impede the flow of flood waters or otherwise cause danger to life and property at or above or below their locations along the floodways;
 - f. To minimize prolonged business interruptions;
 - g. To protect existing drainage courses that carry abnormal flows of stormwater in periods of heavy precipitations;
 - h. To minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines and streets and bridges located in Floodplains;
 - i. To meet the needs of the streams to carry flood waters and protect the creek channels and Floodplains from encroachment so that flood heights and flood damage will not be increased;
 - j. To inform existing and potential property owners that property is in a Special Flood Hazard Area as well as the associated flood risks and development restrictions;
 - k. To minimize future flood losses by depicting Community Flood Fringe Areas on the Flood Insurance Rate Maps;
 - l. To help maintain a stable tax base by providing for the sound use and development of flood prone areas.
3. This ordinance is intended to permit only that development within the floodplain which is appropriate in light of the probability of flood damage and presents a reasonable social and economic use of land in relation to the hazards involved. The regulations hereinafter set forth shall apply to all property located within the Special Flood Hazard Area as shown on the Flood Insurance Rate Maps (FIRM) including FEMA and/or locally approved revisions to data shown on the FIRMs. It is the intent that these regulations combine with and coordinate with the zoning ordinance regulations for the zoning district in which such property is located. Any use not permitted by the zoning regulations shall not be permitted in the Special Flood Hazard Area, and any use permitted by the zoning regulations shall be permitted in these districts only upon meeting conditions and requirements as prescribed in this ordinance. **[formerly known as § 151.05]**

- F. DEFINITIONS. Unless specifically defined in this Chapter, words or phrases used in this Chapter 9 shall apply the definitions provided in Chapter 1 of this Title, or when not defined in Chapter 1 they shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application. The following words, terms and phrases, when used in this Chapter 9, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning. **[formerly § 151.06]**

Accessory Structure – shall mean a structure 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.

Addition (to an existing building) – shall mean an extension or increase in the floor area or height of a building or structure.

Appeal – shall mean a request for a review of the Floodplain Administrator's interpretation of any provision of this ordinance.

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

Building – shall mean any structure built for support, shelter or enclosure for any occupancy or storage.

Chemical Storage Facility – shall mean a building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

Community Base Flood – shall mean the flood determined using future land use conditions having a one percent chance of being equaled or exceeded in any given year.

Community Base Flood Elevation – shall mean the elevation shown on the Flood Insurance Rate Map Flood Hazard Data Table, having a one percent chance of being equaled or exceeded, determined using future land use conditions.

Community Conditional Letter of Map Revisions (CoCLOMR) – shall mean a letter from the Floodplain Administrator that provides conditional approval of a study that proposes to change the location of the Community Encroachment Lines, and/or the location of the Community Flood Fringe Line, and/or Community Base Flood Elevations.

Community Encroachment Area – shall mean the channel of a stream or other watercourse and the adjacent land areas that must be reserved in order to discharge the FEMA Base Flood without cumulatively increasing the water surface elevation more than one-tenth foot (0.1'). (See attachments.)

Community Encroachment Lines – shall mean the lateral limits of the Community Encroachment Area, within which, in the direction of the stream or other body of water, no structure or fill may be added, unless specifically permitted by this ordinance. (See attachments.)

Community Flood Fringe Area – shall mean the land area located between the Community Encroachment Line and the Community Flood Fringe Line as defined herein. (See attachments.)

Community Flood Fringe Line – shall mean the line that depicts the outer limits of the Community Flood Fringe Area (outer limits of the Community Special Flood Hazard Area).

Community Letter of Map Revision (CoLOMR) – shall mean a letter from the Floodplain Administrator that provides final approval of a study, based on as-built conditions, which changes the location of the Community Encroachment Lines and/or the Community Flood Fringe Lines.

Community Special Flood Hazard Area – shall mean the land subject to a one - percent or greater chance of flooding in any given year from a Community Base Flood. It includes the FEMA Floodway, Community Encroachment Area, FEMA Flood Fringe Area, and the Community Flood Fringe Area. (See attachments.)

Conditional Letter of Map Revision (CLOMR) – shall mean FEMA's comments on whether a project, if built as proposed, would meet the minimum NFIP standards.

Critical Facility – shall mean a building used to house a function that is vulnerable or essential to the community. Uses include but are not limited to: child and adult daycare facilities, nursing homes, schools, hospitals, fire, police and medic facilities and other uses as deemed by the Floodplain Administrator.

Development – shall mean any manmade change to improved and unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations or storage of equipment or materials.

Disposal – shall mean as defined in NCGS 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 Public Street – shall mean a public street at the intersection of a proposed driveway where the surface of the pavement is at an elevation above the Community Base Flood Elevation.

Dry land Access – shall mean a gravel, paved or concrete access route, at least twelve feet (12') wide, which is above the Community Base Flood Elevation and connects a habitable building to a dry public street.

Elevated Building – shall mean a non-basement building built to have the lowest floor elevated above the ground level by solid foundation perimeter walls, pilings, columns (posts and piers), or shear walls.

Encroachment – shall mean 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. Building renovations contained within the existing building footprint area are not considered an encroachment.

Existing Manufactured Home Park or Manufactured Home Subdivision – shall mean a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads and the construction of streets) was completed before February 4, 1991.

FEMA – shall mean the Federal Emergency Management Agency.

FEMA Base Flood – shall mean the flood determined using land use conditions at the time of the study having a one percent chance of being equaled or exceeded in any given year.

FEMA Base Flood Elevation (BFE) – shall mean the elevation shown on the Flood Insurance Rate Map and Flood Insurance Study Profile that indicates the water surface elevation resulting from a FEMA Base Flood that has a one percent chance of equaling or exceeding that level in any given year.

FEMA Flood Fringe Area – shall mean the land area located between the FEMA Floodway Lines and the line depicting the maximum elevation subject to inundation by the FEMA Base Flood as defined herein (see attachments).

FEMA Flood Fringe Line – shall mean the line on a map that depicts the outer limits of the FEMA Flood Fringe Area.

FEMA Floodway – shall mean the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the FEMA Base Flood, without cumulatively increasing the water surface elevation more than one-half foot (0.5').

FEMA Floodway Lines – shall mean the lateral limits of the FEMA Floodway. (see attachments).

FEMA Special Flood Hazard Area – shall mean the land subject to a one percent or greater chance of flooding in any given year from a FEMA Base Flood. It includes the FEMA Floodway, Community Encroachment Area, and the FEMA Flood Fringe Area. (see attachments).

Flood or Flooding – shall mean a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters and/or the unusual and rapid accumulation of run-off of surface waters from any source.

Flood Insurance Rate Map (FIRM) – shall mean an official map of a community, in both digital and printed format, on which the Federal Emergency Management Agency has delineated the Special Flood Hazard Area and the risk premium zones applicable to the community. The date of Matthews' original FIRM is February 4, 2004 and this date should be used to determine whether a structure is pre-FIRM or post-FIRM.

Flood Insurance Study – shall mean an examination, evaluation, and determination of Special Flood Hazard Areas, corresponding water surface elevations, flood insurance risk zones, and other flood data in a community. The study includes a Flood Insurance Study report, and/or Flood Insurance Rate Maps (FIRMs).

Floodplain – shall mean the land subject to inundation by the Community Base Flood and is encompassed by the Community Special Flood Hazard Area.

Floodplain Development Permit – shall mean either an Individual Floodplain Development Permit or a General Floodplain Development Permit issued for development in the floodplain per the requirements of §151.16 of this chapter.

Floodproofing – shall mean any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitation facilities, or structures with their contents.

Flood Protection Elevation – shall mean the elevation to which all structures located within the Community Special Flood Hazard Area must be elevated (or flood-proofed if nonresidential). Within areas where Base Flood Elevations (BFEs) have been determined, this elevation shall be the Community Base Flood Elevation plus one foot (1') of freeboard. In areas where no BFE has been established, all structures and other Development must be elevated (or flood-proofed if non-residential), to two feet (2') above the highest adjacent grade.

Floodwall – shall mean a wall built along a shore or bank to protect an area from flooding.

Floodway – shall mean either the FEMA Floodway or the Community Encroachment Area.

Flood Zone – shall mean 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 – shall mean the height added to the Community Base Flood Elevation (BFE) 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, blockage of bridge openings, and the hydrological effect of urbanization of the watershed. The Community Base Flood Elevation (BFE) plus the freeboard establishes the “Flood Protection Elevation”.

Functionally Dependent Facility – shall mean a facility that cannot be used for its intended purpose, unless it is located or carried out in close proximity to water, limited to a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair or seafood processing facilities. The term does not include long-term storage, manufacture, sales or service facilities.

General Floodplain Development Permit – shall mean a permit issued for certain types of Development in the Floodplain per §151.16.

Habitable Building – shall mean a structure designed primarily for, or used for human habitation. This includes, but is not limited to, houses, condominiums, townhomes, restaurants, retail establishments, manufacturing buildings, commercial buildings, office buildings, manufactured homes, and similar uses. It does not include Accessory Structures (see definition above).

Hazardous Waste Management Facility – shall mean a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste as defined in NCGS Article 9 of Chapter 130A.

Highest Adjacent Grade – shall mean the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

Historic Structure – shall mean any structure that is listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register; 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; individually listed on a local inventory of historic landmarks in communities with a Certified Local Government (CLG) Program; or certified as contributing to the historical significance of a historic district designated by a community with a Certified Local Government (CLG) Program.

Individual Floodplain Development Permit – shall mean a permit for Development in the Floodplain that involves activities not listed in §151.16 (B) (1) and may not qualify for a General Floodplain Development Permit.

Letter of Map Revision (LOMR) – shall mean an official amendment to the currently effective FEMA FIRM based on as-built conditions. It is issued by FEMA and may change FEMA Base Flood Elevations, the location of the FEMA Floodway Lines and/or the location of the FEMA Flood Fringe line.

Letter of Map Amendment (LOMA) – shall mean a letter from FEMA that officially removes a property or building from the FEMA Special Flood Hazard Area (SFHA) that was inadvertently shown in the SFHA on the FIRM.

Letter of Map Revision based on Fill (LOMR-F) – shall mean a letter from FEMA that officially removes a property from the FEMA Special Flood Hazard Area (SFHA) as a result of placing fill on the property.

Levee – shall mean a manmade structure, usually an earthen embankment, floodwall or a combination of both that is designed and constructed to contain, control or divert the flow of water so as to provide protection from temporary flooding.

Levee System – shall mean a flood protection system which consists of levee(s) and/or floodwall(s) and associated structures, such as closure and drainage devices.

Lowest Adjacent Grade (LAG) – shall mean the elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building.

Lowest Floor – shall mean the lowest floor of the lowest enclosed area (including the basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a

basement area, is not considered a building's Lowest Floor provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this chapter.

Manufactured Home – shall mean a structure, transportable in one (1) or more sections, which is built on a permanent chassis and designed to be used with or without permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

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

Market Value – shall mean the value of a building, excluding land value, that is determined by an appraiser certified in North Carolina using the cost approach method. Use of the "income capitalization approach" is not acceptable. Market value must be determined based on the building condition prior to Start of Construction (for proposed improvements) or before damage occurred (for damage repair). The value of the land and site improvements (landscaping, driveways, detached accessory structures, etc.) is not included. The values of the use and occupancy (business income) are not included. The Floodplain Administrator may use the tax value of the building in lieu of other methods described.

Market value may also mean the actual cash value (ACV) of a building minus depreciation. Actual cash value is the cost to replace a building on the same parcel with a new building of like-kind quality, minus depreciation due to age, use, and neglect. ACV does not consider loss in value mainly due to outmoded design or location factors. Depreciation accounts for the physical condition of a structure. Depreciation does not take into account functional obsolescence or factors that are external to the structure.

Mean Sea Level – shall mean the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this ordinance, the term is synonymous with the "North American Vertical Datum of 1988 (NAVD 88)."

New Construction – shall mean construction of a replacement structure commenced after total demolition, or renovation/rehabilitation of an existing structure that results in the partial or complete removal of two (2) external walls and has a total cost equal to or exceeding fifty-percent (50%) of the market value of the structure before the "start of construction" of the improvement. For flood insurance purposes, New Construction also means structures for which the start of construction commenced on or after February 4, 1991 and includes subsequent improvements to such structures (see definition of Flood Insurance Rate Map).

New Manufactured Home Park or Subdivision – shall mean 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 slabs) is completed on or after February 4, 1991.

Nonconforming Building or Use – shall mean any legally existing building or use which fails to comply with the provisions of this chapter.

Non-solid Fence – shall mean a fence with at least seventy five percent (75%) open area and with vertical supports each no more than twenty five 25 square inches in cross sectional area.

North American Vertical Datum (NAVD) – shall mean as corrected in 1988 is a vertical control used as a reference for establishing varying elevations within the floodplain. If a datum other than NAVD 88 is used then use the datum listed as the reference datum on the applicable FIRM panel for use on Elevation Certificate completion. (*See Flood Insurance Administration (FIA)-20 part 1, 8*).

Open House Forum – shall mean a public meeting held by the owner of a proposed levee and the Director of Mecklenburg County Storm Water Services, or his designee. The purpose of the Open House Forum is to provide an opportunity for discussion between the owner that has submitted an application for the construction of a levee, nearby property owners, and other interested parties.

Post-FIRM – shall mean construction or other development for which the "start of construction" occurred on or after the effective date of the initial Flood Insurance Rate Map.

Pre-FIRM – shall mean a Construction or other development for which the "start of construction" occurred before the effective date of the initial Flood Insurance Rate Map.

Preliminary Flood Insurance Rate Map (PFIRM) – shall mean a map or maps released by the Federal Emergency Management Agency (FEMA) for public comment prior to the Effective Date of the FIRM as established by FEMA. The map may be in both digital and printed format and shows Community and FEMA Special Flood Hazard Areas,

Community Encroachment Areas and FEMA Floodways, FEMA and Community Base Flood Elevations, flood insurance risk premium zones and other data. The data and maps are subject to change prior to the Effective Date.

Preliminary Flood Insurance Study (PFIS) – shall mean a narrative report released by the Federal Emergency Management Agency for public comment prior to the Effective Date. Information contained in the PFIS includes a description of past flooding and studies, the study area, engineering methods, Community and FEMA Base Flood Elevations, other community and FEMA flood data. The Flood Insurance Rate Maps are also included as part of the Flood Insurance Study. The data and maps are subject to change prior to the Effective Date.

Principally Above Ground – shall mean at least fifty one percent (51%) of the actual cash value of the structure is above ground.

Project – shall mean a development activity that is physically separate, functionally independent and not constructed at the same time as another development activity.

Public Safety and/or Nuisance – shall mean 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, or river, bay, stream, canal, or basin.

Recreational Vehicle – shall mean a vehicle which is: 1) built on a single chassis; 2) four hundred (400) square feet or less when measured at the largest horizontal projection; 3) designed to be self-propelled or permanently towable by a car or light duty truck; and, 4) designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel or seasonal use.

Reference Level – shall mean the portion of a structure or other development that must be compared to the flood protection elevation to determine regulatory compliance of such structure. 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.

Remedy a Violation – shall mean to bring the structure or other development into compliance with this ordinance or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impact may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this chapter or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

Repetitive Loss – shall mean flood-related damages sustained by a structure on two (2) 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 twenty five percent (25%) of the Market Value of the structure before the damage occurred.

Riverine – shall mean relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Salvage Yard – shall mean any non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances and related machinery.

Solid Waste Disposal Site – shall mean as defined in NCGS130A-290(a)(36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

Solid Waste Disposal Facility – shall mean any facility involved in the disposal of solid waste, as defined in NCGS 130A-290(a)(35).

Special Flood Hazard Area – shall mean the FEMA Special Flood Hazard Area.

Start of Construction – shall mean the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, or improvement was within one hundred eighty (180) days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as pouring a slab or footing, installation of piles, construction of columns, or any work beyond the state of excavation or the placement of a manufactured home on a foundation. Permanent construction does not 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 parts of the main structure. For 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.

Structure – shall mean a walled and roofed building, a manufactured home, a gas or liquid storage tank, that is principally above ground.

Substantial Damage – shall mean damage of any origin sustained by a structure whereby the cost of restoring the structure to the condition before damage occurred would equal or exceed fifty percent (50%) of the market value of the structure before the damages occurred. Substantial Damage also means flood-related damages sustained by a structure on two (2) separate occasions during a ten (10) year period beginning after October 11, 1999, for which the cost of repairs at the time of each such flood event, on average, equals or exceeds twenty five percent (25%) of the market value of the structure before the damage occurred. See definition of "Substantial Improvement."

Substantial Improvement – shall mean any repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, or combination thereof, where the total cost equals or exceeds fifty percent (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 any correction of existing violations of State or Community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure. *Substantial Improvement* also refers to any repair, reconstruction, or improvement to a structure on two separate occasions during a ten (10) year period for which the total cost of repairs, reconstruction or improvement at the time of each alteration, equals or exceeds twenty five percent (25%) of the market value of the structure before the damage occurred or the Substantial Improvement began. The Floodplain Administrator may determine if separate actions constitute a single project (§151.29 (A) (13)). For the purposes of this definition, "*Substantial Improvement*" is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

Technically Measurable – shall mean an activity and/or condition that can be modeled within the stated or commonly known accuracy of the FEMA approved hydraulic models or other engineering computations, and may have an impact on base flood elevations. The Floodplain Administrator will determine if a proposed activity and/or condition meets the Technically Measurable definition.

Variance – shall mean a grant of relief to a person from the requirements of this chapter.

Violation – shall mean the failure of a structure or other development to be fully compliant with this ordinance. A structure or other development without the elevation certificate, other certifications or other evidence of compliance required in § 155.904 and § 155.905 is presumed to be in violation, until such time as the documentation is provided.

Watercourse – shall mean a lake, river, creek, stream, channel or other topographic feature on or over which waters flow at least periodically; includes, specifically designated areas in which substantial flood damage may occur.

Water Surface Elevation (WSE) – shall mean the height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

155.902. General Provisions.

- A. JURISDICTION. This Chapter shall apply to all lands in the land use jurisdiction of the Town within the area shown on the Flood Insurance Rate Maps (FIRM) or any FEMA and/or locally approved revisions to data shown on the FIRMs, as being located within the Community Special Flood Hazard Areas or land adjacent to the Community Special Flood Hazard Areas if it is affected by the work that is taking place. [formerly known as § 151.07]
- B. BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS. The FEMA and Community Flood Hazard Areas are those identified in the effective Flood Insurance Study (FIS) for Mecklenburg County dated February 19, 2014, and its accompanying Flood Insurance Rate Maps (FIRM), and local or FEMA approved revisions to the FIRM and/or FIS which are adopted by reference and declared to be a part of this Chapter. (Am. Ord. 1994, passed 2-10-14)

In areas where a Preliminary FIRM and Preliminary FIS exist, Community Base Flood Elevations shown on the Preliminary FIRM and Preliminary FIS shall be used for local regulatory purposes, if they are higher than those shown on the effective FIRM and FIS. The initial Flood Insurance Rate Maps are as follows for the jurisdictional areas of the Town of Matthews at the initial date of February 4, 2004 and Mecklenburg County Unincorporated Area, dated June 1, 1981. [formerly known as § 151.08]
- C. FLOODPLAIN DEVELOPMENT PERMIT REQUIRED. A floodplain development permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities. The *Floodplain*

Regulations Technical Guidance Document may be used for illustrative purposes to assist in determining the applicable type of floodplain development permit required. **[formerly known as § 151.09]**

- D. COMPLIANCE. No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this ordinance and other applicable regulations. **[formerly known as § 151.10]**
- E. ABROGATION AND GREATER RESTRICTIONS. It is not intended by this Chapter to repeal, abrogate, annul or in any way impair or interfere with any existing provisions of laws or ordinances or any rules, regulations or permits previously adopted or issued, or which shall be adopted or issued, in conformity with law, relating to the use of buildings or premises; nor is it intended by this Chapter to interfere with or abrogate or annul any easements, covenants or other agreements between parties; provided, however, that, where this ordinance imposes a greater restriction upon the use of buildings or premises or requires larger yards, courts or other open spaces than are imposed or required by such existing provisions of laws or ordinances, or by such rules, regulations or permits or by such easements, covenants or agreements, the provisions of this Chapter shall control. **[formerly known as § 151.11]**
- F. INTERPRETATIONS. In the interpretation and applications of the Floodplain Regulations, all provisions shall be considered as minimum requirements; liberally construed to meet the purposes and objectives of this regulation as stated in § 155.901.D and § 155.901.E; and deemed neither to limit nor repeal any other powers granted under state statutes. **[formerly known as § 151.12]**
- G. WARNING AND DISCLAIMER OF LIABILITY. The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This Chapter 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. The Floodplain Regulations shall not create liability on the part of the Town of Matthews, Mecklenburg County, or on any agent, officer or employee thereof for any flood damages that result from reliance on this chapter or by any administrative decision lawfully made hereunder. **[formerly known as § 151.13]**
- H. PENALTIES FOR VIOLATION. Violation of the provisions of this Chapter or failure to comply with any of its requirements including violation of conditions and safeguards established in connection with grants of floodplain development permits, variances or special exceptions, shall constitute a misdemeanor. Any person who violates this Chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than five hundred dollars (\$500.00) or imprisoned for not more than thirty (30) days. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Town or the Floodplain Administrator from taking such other lawful action as is necessary to prevent or remedy any violation, including but not limited to seeking injunctive relief, orders of abatement, or other similar equitable relief. **[formerly known as § 151.14]**

155.903. Administration and Enforcement.

- A. FLOODPLAIN DEVELOPMENT PERMITS AND CERTIFICATION REQUIREMENTS. **[formerly known as § 151.16]**
 - 1. A Floodplain Development Permit is required for any development within the Community Special Flood Hazard Area (CSFHA) and is subject to the conditions below. The Floodplain Administrator is authorized to create, and amend from time to time as necessary, a Technical Guidance Document to help explain the application of the provisions of this chapter, specifically the Floodplain Development Permit provisions, through the use of charts and related written materials. The Technical Guidance Document shall not be a part of this chapter, and shall be solely for illustrative and educational purposes. If there is any discrepancy between the Technical Guidance Document and this chapter, the provisions of this chapter shall control.
 - 2. Floodplain Development Permits fall into one of two types: General Floodplain Development Permits (GFDP) and Individual Floodplain Development Permits (IFDP). If the proposed development activities meet the requirements of the General Floodplain Development Permit, an Individual Floodplain Development Permit is not required.
 - a. GENERAL FLOODPLAIN DEVELOPMENT (GFDP) PERMIT. The intent of the General Floodplain Development Permit (GFDP) is to allow uses or activities in the Community Special Flood Hazard Area (including the FEMA Floodway and Community Encroachment Area) which inherently will not increase FEMA and/or Community Base Flood Elevations. The following uses and activities are permitted under a GFDP, without the need for an Individual Floodplain Development Permit, flood study or variance, as long as they result in no Technically Measurable increases in FEMA and/or Community Base Flood Elevations.

- i. General farming, pasture, horticulture, forestry, wildlife sanctuaries, gardens, lawns, landscaping, mulch twelve inches (12”) or less in depth, and other similar activities;
 - ii. Utility infrastructure (poles, sewer manholes, vent pipes, underground utilities, etc.), sign poles, non-solid fences, and other similar activities.
 - iii. On-grade driveways, trails, sidewalks, boardwalks, roads and road maintenance; storm drainage system construction, repairs and maintenance (major and minor system), and other similar activities. The Floodplain Administrator must be notified in writing, including a project description and sketch plan, prior to commencement of these activities.
 - iv. Interior renovations with a value of less than ten thousand dollars (\$10,000.00), to a structure with its lowest floor not meeting the requirements of § 155.905.B.1.a or § 155.905.B.1.b.
 - v. Interior renovations of any value, to a structure with its Lowest Floor meeting the requirements of § 155.905.B.1.a or § 155.905.B.1.b.
- b. **INDIVIDUAL FLOODPLAIN DEVELOPMENT (IDFP) PERMITS.** Individual Floodplain Development Permits are required for all other projects that do not meet the requirements of a General Floodplain Development Permit. Application for an Individual Floodplain Development Permit (IFDP) shall be made to the Floodplain Administrator on forms furnished by him or her prior to any development activities proposed to be located within the Community Special Flood Hazard Area. Requirements for submittal are available from the Floodplain Administrator.
- c. **CERTIFICATION REQUIREMENTS.** Final As-Built Elevation Certificate (FEMA Form 81-31) (for either residential or non-residential buildings) or Flood-proofing Certificate (FEMA Form 81-65) is required after construction is completed and prior to the issuance of a Certificate of Occupancy or a Temporary Certificate of Occupancy. 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 or flood-proofed elevation of the reference level and all attendant utilities. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When flood-proofing is utilized, said 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 the issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make said corrections required shall be cause to withhold the issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy.
- i. For proposed development in the Community or FEMA Special Flood Hazard Area but located outside of the Community Encroachment Area and the FEMA Floodway, a certification from a registered land surveyor or professional engineer that states that no fill material or other development was placed within the FEMA Floodway or Community Encroachment Area of any watercourse, will be required prior to issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy.
 - ii. For proposed development within the Community Encroachment Area or the FEMA Floodway, an as-built topographic map prepared by a registered land surveyor or professional engineer will be required prior to issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy. This is in addition to a no-rise/no-impact study or CLOMR that may be required as specified in § 9-102 (a)(6).
 - iii. If a manufactured home is placed within the Floodplain and the elevation of the chassis is thirty six inches (36”) or higher above adjacent grade, an engineered foundation certification is required.
- d. **CERTIFICATION EXEMPTIONS.** The following structures, if located within the Floodplain, are exempt from the elevation/flood-proofing certification requirements specified in § 155.903.B.1 and § 155.903.B.2:
- i. Recreational vehicles meeting requirements of § 155.905.B.1.i.;
 - ii. Temporary structures meeting requirements of § 155.905.B.1.j; and

- iii. Accessory structures less than one hundred fifty (150) square feet meeting requirements of § 155.905.B.1.k.
- e. PERMIT APPLICATION REQUIREMENTS.
 - i. A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
 - 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;
 - The location of the Community Flood Fringe Line, Community Encroachment Line, FEMA Flood Fringe Line and FEMA Floodway Line as shown on the FIRM or other flood map, or a statement that the entire lot is within the Special Flood Hazard Area;
 - Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map;
 - The FEMA Base Flood Elevation (BFE) and Community Base Flood Elevation (CBFE) and Flood Protection Elevation (FPE);
 - The old and new location of any watercourse that will be altered or relocated as a result of proposed development;
 - The certification of the plot plan by a registered land surveyor or professional engineer as deemed necessary by the Floodplain Administrator.
 - ii. Proposed elevation, and method thereof, of all development within a Community or FEMA Special Flood Hazard Area including but not limited to:
 - Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;
 - Elevation in relation to mean sea level to which any non-residential structure in Zone AE, will be flood-proofed; and
 - Elevation in relation to mean sea level to which any proposed utility systems will be elevated or flood-proofed;
 - iii. If flood-proofing, a Flood-proofing Certificate (FEMA Form 81-65) with supporting data and an inspection and operational plan that includes, but is not limited to, installation, exercise, and maintenance of flood-proofing measures.
 - iv. A foundation plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this ordinance are met. These details include but are not limited to:
 - 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);
 - Openings to facilitate automatic equalization of hydrostatic flood forces on walls when solid foundation perimeter walls are used in Community Special Flood Hazard Area
 - Usage details of any enclosed areas below the lowest floor.
 - 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;
 - Certification that all other Local, State and Federal permits required prior to floodplain development permit issuance have been received.

- Documentation for proper placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure that the provisions of § 155.905.B.1.i and § 155.905.B.1.j are met
 - 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.
- f. PERMIT REQUIREMENTS. The Floodplain Development Permit shall include, but not be limited to:
- i. A description of the development to be permitted under the floodplain development permit.
 - ii. The Special Flood Hazard Area determination for the proposed development
 - iii. The Flood Protection Elevation required for the reference level and all attendant utilities.
 - iv. The Flood Protection Elevation required for the protection of all public utilities.
 - v. All certification submittal requirements with timelines.
 - vi. A statement that no fill material or other development shall encroach into the Community Encroachment Area or FEMA Floodway area of any watercourse, as applicable.
 - vii. The flood openings requirements in accordance with § 155.905.B.1.d.

B. CORRECTIVE PROCEDURES. [FORMERLY KNOWN AS § 151.18]

1. VIOLATIONS TO BE CORRECTED. When the Floodplain Administrator finds violations of applicable state and local laws and notifies the property owner or building occupant of the violation, the owner or occupant shall immediately remedy each violation of law cited in the notice.
2. ACTIONS IN EVENT OF FAILURE TO TAKE CORRECTIVE ACTION. If the owner or occupant of a building or property shall fail to take prompt corrective action, the Floodplain Administrator shall give written notice, by certified or registered mail to the last known address or by personal service that:
 - a. The building or property is in violation of the Floodplain Regulations;
 - b. A hearing will be held before the Floodplain Administrator at a designated place and time, not later than twenty (20) calendar days after the date of the notice; at which time the owner or occupant shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and
 - c. Following the hearing, the Floodplain Administrator may issue such order to alter, vacate or demolish the building, or to remove fill or other unauthorized encroachment, as appears appropriate.
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 Floodplain Regulations, he shall issue an order in writing to the owner or occupant, requiring the owner or occupant to remedy the violation within such period, not less than sixty (60) calendar days, nor more than one hundred eighty (180) calendar days. If the Floodplain Administrator determines that there is imminent danger to public health, safety or welfare or other property, he may order that immediate corrective action be taken, and if no corrective action is taken as ordered, the Floodplain Administrator, with the written authorization of the Town Manager, shall have the authority to enter upon the property to perform the work necessary to correct the condition and the owner or occupant shall be responsible for the actual costs incurred.
4. APPEAL. Any owner or occupant who has received an order to take corrective action may appeal the order to the Town Zoning Board of Adjustment (hereinafter referred to as the "Board of Adjustment" or "Board") as provided in § 155.904.B. In the absence of an appeal, the order of the Floodplain Administrator shall be final. The Board of Adjustment 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 or occupant 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 Board of Adjustment following an appeal, he/she shall be guilty of a misdemeanor and shall be punished in the discretion of the court. In addition, the owner or occupant shall be subject to civil enforcement as described in § 155.902.H.

155.904. Appeals and Variances.

A. INITIATION AND FILING OF APPEAL.

1. An appeal of an order, decision, determination or interpretation made by the Floodplain Administrator may be initiated by any person aggrieved by any officer, department, board or bureau of the Town.
2. A notice of appeal in the form prescribed by the Board of Adjustment must be filed with the Board's Clerk, with a copy to the Floodplain Administrator, within twenty (20) days of the order, decision, determination or interpretation and must be accompanied by a nonrefundable filing fee as established by the Town Council. Failure to timely file such notice and fee will constitute a waiver of any rights to appeal under this section and the Board of Adjustment shall have no jurisdiction to hear the appeal. **[formerly known as § 151.20]**

B. STANDARDS AND HEARING PROCEDURE.

1. The Board of Adjustment will conduct the hearing on an appeal of an order, decision, determination or interpretation of these regulations in accordance with its normal hearing procedures as set out in Chapter 2 of this Title.
2. At the conclusion of the hearing, the Board of Adjustment may reverse or modify the order, decision, determination or interpretation under appeal upon finding an error in the application of these regulations on the part of the Floodplain Administrator who rendered the decision, determination or interpretation. In modifying the decision, determination or interpretation, the Board will have all the powers of the officer from whom the appeal is taken. **[formerly known as § 151.21]**

C. INITIATION AND FILING OF VARIANCE PETITION.

1. A petition for variance may be initiated only by the owner of the affected property, or an agent authorized in writing to act on the owner's behalf.
2. A petition for a variance from these regulations in the form prescribed by the Board of Adjustment must be filed with the Board's Clerk, with a copy to the Floodplain Administrator, and be accompanied by a nonrefundable filing fee as established by the Town Board of Commissioners. **[formerly known as § 151.22]**

D. FACTORS FOR CONSIDERATION AND DETERMINATION OF COMPLETENESS.

1. In passing upon variances, the Board of Adjustment shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this Chapter, and:
 - a. The danger that materials allowed to be placed in the floodway as a result of the variance may be swept onto other lands to the injury of others during a Community Base Flood;
 - b. The danger to life and property due to flooding or erosion damage from a Community Base Flood;
 - c. Susceptibility of the proposed facility and its contents to flood damage and the effect of such damage during the Community Base Flood;
 - d. Importance of the services provided by the proposed facility to the community;
 - e. Necessity to the facility of a waterfront location, where applicable;
 - f. Availability of alternative locations, not subject to flooding or erosion damage during a Community Base Flood, for the proposed use;
 - g. Compatibility of the proposed use with existing and anticipated development;
 - h. Relationship of the proposed use to the Mecklenburg County Floodplain Management Guidance Document, Mecklenburg County Flood Hazard Mitigation Plans, the Mecklenburg County and/or Matthews Greenway Plans, and any other adopted land use plans for that area;
 - i. Safety of access to the property in times of a Community Base Flood for ordinary and emergency vehicles;
 - j. Expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters during a Community Base Flood expected at the site; and
 - k. Costs of providing governmental services during and after flood events, including maintenance and repair of public utilities and facilities, such as sewer, gas, electrical and water systems and streets and bridges.

2. A written report addressing each of the above factors shall be submitted with the application for a variance.
3. Upon consideration of the factors listed above and the purposes of this ordinance, the Board of Adjustment may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
4. 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.
5. Functionally dependent facilities if determined to meet the definition as stated in § 155.901.F, provided provisions of § 155.906 have been satisfied, and such facilities are protected by methods that minimize flood damages during the base flood and create no additional threats to public safety; or
6. Any other type of development, provided it meets the requirements of this Section. **[formerly known as § 151.23]**

E. CONDITIONS FOR VARIANCES.

1. Variances shall not be issued when the variance will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.
2. Variances shall not be issued within any designated Floodway if the variance would result in any increase in flood levels during the Community and/or FEMA Base Flood discharge unless the requirements of § 155.905.B.1.f are met.
3. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
4. Variances shall only be issued prior to approval of a Floodplain Development Permit. **[formerly known as § 151.24]**

F. STANDARDS FOR GRANTING VARIANCES.

1. Variances shall only be issued upon:
 - a. A showing of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship; and
 - c. A determination that the granting of a variance will not result in increased flood heights (unless the requirements of § 155.905.B.1.f are met), additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with other existing local laws or ordinances.
2. The fact that the property could be utilized more profitably or conveniently with the variance than without the variance shall not be considered as grounds for granting the variance. **[formerly known as § 151.25]**

G. MISCELLANEOUS CONDITIONS.

1. In addition to consideration of the items in § 155.904.E.1, if dry land access cannot be obtained, a variance to the requirement for dry land access may be granted by the Board of Adjustment upon consideration of the following conditions:
 - a. A determination that all possible alternatives have been investigated in an attempt to provide the safest access from a proposed habitable building to a dry public street.
 - b. The existence of a site plan prepared by a licensed land surveyor or professional engineer indicating that the proposed access to habitable buildings on the property poses the least risk from flooding.
2. In addition to consideration of the items in § 155.904.E.1, a variance may be issued by the Board of Adjustment 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 all of the following criteria 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 Areas.
 - c. The lowest floor of any structure is elevated above the Community Base Flood Elevation or is designed and sealed by a professional engineer or a registered architect to be watertight with walls

substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

- d. There will be no storage of materials or tanks which could flood within the Special Flood Hazard Area unless they are contained in a structure as defined in § 155.904.H.2.c.
- e. The use complies with all other applicable laws and regulations.
- f. The Town of Matthews 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. **[formerly known as § 151.26]**

H. NOTIFICATION AND RECORDKEEPING.

- 1. Any applicant to whom a variance from the FEMA Base Flood Elevation is granted shall be given written notice specifying the difference between the FEMA Base Flood Elevation 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 lowest floor elevation. Such notification shall be maintained with a record of all variance actions.
- 2. The Floodplain Administrator shall maintain the records of all appeal actions and report any variances regarding FEMA minimum standards to the Federal Emergency Management Agency and the State of North Carolina upon request **[formerly known as § 151.27]**

I. APPEAL FROM BOARD OF ADJUSTMENT.

- 1. Any person aggrieved by the final decision of the Board of Adjustment to grant or deny a Floodplain Development Permit shall have thirty (30) days to file an appeal to Mecklenburg County Superior Court, as provided in NCGS. 143-215.57 (c).
- 2. Any party aggrieved by the decision of the Board of Adjustment related to any other order, decision, determination or interpretation of these regulations, including the granting or denial of a variance, shall have thirty (30) days from the receipt of the Board's decision to file a petition for review in the nature of *certiorari* in Mecklenburg County Superior Court. **[formerly known as § 151.28]**

155.905. Provisions for Flood Hazard Reduction.

A. GENERAL STANDARDS.

- 1. In all Special Flood Hazard Areas, the following provisions are required:
 - a. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure;
 - b. Manufactured homes shall be anchored to prevent flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, the use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;
 - c. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
 - d. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
 - e. Electrical, heating, ventilation, plumbing, air-conditioning equipment and other service facilities shall be designed, constructed, installed, designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the Flood Protection Elevation. These include but are not limited to HVAC equipment, water softener units, bath/kitchen fixtures, electric meter panels/boxes, utility/cable boxes, appliances (i.e., washers, dryers, refrigerator, etc.), hot water heaters, electric wiring, and outlets/switches;
 - f. All new and replacement water supply systems shall be designed to minimize or eliminate the infiltration of floodwaters into the system;
 - g. New and replacement sanitary sewage systems shall be designed to minimize or eliminate the infiltration of floodwaters into the system and discharges from the systems into floodwaters;

- h. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
- i. 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;
- j. Construction of new solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted except by variance, in Special Flood Hazard Area. 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 above the Community Base Flood Elevation or designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy;
- k. Any new critical facility must be located outside of the five hundred (500) year two tenths percent (0.2%) flood fringe area and elevated at least one foot (1') above the five hundred (500) year two tenths percent (0.2%) flood elevation or the Community Base Flood Elevation whichever is greater. The determination of this flood fringe area and elevation will be provided by the Floodplain Administrator;
- l. SUBDIVISIONS. All development proposals submitted for review and approval in accordance with the Town Unified Development Ordinance shall also comply with the following provisions:
 - i. Locate and construct public utilities and facilities, such as sewer, gas, electrical and water systems, to minimize flood damage;
 - ii. Construct all new streets located in a Community Special Flood Hazard Area in accordance with the applicable provisions of the Unified Development Ordinance;
 - iii. Design and construct adequate drainage to reduce exposure to flood hazards; and
 - iv. Take such other appropriate measures needed to minimize flood damage.
- m. For the purpose of determining substantial improvement, the Floodplain Administrator shall make a determination of the total cost of repairs as it relates to a substantial improvement, including a determination of whether a series of repairs, reconstructions or improvements constitute one single alteration such that the total cost of the repairs, reconstructions or improvements will be the cumulative cost from the first alteration.
- n. 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.
- o. 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. **[formerly known as § 151.29]**

B. SPECIFIC STANDARDS.

- 1. Unless a variance is granted by the Town Board of Adjustment, no new construction, substantial improvements or other development requiring an Individual Floodplain Development Permit per § 155.903.B.1.d, is allowed within the Community and FEMA Special Flood Hazard Area, except where necessary for public infrastructure including but not limited to streets, utilities, greenways and sidewalks. These uses must be approved by the Floodplain Administrator. Review and implementation of SWIM buffer regulations shall be concurrent and coordinated with the provisions of this chapter, so that both are satisfied. In all Community and FEMA Special Flood Hazard Areas where development is allowed by variance the following provisions will apply:
 - a. RESIDENTIAL CONSTRUCTION.
 - i. New construction or substantial improvement of any residential structure shall have the lowest floor elevated at least one foot above the Community Base Flood Elevation.
 - ii. Non-substantial Improvements Notice. Renovations/rehabilitations costing between twenty five percent (25%) and fifty percent (50%) of the market value of the existing building and said building having the lowest floor below the Flood Protection Elevation,

will require the property owner to record a Notice of Floodplain Improvements (provided in the Technical Guidance Document) with the Mecklenburg County Register of Deeds Office prior to the issuance of a building permit.

- b. NONRESIDENTIAL CONSTRUCTION. New construction or substantial improvement of any commercial, industrial or nonresidential structure shall meet the requirements for residential construction in § 155.905.B.1.a, or the structure may be flood-proofed in lieu of elevation, provided that all areas of the structure below the required 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 effects of buoyancy. 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 in § 155.903.B.2.c.
- c. NEW BUILDINGS REMOVED FROM THE FEMA SPECIAL FLOOD HAZARD AREA BY FILL. When new buildings have been constructed on land that has been removed from the FEMA Special Flood Hazard Area by the placement of fill, they must have the lowest floor (including basement) elevated at least one foot above the Community Base Flood Elevation.
- d. ELEVATED BUILDINGS. New construction or substantial improvement of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the Community Base Flood Elevation shall meet the requirements of § 155.905.B.1, and shall be designed to preclude finished living space and shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. The walls shall be designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.
 - i. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 - Provide a minimum of two (2) openings, having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding;
 - The bottom of all openings shall be no higher than one foot (1') above adjacent grade at the opening;
 - Openings may be equipped with screens, louvers, valves or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions;
 - Openings must be on different sides of the enclosed area if possible; and
 - If the building has more than one enclosed area, each must have openings.
 - ii. FOUNDATION ENCLOSURES:
 - 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.
 - Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires hydrostatic openings as outlined above to comply with this ordinance.
 - iii. 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).
 - iv. Shall not be partitioned or finished into separate rooms, except to enclose storage areas.
 - v. Shall be constructed entirely of flood resistant materials at least to the Regulatory Flood Protection Elevation; and
- e. DRY LAND ACCESS. Access to habitable buildings during a flood event is extremely hazardous. Dry land access must be provided to new or substantially improved habitable buildings according to the following criteria:
 - i. Dry land access is required if any portion of either the habitable building or vehicular access route, connecting the habitable building to a public street, is within the Floodplain.

If dry land access cannot be obtained, a variance to the requirement for dry land access may be granted by the Board of Adjustment. Plans and details for the dry land access must be submitted by a registered professional engineer or surveyor and approved by the Floodplain Administrator.

- ii. The following are exempt from the dry land access requirement:
 - Substantial improvement to an existing habitable building where the property does not have any access to a dry public street.
 - Construction of a new habitable building where both the habitable building and the access route connecting it to a public street, are located entirely outside the Community Encroachment Area and where the property does not have any access to a dry public street. Under this exemption, access from the habitable building to the public street must connect to the highest point of the public street adjacent to the property; be constructed of gravel, pavement or concrete and be at least twelve feet (12') wide; and be constructed entirely at or above the elevation of highest point of the public street adjacent to the property.
- f. FEMA FLOODWAY AND COMMUNITY ENCROACHMENT AREA. The FEMA Floodway and the Community Encroachment Area are very hazardous areas due to the velocity of floodwaters which carry debris and potential projectiles and have erosion potential. The following provisions shall apply within each of these designated areas:
 - i. COMMUNITY ENCROACHMENT AREA. No encroachments, requiring an Individual Floodplain Development Permit, including fill, new construction, substantial improvements and other development shall be permitted within the Community Encroachment Area unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that such encroachment would not result in increased flood heights of greater than one tenth feet (0.10') during the occurrence of a Community Base Flood. Such certification and associated technical data by a registered engineer shall be approved by the Floodplain Administrator. Any change which would cause a rise of more than one tenth feet (0.10') in the Community Base Flood Elevation will require notification of impacted property owners, and a Community Conditional Letter of Map Revision (CoCLOMR) from the Floodplain Administrator. If approved and constructed, as-built plans must be submitted and approved by the Floodplain Administrator and a Community Letter of Map Revision (CoLOMR) issued. A Certificate of Occupancy will not be issued without the above stated Community Letter of Map Revision. Projects impacting existing habitable buildings that increase the Community Base Flood Elevation more than 0.00 feet will not be allowed without a variance.
 - ii. FEMA FLOODWAY. No encroachments requiring an Individual Floodplain Development Permit, including fill, new construction, substantial improvements and other development shall be permitted within the FEMA Floodway unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that such encroachment would not result in any (0.00 feet) increase in the FEMA Base Flood Elevations during the occurrence of a FEMA Base Flood and no increase in the Community Base Flood Elevations during the occurrence of the Community Base Flood. Such analysis performed by a registered professional engineer shall be approved by the Floodplain Administrator. Any change which would cause a rise in the FEMA Base Flood Elevation or an increase in the FEMA Floodway width during the occurrence of the FEMA Base Flood will require notification of impacted property owners, and a Conditional Letter of Map Revision from FEMA. If approved and constructed, as-built plans must be submitted by the property owner and approved by FEMA and a Letter of Map Revision issued. A Certificate of Occupancy will not be issued without the above stated Conditional Letter of Map Revision. Any change which would cause a rise in the Community Base Flood Elevation or an increase in the width of the Community Encroachment Area during the occurrence of the Community Base Flood will require notification of impacted property owners, and a Community Conditional Letter of Map Revision (CoCLOMR). Projects

which cause a rise of greater than 0.00 feet in the FEMA Base Flood Elevation and impact an existing habitable building will not be allowed.

- iii. No manufactured homes shall 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 the anchoring and the elevation standards of § 155.905.B.1.h are met.
- iv. TEMPORARY ENCROACHMENTS. Certain temporary encroachments into the Community Encroachment Area and/or the FEMA Floodway may be exempt from meeting the requirements of § 155.905.B.1.f. Examples of temporary encroachments include but are not limited to: sediment control devices including basins and/or check dam diversions, temporary stream crossings, haul roads/construction entrances, storage of equipment, and soil stockpiling. The following conditions must be met to qualify for the exemption:
 - The proposed encroachment shall not be in place more than three months and is renewable for up to one year with written approval from the Floodplain Administrator. Temporary sediment control devices may be kept in place longer than one year if required by the appropriate regulatory agency; and
 - Supporting documentation, including hydrologic and/or hydraulic analyses (if required by the Floodplain Administrator) must be submitted by a registered engineer indicating that the proposed project will not impact any existing habitable building or overtop any roadway surfaces.
 - The temporary encroachment will require an Individual Floodplain Development Permit unless it is included in another IFDP.

g. ADDITIONS/IMPROVEMENTS.

- i. Additions and/or improvements to noncompliant portions of pre-FIRM structures where the addition and/or improvements in combination with any interior modifications to the existing structure *i)* are not a substantial improvement, then the addition and/or improvements must be designed to minimize flood damages, not have an enclosed area lower than that of the existing structure, be constructed of flood resistant materials, and must not be any more non-conforming than the existing structure; *ii)* are a substantial improvement, then both the existing structure and the addition and/or improvements must comply with the standards of § 155.905.B.1.a.
- ii. Additions to post-FIRM structures with no modifications to the existing structure other than a standard door in the common wall require only the addition to comply with the standards of § 155.905.B.1.a.
- iii. Additions and/or improvements to post-FIRM structures where the addition and/or improvements in combination with any interior modifications to the existing structure *i)* are not a substantial improvement, then the addition and/or improvements only must comply with the standards for new construction; *ii)* are a substantial improvement, then both the existing structure and the addition and/or improvements must comply with the standards of § 155.905.B.1.a.
- iv. Customary maintenance and/or repair are not considered additions and/or improvements.

h. MANUFACTURED HOMES:

- i. New and replaced manufactured homes shall be elevated such that the lowest floor of the manufactured home is elevated at least one foot (1') above the Community Base Flood Elevation.
- ii. Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, or lateral movement, either by certified engineered foundation system, or in accordance with the Regulations for Mobile Homes and Modular Housing adopted by the Commissioner of Insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by raising the chassis at least thirty six inches (36") 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. When the elevation of the chassis is above thirty six inches (36") in height an engineering certification is required.

iii. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivision located within the Special Flood Hazard Area. This plan shall be filed with and approved by the Floodplain Administrator and the local Emergency Management Coordinator.

iv. All enclosures or skirting below the lowest floor shall meet the requirements of § 155.905.B.1.d.

i. RECREATIONAL VEHICLES. Recreational vehicles shall either *i*) be on site for fewer than one hundred eighty (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 *ii*) Meet all the requirements for New Construction.

j. TEMPORARY STRUCTURES. Prior to issuance of a Floodplain Development Permit for a temporary structure the following requirements must be met:

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

- A specified time period for which the temporary use will be permitted. The time specified may not exceed three months, and is renewable up to one (1) year;
- The name, address, and phone number of the individual responsible for the removal of the structure;
- The time frame prior to the event at which a structure will be removed;
- A copy of the contract or other suitable instrument with a trucking company to ensure the availability of removal equipment when needed; and
- Designation, accompanied by documentation, of a location outside the floodplain to which the temporary structure will be removed.

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

k. ACCESSORY STRUCTURE. When accessory structures (sheds, detached garages, etc.), are to be placed in the Floodplain the following criteria shall be met:

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

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

iii. Accessory structures shall be firmly anchored in accordance with § 155.905.A.1.a;

iv. Service facilities such as electrical and heating equipment shall be elevated in accordance with § 155.905.A.1.e;

v. Accessory structures shall have hydrostatic openings in accordance with § 155.905.B.1.d.

vi. Accessory structures less than one hundred fifty (150) square feet do not require an elevation or flood proofing certificate.

vii. Accessory structures shall not be temperature-controlled

l. PARKING AREAS. All parking areas for new or substantially improved non-single family habitable buildings must be at an elevation such that water depths would be less than six inches (6") deep in any parking space during the occurrence of a Community Base Flood. **[formerly known as § 151.30]**

C. LEVEES. In all Community and FEMA Special Flood Hazard Areas where Community and FEMA Base Flood Elevation data have been provided, the following provisions for levees are required as set forth in § 155.905.C.2.

1. GENERAL LEVEE REQUIREMENTS.

- a. Levees will be treated as development in the Floodplain and are subject to all applicable sections of this Chapter.
 - b. Levees shall not be constructed solely to protect vacant property from flooding.
 - c. With the exception of a levee that protects a building or feature that must be located in the vicinity of a stream to be functional such as a stream monitor, water/sewer facility or other uses approved by the Floodplain Administrator, levees require the approval of the Director of Mecklenburg County Storm Water Services, or his designee, regardless of their location within the Community Special Flood Hazard Area (entire Floodplain).
 - d. With the exception of a levee that protects a building or feature that must be located in the vicinity of a stream to be functional such as a stream monitor, water/sewer facility or other uses approved by the Floodplain Administrator, the owner of the levee and the Director of Mecklenburg County Storm Water Services (the "Director"), or his designee, shall conduct an open house forum prior to consideration of approval. The open house forum initiates a thirty (30) day comment period for the Director or his designee to receive comments from the public.
 - e. Owners of land adjacent to a proposed levee shall be notified of the open house forum and be provided an opportunity to submit written comments during the thirty (30) day comment period. Notification is to occur through regular mail, as well as a sign being placed at a conspicuous place at the creek and along the public and private road(s) of the properties that would be protected by the proposed levee.
 - f. After the end of the thirty (30) day comment period, but no more than sixty (60) days from the end of the comment period, the Director shall approve or disapprove the application or request more information from the owner of the levee. If the Director determines that the additional information is sufficiently significant, the director may offer an additional thirty (30) day comment period to all parties involved. Consistent with § 155.904, the Director's decision may be appealed to the Matthews Board of Adjustment.
 - g. Regardless of whether the proposed levee would meet FEMA certification requirements, floodplain lines and flood elevations will not be modified based on the location, performance or any other aspects of the levee.
2. **LEEVE PERMITTING REQUIREMENTS.** Prior to the issuance of a Floodplain Development Permit for construction of a proposed levee, the applicant must submit the following information in writing to the Floodplain Administrator for review and written approval:
- a. Plans and/or specifications showing the location of the proposed levee is as far away from the adjacent creek as reasonably possible;
 - b. A copy of the written approval for the levee received from the Director of Mecklenburg County Storm Water Services;
 - c. Verification of notification to owners of land adjacent to the proposed levee (those within five hundred feet (500') of the property lines of the parcel on which the proposed levee is to be located or within a distance equal to the length of the proposed levee, whichever is greater). Notification is also to include properties that are in the Community Special Flood Hazard Area and within the hydraulic modeling limits as described below;
 - d. Copies of all written comments received from property owners referenced above;
 - e. If the levee is proposed to be located within the Community Encroachment Area, a hydrologic and hydraulic analysis must be provided by a registered professional engineer and performed in accordance with standard engineering practice. In addition to the requirements of § 155.905.B.1.f. the analysis shall also:
 - i. show no increase in water surface elevations on any existing habitable building using the current and future discharges for the ten (10), twenty five (25), fifty (50), and one hundred (100) year frequency flows;
 - ii. account for all feasible future levees in the area as deemed appropriate by the Floodplain Administrator;
 - f. A copy of the contract with the entity responsible for construction of the proposed levee;

- g. A copy of the maintenance plan for the levee which has been certified by a professional engineer, which shall include a description of the process by which the levee will be inspected annually and provide for updated plans to be provided annually to property owners and residents intended to benefit from the levee.
- 3. Levees constructed on an individual single-family residential parcel are exempt from the requirements of §§ 155.905.C.1.(a-f), and 2.(a-g). **[formerly known as § 151.31]**

155.906. Legal Status Provisions.

A. LEGAL STATUS PROVISIONS.

- 1. **EFFECT ON RIGHTS AND LIABILITIES UNDER THE EXISTING FLOODWAY REGULATIONS.** These regulations in part come forward by reenactment of some of the provisions of the Floodway Regulations enacted February 4, 1991 (Ordinance 650) as amended, and it is not the intention 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 Chapter shall not affect any action, suit or proceeding instituted or pending. All provisions of the Flood Damage Prevention Ordinance enacted on February 4, 1991, as amended, which are not reenacted herein, are repealed. The date of the initial Flood Damage Prevention Ordinance for Mecklenburg County is December 4, 1972.
- 2. **EFFECT UPON OUTSTANDING FLOODPLAIN DEVELOPMENT PERMITS.**
 - a. 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 before the time of passage of this Floodplain Regulation ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of two (2) years subsequent to passage of this Chapter or any revision thereto, such permit shall become void and construction or use shall be in conformity with the provisions of this Chapter.
 - b. Any application(s) for a Floodplain Development Permit received prior to the Effective Date of these Floodplain Regulations shall be reviewed under the regulations in effect at the time of the initial application. Any incomplete application(s) for a Floodplain Development Permit will be valid only for ninety (90) days after the Floodplain Administrator has requested additional information from the applicant or his agent. If ninety (90) days after the owner or his agent has received the request for additional information the applicant has failed to submit reasonably complete information that demonstrates a good faith effort to provide all the additional information requested, as determined by the Floodplain Administrator, the application will become void. Any subsequent submittals will be considered as new applications and reviewed under the regulations in effect on the date the subsequent submittal is received by the Floodplain Administrator.
- 3. **EXPIRATION OF FLOODPLAIN DEVELOPMENT PERMITS ISSUED AFTER FLOODPLAIN REGULATION ADOPTION.**
 - a. Individual Floodplain Development Permits issued pursuant to this ordinance expire two (2) years after the date of issuance unless *i*) the work has commenced within two (2) years after the date of issuance, or *ii*) the issuance of the permit is legally challenged in which case the permit is valid for two (2) years after the challenge has been resolved.
 - b. Any incomplete application(s) for an Individual Floodplain Development Permit will be valid only for ninety (90) days after the Floodplain Administrator has requested additional information from the applicant or his agent. If ninety (90) days after the owner or his agent has received the request for additional information the applicant has failed to submit reasonably complete information that demonstrates a good faith effort to provide all the additional information requested, as determined by the Floodplain Administrator, the application will become void. Any subsequent submittals will be considered as new applications and reviewed under the regulations in effect on the date the subsequent submittal is received by the Floodplain Administrator. **[formerly known as § 151.32]**

- B. SEVERABILITY.** If any section, clause, sentence, or phrase of the Floodplain Regulations Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Floodplain Regulations Ordinance. **[formerly known as § 151.33]** (Ord. No. 1664; passed 1-12-09)

