

FLOODPLAIN OVERLAY DISTRICT 18

SECTIONS

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18.1 GENERAL

18.1.1 SHORT TITLE

The regulations set out in this ordinance (sometimes herein referred to as “this regulation” or “this ordinance”) shall be known and may be cited as the “Floodplain Regulations of Davidson, North Carolina.”

18.1.2 STATUTORY AUTHORIZATION

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.

18.1.3 FINDINGS OF FACT

The flood hazard areas of Davidson and Davidson’s 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

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impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

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, floodproofed or otherwise unprotected from flood damages.

18.1.4 STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- A.** 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;
- B.** Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C.** Control the alteration of natural Floodplains, stream channels and natural protective barriers which are involved in the accommodation of flood waters;
- D.** Control filling, grading, dredging and other Development which may increase erosion or flood damage; and
- E.** Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

18.1.5 OBJECTIVES

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.

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;

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- 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 and;
- L. To help maintain a stable tax base by providing for the sound use and development of flood prone areas.

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 planning ordinance regulations for the planning area in which such property is located. Any use not permitted by the planning ordinance shall not be permitted in the Special Flood Hazard Area, and any use permitted by the ordinance regulations shall be permitted in these districts only upon meeting conditions and requirements as prescribed in this ordinance.

18.2 DEFINITIONS

Unless specifically defined in this section, words or phrases used in this ordinance 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 ordinance, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning.

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

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

Alteration of a Watercourse: means a dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification associated with development which may increase the FEMA or Community Base Flood Elevations.

Appeal: A request for a review of the Floodplain Administrator's interpretation of any provision of this ordinance.

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

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

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

Community Base Flood: 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: 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): 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: 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 0.1 foot.

Community Encroachment Lines: 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.

Community Flood Fringe Area: The land area located between the Community Encroachment Line and the Community Flood Fringe Line as defined herein.

Community Flood Fringe Line: 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): A letter from the Floodplain Administrator that provides final approval of a study, based on as-built conditions, that changes the location of the Community Encroachment Lines and/or the Community Flood Fringe Lines.

Community Special Flood Hazard Area: 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.

Conditional Letter of Map Revision (CLOMR): [A formal review and comment as to whether a proposed project complies with the minimum NFIP requirements for such projects](#)

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with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA to revise the effective FIRM.

Critical Facility: 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 day care facilities, nursing homes, schools, hospitals, fire, police and medic facilities and other uses as deemed by the Floodplain Administrator.

Development: Any man-made 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: 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: 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

Dryland Access: A gravel, paved or concrete access route, at least 12 feet wide, which is above the Community Base Flood Elevation and connects a Habitable Building to a Dry Public Street.

Elevated Building: 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: 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: 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 January 10, 1995 the initial effective date of the floodplain management regulations adopted by the community.

Existing Building and Existing Structure: Any building and/or structure for which the "start of construction" commenced before the effective date of the initial Flood Insurance Rate Map.

FEMA: The Federal Emergency Management Agency.

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FEMA Base Flood: 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): A determination of the water surface elevations of the base flood as published in the Flood Insurance Study. It is the elevation 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 based on existing land use.

FEMA Flood Fringe Area: 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.

FEMA Flood Fringe Line: The line on a map that depicts the outer limits of the *FEMA Flood Fringe Area*.

FEMA Floodway: 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 0.5 foot. On the Catawba River, and the portions of Six Mile Creek and Rocky River which run along the county boundary line, the FEMA Floodway means 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 1.0 feet.

FEMA Floodway Lines: The lateral limits of the FEMA Floodway.

FEMA Special Flood Hazard Area: 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.

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

1. The overflow of inland or tidal waters; and
2. The unusual and rapid accumulation of run-off of surface waters from any source.

Flood Insurance: The insurance coverage provided under the National Flood Insurance Program.

Flood Insurance Rate Map (FIRM): 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 Davidson's original FIRM is June 1, 1981, and this date should be used to determine whether a structure is pre-FIRM or post-FIRM.

Flood Insurance Study: 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 Map (FIRMs).

Floodplain: The land subject to inundation by the Community Base Flood and is encompassed by the Community Special Flood Hazard Area.

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Floodplain Administrator: (or Administrator) The person, agent, or his or her designees, appointed to administer, implement and enforce the provisions of this ordinance.

Floodplain Development Permit: Either an Individual Floodplain Development Permit or a General Floodplain Development Permit issued for development in the Floodplain per the requirements of Section 18.4 of this ordinance.

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

Floodplain Management Regulations: This ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances, and other applications of police power. This term describes Federal, State or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

Floodproofing: 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: The elevation to which all structures located within the Community Special Flood Hazard Area must be elevated (or floodproofed if non-residential). Within areas where Base Flood Elevations (BFEs) have been determined, this elevation shall be the Community Base Flood Elevation plus one (1) foot of freeboard (except along the Catawba River where it is the FEMA Base Flood Elevation plus two (2) feet of freeboard). In areas where no BFE has been established, all structures and other Development must be elevated (or floodproofed if non-residential), to two (2) feet above the highest adjacent grade.

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

Floodwall: A wall built along a shore or bank to protect an area from flooding.

Floodway: The either the FEMA Floodway or the Community Encroachment Area, including the area above a bridge or culvert when applicable. **Floodway Engineering Analysis:** An engineering analysis of the impact that a proposed encroachment into a floodway is expected to have on the floodway boundaries and flood levels during the occurrence of the

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base flood discharge. The evaluation shall be prepared by a qualified North Carolina licensed engineer using standard engineering methods and models.

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

Floor: (See Lowest Floor)

Freeboard: 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: 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: A permit issued for certain types of Development in the Floodplain per Section 18.4 of this ordinance.

Habitable Building: 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: 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: The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

Highest Adjacent Grade: The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.

Historic Structure Any structure that is:

1. 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;
2. Certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a local inventory of historic landmarks in communities with a "Certified Local Government (CLG) Program"; or

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4. Certified as contributing to the historical significance of a historic district designated by a community with a "Certified Local Government (CLG) Program." Certified Local Government (CLG) Programs are approved by the US Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the State Historic Preservation Officer as having met the requirements of the National Historic Preservation Act of 1966 as amended in 1980.

Individual Floodplain Development Permit: means a permit for Development in the Floodplain that involves activities not listed in Section 18.4.2 and may not qualify for a General Floodplain Development Permit.

Letter of Map Revision (LOMR): An official revision 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): 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): A determination that a structure or parcel of land has been elevated by fill above the BFE and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.

Levee: A man-made 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: A flood protection system which consists of Levee(s) and/or Floodwall(s) and associated structures, such as closure and drainage devices.

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

1. Designed primarily for purposes of transportation of property or is a derivation of such a vehicle.
2. Designed primarily for transportation of persons and has a capacity of more than 12 persons; or
3. Available with special features enabling off-street or off-highway operation and use.

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

Lowest Floor: 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 ordinance.

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

Market Value: The value of a building, excluding land value, that is determined by an appraiser certified in North Carolina. The tax value of the building may be used for screening purposes.

New Construction: 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 external walls and has a total cost equal to or exceeding 50 percent 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 June 1, 1981 and includes subsequent improvements to such structures (see definition of Flood Insurance Rate Map.

New Manufactured Home Park or Subdivision: A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs) is completed on or after January 10, 1995, the initial effective date of the floodplain management regulations adopted by the community.

Nonconforming Building or Use: Any legally existing building or use which fails to comply with the provisions of this ordinance.

Non-solid Fence: A fence with at least 75 percent open area.

No-Rise Certification: A certification statement signed by a duly-qualified engineer licensed to practice in the state of North Carolina certifying that a proposed Project will not impact the FEMA Base Flood Elevations or the Community Base Flood Elevations at modeled cross sections in the vicinity of the proposed Project.

North American Vertical Datum: as corrected in 1988 (NAVD or NAVD 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: A public meeting held by the owner of the 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: Construction or other development for which the "start of construction" occurred on or after the effective date of the initial Flood Insurance Rate Map.

Deleted: Mean Sea Level: 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)."

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Pre-FIRM: 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): a map(s) released by the Federal Emergency Management Agency for public comment prior to the effective date. The map may be in both digital and printed format and shows the 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): 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: At least 51 percent of the actual cash value of the structure is above ground.

Public Safety and/or Nuisance: Anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

Recreational Vehicle: A vehicle which is: built on a single chassis; 400 square feet or less when measured at the largest horizontal projection; designed to be self-propelled or permanently towable by a car or light duty truck; and designed primarily not for use as a permanent dwelling, but as temporarily living quarters for recreational, camping, travel or seasonal use, and (5) is fully licensed and ready for highway use.

Reference Level: The portion of a structure or other Development that must be compared to the flood protection elevation to determine regulatory compliance of such building. Within Special Flood Hazard Areas designated as zones A1-A30, AE, A, A99, AO, or AH, the reference level is the top of the lowest floor.

Remedy a Violation: 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 ordinance or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other Development.

Repetitive Loss: Flood-related damages sustained by a structure during any 10-year period for which the total cost of repairs equals or exceeds fifty percent (50%) of the Market Value of the structure before the damage occurred. Repetitive Loss damages include flood-related damages sustained prior to November 16, 2018 for which the cost of repairs equaled or exceeded twenty-five percent (25%) of the Market Value of the structure before the damage occurred if within the relevant 10-year period.

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Riverine: Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Salvage Yard: 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 Facility: Any facility involved in the disposal of solid waste, as defined in NCGS 130A-290(a)(35).

Solid Waste Disposal Site: As defined in NCGS 130A-290(a)(36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

Special Flood Hazard Area: The FEMA Special Flood Hazard Area. See definition above.

Start of Construction: The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as 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: For floodplain management purposes, a walled and roofed building, a manufactured home, a gas or liquid storage tank, that are principally above ground.

Substantial Damage: Damage of any origin sustained by a structure over a 10-year period 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 includes flood-related damages sustained by a structure prior to November 16, 2018 for which the cost of repairs at the time of the flood event equaled or exceeded twenty-five percent (25%) of the Market Value of the structure before the damage occurred if within the relevant 10-year period. See definition of "Substantial Improvement."

Substantial Improvement: Any repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, or combination thereof, where the total cost over a 10-year period equals or exceeds fifty percent (50%) 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. Substantial Improvement includes any repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, or combination thereof prior to November 16, 2018 for which the cost of repairs at the time of the flood event equaled or exceeded twenty-five percent (25%) of the Market Value of the structure before the damage occurred or the Substantial

Commented [CD15]: Per model ordinance, a time-period must be specified (minimum of 1 year). Staff recommend a 10-year period to document current practice, maintain a time-period consistent with two 25% criteria, and be eligible for an additional 80 CRS points.

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Commented [CD16]: Cumulating substantial damages over a 10-yr period for the 50% criteria makes the two 25% criteria obsolete. Staff believe removal of this criteria will not affect availability of Increased Cost of Compliance (ICC) insurance coverage for homeowners and will not reduce Community Rating System (CRS) points because the 50% criteria over a 10-year period meets the "Repetitive Loss" definition for ICC qualification.

Deleted: of the market value of the structure before the damages occurred.

Deleted: Substantial Damage also means flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

Commented [CD17]: Per model ordinance, a time-period must be specified (minimum of 1 year). Staff recommend a 10-year period to document current practice, maintain a time-period consistent with two 25% criteria, and be eligible for an additional 80 CRS points.

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Floodplain Overlay District

Improvement began if within the relevant 10-year period. The term does not, however, include either:

1. 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,
2. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure

3. Any replacement subject to the requirements of Section 18.6.1 A(5)(c) of this ordinance.

Substantial Improvement: 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: An activity and/or condition that can be modeled within the stated or commonly known accuracy of a Floodway Engineering Analysis or other engineering computations, and may have an impact on Base Flood Elevations. The Floodplain Administrator may require a No-Rise Certification by a licensed engineer to determine if a proposed activity and/or condition meets the Technically Measurable definition.

Temperature Controlled: Having the temperature regulated by a heating and/or cooling system, built-in or appliance.

Variance: A grant of relief to a person from the requirements of this ordinance.

Violation: 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 Articles III and V is presumed to be in violation, until such time as the documentation is provided.

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

Watercourse: A lake, river, creek, stream, channel or other topographic feature within a Special Flood Hazard Area on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

Commented [CD18]: Cumulating substantial damages over a 10-yr period for the 50% criteria makes the two 25% criteria obsolete. Staff believe removal of this criteria will not affect availability of Increased Cost of Compliance (ICC) insurance coverage for homeowners and will not reduce Community Rating System (CRS) points because the 50% criteria over a 10-year period meets the "Repetitive Loss" definition for ICC qualification.

Commented [CD19]: To encourage owners to locate replacement equipment at compliant elevations, staff recommend offering this option to owners which will remove floodplain risk for new equipment and benefit the owner.

Deleted: Also means any repair, reconstruction, or improvement to a structure on two separate occasions during a 10-year period for which the total cost of repairs, reconstruction or improvement at the time of each alteration, equals or exceeds 25 percent 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 (Section 154.2918.6.1.A(13)).).

Commented [CD21]: Rename model to "Floodway Engineering Analysis" to be consistent throughout the ordinance.

Deleted: of the FEMA approved hydraulic models

Commented [CD22]: Clarify that some activities may require an engineer to certify a no rise condition.

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Commented [CD23]: Per model ordinance, include definition that does not exist in current ordinance.

18.3 GENERAL PROVISIONS

18.3.1 LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all lands in the land use jurisdiction including the Extra-Territorial Jurisdiction (ETJ) of the Town of Davidson 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.

Commented [CD24]: Per Model Ordinance, clarify that the ordinance applies within the Town limits and ETJ area.

18.3.2 BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS

The Special Flood Hazard Areas include those identified by the Mecklenburg County Flood Insurance Rate Maps, dated November 16, 2018, which with accompanying data are adopted by reference and declared to be part of this ordinance.

Commented [CD25]: FEMA-required change to incorporate the new FIRMs.

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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.

Commented [BJ26]: Language added per Floodplain Staff's recommendation.

The initial Flood Insurance Rate Maps are as follows for the jurisdictional areas at the initial date: Mecklenburg County Unincorporated Area, dated June 1, 1981.

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18.3.3 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 Ordinance Guidance Document may be used for illustrative purposes to assist in determining the applicable type of Floodplain Development Permit required

18.3.4 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.

18.3.5 ABROGATION AND GREATER RESTRICTIONS

It is not intended by this ordinance 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 ordinance 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 ordinance shall control.

18.3.6 INTERPRETATION

In the interpretation and applications of this ordinance, all provisions shall be:

A. Considered as minimum requirements;

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- B. Liberally construed to meet the purposes and objectives of this regulation as stated in Sections 18.1.4 and 18.1.5; and
- C. Deemed neither to limit nor repeal any other powers granted under state statutes.

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18.3.7 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Town of Davidson, Mecklenburg County, or on any agent, officer or employee thereof for any flood damages that result from reliance on this ordinance or by any administrative decision lawfully made hereunder.

18.3.8 PENALTIES FOR VIOLATION

Violation of the provisions of this ordinance 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 ordinance 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 of Davidson 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.

18.4 ADMINISTRATION AND ENFORCEMENT

18.4.1 DESIGNATION OF FLOODPLAIN ADMINISTRATOR

The Town designates the Planning Director or his or her designee as the Floodplain Administrator and the County Floodplain Administrator or his or her designated agent as the persons with the authority to administer, implement and enforce the provisions of this ordinance through a properly executed, legally binding interlocal agreement.

18.4.2 FLOODPLAIN DEVELOPMENT PERMIT AND CERTIFICATION REQUIREMENTS

- A. 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 ordinance, 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 ordinance, and shall be solely for illustrative and educational purposes. If there is any discrepancy between the Technical Guidance Document and this ordinance, the provisions of this ordinance shall control.
- B. 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.

18.4.2.1 GENERAL FLOODPLAIN DEVELOPMENT 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, Floodway Engineering Analysis or variance, as long as they result in no Technically Measurable increases in FEMA and/or Community Base Flood Elevations. A No-Rise Certification may be required by the Floodplain Administrator to demonstrate no technically-measurable increases.

- A. General farming, pasture, horticulture, forestry, wildlife sanctuaries, gardens, lawns, landscaping and other similar activities;
- B. Utility infrastructure (poles, sewer manholes, vent pipes, underground utilities, etc.), sign poles, non-solid fences, and other similar activities.
- C. On-grade driveways, trails, sidewalks, boardwalks, roads and road maintenance; storm drainage system construction, repairs and maintenance (Major & 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.

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Commented [CD27]: Rename the "flood study" to "Floodway Engineering Analysis" to be consistent throughout the ordinance.

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Commented [CD28]: Add statement to allow for engineering certification of no technically measurable increases without requiring an Floodway Engineering Analysis.

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- D. Interior renovations with a value of less than \$10,000, to a structure with its Reference Level not meeting the requirements of Sections 18.6.2.1 and 18.6.2.2.
- E. Interior renovations of any value, to a structure with its Reference Level meeting the requirements of Sections 18.6.2.1 and 18.6.2.2.

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Deleted: 154.30 A. (1),(2)

18.4.2.2 INDIVIDUAL FLOODPLAIN DEVELOPMENT 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.

18.4.2.3 CERTIFICATION REQUIREMENTS

- A. A Final As-Built Elevation Certificate (FEMA Form 086-0-33) (for either residential or non-residential buildings) or Floodproofing Certificate (FEMA Form 086-0-34) with supporting data, an operational plan, and an inspection and maintenance plan 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 floodproofed 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 floodproofing is utilized, said certification operational plan, and inspection and maintenance plan 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 operational plan, and inspection and maintenance plan 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.
- B. For proposed Development to be 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.
- C. 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 Floodway Engineering Analysis or CLOMR that may be required as specified in Section 18.6.2.6.

Commented [CD29]: Per Model Ordinance add this part of the language to emphasize the need for a plan including inspections and maintenance.

Commented [CD30]: Per Model Ordinance add this part of the language to emphasize the need for a plan including inspections and maintenance.

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Commented [CD31]: Per Model Ordinance add this part of the language to emphasize the need for a plan including inspections and maintenance.

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Commented [CD32]: Rename to "Floodway Engineering Analysis" to be consistent throughout the ordinance.

Deleted: no-rise/no-impact study

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Floodplain Overlay District

- D. If a manufactured home is placed within the Floodplain and the elevation of the chassis is 36 inches or higher above adjacent grade, an engineered foundation certification is required.
- E. Certification Exemptions. The following structures, if located within the Floodplain, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) above:
 - 1. Recreational Vehicles meeting requirements of Section 18.6.2.9;
 - 2. Temporary Structures meeting requirements of Section 18.6.2.10; and
 - 3. Accessory Structures less than 150 square feet meeting requirements of Section 18.6.2.11.

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18.4.2.4 PERMIT APPLICATION REQUIREMENTS

- A. A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
 - 1. The nature, location, dimensions, and elevations of the area of development/ disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;
 - 2. The 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;
 - 3. Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map;
 - 4. The FEMA Base Flood Elevation (BFE) and Community Base Flood Elevation (CBFE);
 - 5. The old and new location of any watercourse that will be altered or relocated as a result of proposed development; and
 - 6. The certification of the plot plan by a registered land surveyor or professional engineer.
- B. Proposed elevation, and method thereof, of all development within a Community Special Flood Hazard Area including but not limited to:
 - 1. Elevation in relation to NAVD 1988 of the proposed reference level (including basement) of all structures;
 - 2. Elevation in relation to NAVD 1988 to which any non-residential structure in Zone AE, will be floodproofed; and
 - 3. Elevation in relation to NAVD 1988 to which any proposed utility systems will be elevated or floodproofed.
- C. If floodproofing, a Floodproofing Certificate (FEMA Form 086-0-34) with supporting data and an operational plan that includes, but is not limited to, installation, exercise, inspection and maintenance of floodproofing measures.

Commented [CD33]: Per Model Ordinance, staff recommend removing msl as all regulatory vertical elevations are based upon NAVD 1988.

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Commented [CD34]: Per Model Ordinance, staff recommend removing msl as all regulatory vertical elevations are based upon NAVD 1988.

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Commented [CD35]: Per Model Ordinance, staff recommend removing msl as all regulatory vertical elevations are based upon NAVD 1988.

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Floodplain Overlay District

- D. 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:
1. The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls);
 2. Openings to facilitate automatic equalization of hydrostatic flood forces on walls when solid foundation perimeter walls are used in Community Special Flood Hazard Area;
 3. Usage details of any enclosed areas below the lowest floor;
 4. 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;
 5. Certification that all other Local, State and Federal permits required prior to floodplain development permit issuance have been received;
 6. Documentation for proper placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure that the provisions of 18.6.2.9 and 18.6.2.10 are met; and
 7. A description of proposed alteration of a watercourse, 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 alteration of a watercourse.
- E. If placing fill within the Special Flood Hazard Area, a demonstration of compliance with Section 9 and 10 of the Federal Endangered Species Act (ESA) is required. The demonstration of compliance must be provided to the Floodplain Administrator.

18.4.2.5 PERMIT REQUIREMENTS

The Floodplain Development Permit shall include, but not be limited to:

- A. A description of the development to be permitted under the floodplain development permit.
- B. The Special Flood Hazard Area determination for the proposed development.
- C. The Flood Protection Elevation required for the reference level and all attendant utilities.
- D. The Flood Protection Elevation required for the protection of all public utilities.
- E. All certification submittal requirements with timelines.
- F. A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse unless the requirements of Section 18.6.2.6 are met.

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Commented [CD36]: Revised language to reflect model Ordinance definition.

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Commented [CD37]: Revised language to reflect model Ordinance definition.

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Commented [CD38]: As of October 1, 2010, FEMA (under 44 CFR 60.3(a)(2)) requires the community to document compliance with the Endangered Species Act and ensure Incidental Take permits are obtained, if needed, prior to issuing a floodplain permit. The form of the demonstration will be specified in the Technical Guidance document and can include proof of a 404 Army Corps permit, an ESA evaluation provided by a qualified professional or other method approved by the Floodplain Administrator

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Floodplain Overlay District

G. The flood openings requirements per Section 18.6.2.4.

H. A statement that all construction materials below the FPE shall be constructed entirely of flood-resistant materials.

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Commented [CD40]: This is an ordinance requirement for elevated buildings; staff propose to extend this to all building structures.

18.4.3 DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

The Floodplain Administrator is authorized to and shall perform, but not be limited to, the following duties:

- A.** Reviewing, approving, and issuing all Floodplain Development Permits in a timely manner to assure that the permit requirements of this ordinance have been satisfied.
- B.** Reviewing, approving and issuing all documents applicable to Letters of Map Change.
- C.** Advising the permittee that additional federal or state permits may be required; and if specific federal or state permits are known, requiring that copies of such permits be provided and maintained on file with the Floodplain Development Permit.
- D.** Notifying adjacent communities and the North Carolina Department of Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration of a watercourse and submitting evidence of such notification to the Federal Emergency Management Agency.
- E.** Assuring that within available resources, maintenance is provided within the altered or relocated portion of any altered Watercourse so that the flood-carrying capacity is maintained.
- F.** Not issuing a Floodplain Development Permit for Encroachments within the Community Encroachment Area and/or the FEMA Floodway unless the certification and flood hazard reduction provisions of Article V are met.
- G.** Reviewing and recording the actual elevation (in relation to NAVD 1988) of the Reference Level (including basement) of all new or substantially improved structures, in accordance with Section 18.4.2.3.
- H.** Reviewing and recording the actual elevation (in relation to NAVD 1988) to which the new or substantially improved non-residential structures have been floodproofed, in accordance with Section 18.4.2.3.
- I.** Obtaining certifications from a registered professional engineer or architect in accordance with Section 18.6.2.2 when floodproofing is utilized for a particular non-residential structure.
- J.** Making the interpretation of the exact location of boundaries within the FEMA Special Flood Hazard Area or the Community Special Flood Hazard Area when, for example, there appears to be conflict between a mapped boundary and actual field conditions. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this ordinance. Procedures for changing flood hazard area boundaries and lines depicted on the Flood Insurance Rate Maps are identified in the National Flood Insurance Program regulations (44 CFR Parts 59-78).

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- K.** Permanently maintain all records that pertain to the administration of this ordinance and make these records available for public inspection, recognizing that such information may be subject to the Privacy Act of 1974, as amended
- L.** Making on-site inspections of projects.
- M.** Serving notices of violation, issuing stop work orders, revoking permits and taking corrective actions.
- N.** Maintaining a copy of the Letter of Map Amendment issued from FEMA in the Floodplain Development Permit file when a property owner has received a Letter of Map Amendment (LOMA). (A LOMA is typically applied for and approved when the exact location of boundaries of the FEMA Special Flood Hazard Area conflicts with the current, natural topography information at the site.)
- O.** Determining the required information to be submitted with an application for approval of an Individual Floodplain Development Permit.
- P.** Reviewing information provided by a property owner or his designated agent for the purpose of making 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.
- Q.** Reviewing information provided by a property owner or his designated agent for the purpose of making a determination of whether the proposed construction activities constitute New Construction for purposes of this ordinance.
- R.** Reviewing and acknowledging FEMA Conditional Letters of Map Revision and FEMA Letters of Map Revision.
- S.** Reviewing and approving Community Conditional Letters of Map Revision and Community Letters of Map Revision.
- T.** Making on-site inspections of work in progress. As the work pursuant to a Floodplain Development Permit progresses, the Floodplain Administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit.
- U.** Issuing stop-work orders. Whenever a building or part thereof is being constructed, reconstructed, altered or repaired in violation of this ordinance, the Floodplain Administrator may order the work to be immediately stopped. The stop work order shall be in writing and directed to the person doing the work. The stop work order shall state the specific work to be stopped, the specific reasons for the stoppage and the conditions under which the work may be resumed. Violation of a stop work order constitutes a misdemeanor.
- V.** Revoking Floodplain Development Permits. The Floodplain Administrator may revoke and require the return of the Floodplain Development Permit by notifying the permit holder in writing stating the reason for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans or specifications; for refusal

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or failure to comply with the requirements of state or local laws; or for false statements or misrepresentation made in securing the permit. Any permit mistakenly issued in violation of an applicable state or local law may also be revoked. Revoked permits may be resubmitted for approval using the requirements of the ordinance in effect at the time of the original submittal unless they were revoked because of the intentional submission of incorrect information by the permittee or his agent, or under other circumstances where allowing resubmittal using the requirement of the ordinance in effect at the time of the original submittal would not be equitable or consistent with public policy. However, base flood elevations that govern the elevation to which the structure is built must comply with the regulations and flood elevations in effect at the time of application for the building permit.

- W. Making periodic inspections. The Floodplain Administrator and each member of his inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
- X. Providing owners of structures in the Floodplain with information concerning their flood risk, and (for structures with the Reference Level below the Flood Protection Elevation) inform potential buyers of Substantial Improvement restrictions through the recordation of a notice in the property chain of title or other similar notice.
- Y. Obtain actual elevation (in relation to [NAVD 1988](#)) of the reference level (including basement) and all attendant utilities of all new and substantially improved structures, in accordance with the provisions of Section [18.4.2.3](#).
- Z. Obtain actual elevation (in relation to [NAVD 1988](#)) of all public utilities in accordance with the provisions of Section [18.4.2.3](#).
- AA. [Maintain a current map repository to include, but not limited to, historical and effective FIS Report, historical and effective FIRM and other official flood maps and studies adopted in accordance with the provisions of Section 18.3.2 of this ordinance, including any revisions thereto including Letters of Map Change, issued by FEMA. Notify Sate and FEMA of mapping needs.](#)

Commented [CD44]: Per Model Ordinance, staff recommend removing msl as all regulatory vertical elevations are based upon NAVD 1988.

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Floodplain Overlay District

18.4.4 CORRECTIVE PROCEDURES

- A. 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.
- B. 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:
 1. The building or property is in violation of the Floodplain Regulations;
 2. 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
 3. 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.
 4. 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, as the Floodplain Administrator may prescribe; provided that, where the Floodplain Administrator finds that there is imminent danger to life or other property, he may order that corrective action be taken in such lesser period as may be feasible.
 5. Appeal. Any owner or occupant who has received an order to take corrective action may appeal the order to the Davidson Zoning Board of Adjustment (hereinafter referred to as the "Board of Adjustment" or "Board") as provided in Article VI, Section 18.5.2. 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.
 6. 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 Article II, Section 18.3.8.

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18.5 APPEALS AND VARIANCES

18.5.1 AUTHORITY OF BOARD OF ADJUSTMENT

- A. The Board of Adjustment of Davidson shall hear and decide appeals from any order, decision, determination or interpretation made by the Floodplain Administrator pursuant to or regarding these regulations.
- B. The Board of Adjustment shall hear and decide petitions for Variances from the requirements of this ordinance.

18.5.2 INITIATION AND FILING OF APPEAL

- A. 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.
- B. 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.

18.5.3 STANDARDS AND HEARING PROCEDURE

- A. 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 the Town of Davidson Planning Ordinance.
- B. 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.

18.5.4 INITIATION AND FILING OF VARIANCE PETITION

- A. 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.
- B. 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 Board of Commissioners.

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18.5.5 FACTORS FOR CONSIDERATION AND DETERMINATION OF COMPLETENESS

- A.** In passing upon Variances, the Board of Adjustment shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and the:
- 1.** 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;
 - 2.** Danger to life and property due to flooding or erosion damage from a Community Base Flood;
 - 3.** Susceptibility of the proposed facility and its contents to flood damage and the effect of such damage during the Community Base Flood;
 - 4.** Importance of the services provided by the proposed facility to the community;
 - 5.** Necessity to the facility of a waterfront location, where applicable;
 - 6.** Availability of alternative locations, not subject to flooding or erosion damage during a Community Base Flood, for the proposed use;
 - 7.** Compatibility of the proposed use with existing and anticipated Development;
 - 8.** Relationship of the proposed use to the Mecklenburg County Floodplain Management Guidance Document, Mecklenburg County Flood Hazard Mitigation Plans, the Mecklenburg County Greenway Plan, and any other adopted land use plans for that area;
 - 9.** Safety of access to the property in times of a Community Base Flood for ordinary and emergency vehicles;
 - 10.** Expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters during a Community Base Flood expected at the site; and
 - 11.** 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.
- B.** A written report addressing each of the above factors shall be submitted with the application for a Variance.
- C.** 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 ordinance.
- D.** 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.
- E.** Functionally dependent facilities if determined to meet the definition as stated in Section 18.2 of this ordinance, provided provisions of Article 5 have been satisfied, and such

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Floodplain Overlay District

facilities are protected by methods that minimize flood damages during the base flood and create no additional threats to public safety; or

- F. Any other type of development, provided it meets the requirements of this section.

18.5.6 CONDITIONS FOR VARIANCES

- A. Variances shall not be issued when the Variance will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.
- B. Variances shall not be issued within any designated Floodway if the Variance would result in any increase in flood levels during the Community and/or FEMA Base Flood discharge unless the requirements of 18.6.2.6 are met.
- C. Variances shall only be issued upon a determination that the Variance is the minimum necessary, considering the flood hazard, to afford relief.
- D. Variances shall only be issued prior to approval of a Floodplain Development Permit.

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18.5.7 STANDARDS FOR GRANTING VARIANCE

- A. Variances shall only be issued upon:
 - 1. A showing of good and sufficient cause;
 - 2. A determination that failure to grant the Variance would result in exceptional hardship; and
 - 3. A determination that the granting of a Variance will not result in increased flood heights (unless the requirements of Section 18.6.2.6 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.
- B. 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.

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18.5.8 MISCELLANEOUS CONDITIONS

- A. In addition to consideration of the items in 18.5.5, if Dryland Access cannot be obtained, a Variance to the requirement for Dryland Access may be granted by the Board of Adjustment upon consideration of the following conditions:
 - 1. 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.
 - 2. The existence of a site plan prepared by a Licensed Land Surveyor or Professional Engineers indicating that the proposed access to Habitable Buildings on the property poses the least risk from flooding.

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Floodplain Overlay District

- B. In addition to consideration of the items in 18.5.5, 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:
1. The use serves a critical need in the community.
 2. No feasible location exists for the use outside the Special Flood Hazard Areas.
 3. The Reference Level of any structure is elevated above the Community Flood Protection 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.
 4. 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 3. above.
 5. The use complies with all other applicable laws and regulations.
 6. The Town of Davidson has notified the Secretary of the North Carolina Department of Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the Variance.

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18.5.9 NOTIFICATION AND RECORDKEEPING

- A. 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 Reference Level elevation. Such notification shall be maintained with a record of all Variance actions.
- B. 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.

18.5.10 APPEAL FROM BOARD OF ADJUSTMENT

- A. Any person aggrieved by the final decision of the Board of Adjustment to grant or deny a Floodplain Development Permit shall have 30 days to file an appeal to Mecklenburg County Superior Court, as provided in N.C.G.S. 143-215.57 (c).
- B. 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 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.

18.6 PROVISIONS FOR FLOOD HAZARD REDUCTION

18.6.1 GENERAL STANDARDS

- A. In all Special Flood Hazard Areas, the following provisions are required:
1. All New Construction and Substantial Improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure;
 2. 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;
 3. All New Construction and Substantial Improvements shall be constructed with materials and utility equipment resistant to flood damage;
 4. All New Construction or Substantial Improvements shall be constructed by methods and practices that minimize flood damage;
 5. All new electrical, heating, ventilation, plumbing, air-conditioning equipment and other service facilities shall be designed, constructed, installed 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, ductwork, electric meter panels/boxes, utility/cable boxes, appliances (i.e., washers, dryers, refrigerator, etc.), hot water heaters, electric wiring, and outlets/switches;
 - a. Replacements part of a substantial improvement, electrical, heating, ventilation, plumbing, air conditioning equipment, and other service equipment shall also meet the above provisions.
 - b. Replacements that are for maintenance and not part of a substantial improvement, may be installed at the original location provided the addition and/or improvements only comply with the standards for new construction consistent with the code and requirements for the original structure.
 - c. The cost for replacements that are for maintenance, are not part of a substantial improvement, and that are installed at the original location are not included as substantial improvement costs if the replacements are 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.
 6. All new and replacement water supply systems shall be designed to minimize or eliminate the infiltration of floodwaters into the system;
 7. 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;

Commented [CD48]: Per model ordinance, specify "all new"

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Commented [CD49]: Per Model Ordinance, add ductwork to the list as the NC Mechanical Code requires ductwork to be located above flood elevations

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Commented [CD50]: Per Model Ordinance, add language to enable replacement of equipment without requiring equipment to be elevated unless part of a substantial improvement. Staff have historically been implementing this as a policy.

Commented [CD51]: To encourage owners to locate replacement equipment at compliant elevations, staff recommend offering this option to owners which will remove floodplain risk for new equipment and benefit the owner.

Floodplain Overlay District

8. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
9. Any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this ordinance, shall meet the requirements of "New Construction" as contained in this ordinance;
10. 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;
11. Any new critical facility must be located outside of the 500-year (0.2%) flood fringe area and elevated at least one foot above the 500-year (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;
12. Subdivisions. All Development proposals submitted for review and approval in accordance with the Town of Davidson Planning Ordinance shall also comply with the following provisions:
 - a. Locate and construct public utilities and facilities, such as sewer, gas, electrical and water systems, to minimize flood damage;
 - b. Construct all new streets located in a Community Special Flood Hazard Area in accordance with the applicable provisions of the Subdivision Ordinance;
 - c. Design and construct adequate drainage to reduce exposure to flood hazards; and
 - d. Take such other appropriate measures needed to minimize flood damage.
13. 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.
14. 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.
15. 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.

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18.6.2 SPECIFIC STANDARDS

- A. Unless a variance is granted by the Town of Davidson ZBA, no new construction, substantial improvements or other development requiring an Individual Floodplain Development Permit per Section 18.4.2.2, 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.
- B. Any existing structure, that at the time such structure was most recently constructed, re-constructed, or substantially improved conformed to all applicable federal, state, and local ordinances which provide standards for preventing and reducing flood loss and damage, may be reconstructed or rehabilitated to its condition as of the most recent construction, re-construction, or substantial improvement without obtaining a variance pursuant to Section 18.6.2.A. All other requirements of this Ordinance shall be applicable.

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In all Community and FEMA Special Flood Hazard Areas where development is allowed by variance the following provisions will apply:

18.6.2.1 RESIDENTIAL CONSTRUCTION

- A. New Construction or Substantial Improvement of any residential structure shall have the Reference Level, elevated at least one foot above the Community Base Flood Elevation.
- B. Non-substantial Improvements Notice Renovations, rehabilitations, repair, reconstruction, or improvement costing between 10% and 50% of the Market Value of the existing building and said building having the Reference Level 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.

Commented [CD52]: Because staff proposes a 10-year cumulation period for the 50% substantial improvement and to eliminate the two 25% substantial improvement conditions from the ordinance, staff proposes to reduce the notice amount from 25% to 10% of Market Value to provide current and future property owners more accurate cost limitations of improving the structure before having to bring the structure into compliance.

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18.6.2.2 NONRESIDENTIAL CONSTRUCTION

New Construction or Substantial Improvement of any commercial, industrial or nonresidential structure shall meet the requirements for residential construction in Section 18.6.2.1 above, or the structure may be floodproofed 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 Section 18.4.2.3,

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18.6.2.3 NEW BUILDINGS REMOVED FROM THE FEMA SPECIAL FLOOD HAZARD AREA BY FILL

Floodplain Overlay District

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 Reference Level (including basement) elevated at least one foot (two feet on the Catawba River) above the Community Base Flood Elevation.

18.6.2.4 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 Section 18.6.2.1, 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.

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- A. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 - 1. 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;
 - 2. The bottom of all openings shall be no higher than one (1) foot above adjacent grade at the opening;
 - 3. Openings may be equipped with screens, louvers, valves or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions;
 - 4. Openings must be on different sides of the enclosed area if possible; and
 - 5. If the building has more than one enclosed area, each must have openings.
- B. Foundation enclosures:
 - 1. Vinyl or sheet metal skirting is not considered an enclosure for regulatory and flood insurance rating purposes. Therefore such skirting does not require hydrostatic openings as outlined above.
 - 2. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires hydrostatic openings as outlined above to comply with this ordinance.
- C. 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 enter to the living area (stairway or elevator).
- D. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms, except to enclose storage areas.
- E. Shall be constructed entirely of flood resistant materials at least to the Flood Protection Elevation.
- F. The enclosed area shall not be temperature controlled.

Commented [CD53]: Per Model Ordinance, add language to help ensure crawl spaces subject to flooding are not converted to living space.

Floodplain Overlay District

18.6.2.5 DRYLAND ACCESS

Access to Habitable Buildings during a flood event is extremely hazardous. Dryland Access must be provided to new or Substantially Improved Habitable Buildings according to the following criteria:

Dryland 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 Dryland Access cannot be obtained, a Variance to the requirement for Dryland Access may be granted by the Board of Adjustment. Plans and details for the Dryland Access must be submitted by a registered professional engineer or surveyor and approved by the Floodplain Administrator. The following are exempt from the Dryland Access Requirement:

- A. Substantial Improvement to an existing Habitable Building where the property does not have any access to a Dry Public Street.
- B. 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;
 - 1. Connect to the highest point of the public street adjacent to the property;
 - 2. Be constructed of gravel, pavement or concrete and be at least 12' wide; and
 - 3. Be constructed entirely at or above the elevation of highest point of the public street adjacent to the property.

18.6.2.6 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:

- A. **Community Encroachment Area.** No Encroachments, requiring an Individual Floodplain Development Permit (Section [18.4.2.2](#)), including fill, New Construction, Substantial Improvements and other Development shall be permitted within the Community Encroachment Area unless it has been demonstrated through [Floodway Engineering Analysis](#) performed in accordance with standard engineering practice that such Encroachment would not result in increased flood heights of greater than 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 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.

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Commented [CD54]: Rename to "Floodway Engineering Analysis" to be consistent throughout the ordinance.

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Floodplain Overlay District

Projects impacting existing Habitable Buildings that increase the Community Base Flood Elevation more than 0.00' will not be allowed without a Variance.

- B. FEMA Floodway.** No Encroachments requiring an Individual Floodplain Development Permit (Section 18.4.2.2), including fill, New Construction, Substantial Improvements and other Development shall be permitted within the FEMA Floodway unless it has been demonstrated through Floodway Engineering Analysis performed in accordance with standard engineering practice that such Encroachment would not result in any (0.00') 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' in the FEMA Base Flood Elevation and impact an existing Habitable Building, will not be allowed.

- C. 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 Section 18.6.2.8 are met.

- D. Temporary Encroachments.** Certain temporary Encroachments into the Community Encroachment Area and/or the FEMA Floodway may be exempt from meeting the requirements of Section 18.6.2.6, A. and B. Examples of temporary Encroachments include but are not limited to: sediment control devices including basins, check dams diversions, etc. temporary stream crossings, haul roads/construction entrances, storage of equipment, soil stockpiling. The following conditions that must be met to qualify for the exemption:

1. 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,
2. Supporting documentation, including a Floodway Engineering Analysis (if required by the Floodplain Administrator) must be submitted by a registered professional engineer indicating that the proposed project will not impact any existing habitable

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Floodplain Overlay District

building or overtop any roadway surfaces.

3. The temporary Encroachment will require an Individual Floodplain Development Permit unless it is included in another IFDP.

Commented [BJ56]: Language for Temporary Encroachments added per Floodplain Staff's recommendation

18.6.2.7 ADDITIONS/IMPROVEMENTS

- A. Additions and/or improvements to pre-FIRM structures whereas the addition and/or improvements in combination with any interior modifications to the existing structure
 1. Are not a Substantial Improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.
 2. Are a Substantial Improvement, both the existing structure and the addition and/or improvements must comply with the standards of Sections 18.6.2.1 and 18.6.2.2.
- B. 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 Sections 18.6.2.1 & 18.6.2.2.
- C. Additions and/or improvements to post-FIRM structures whereas the addition and/or improvements in combination with any interior modifications to the existing structure
 1. Are not a Substantial Improvement, the addition and/or improvements only must comply with the standards for New Construction.
 2. Are a Substantial Improvement, both the existing structure and the addition and/or improvements must comply with the standards of Sections 18.6.2.1 and 18.6.2.2.

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18.6.2.8 MANUFACTURED HOMES:

- A. New and replaced Manufactured Homes shall be elevated such that the Reference Level of the manufactured home is elevated at least one (1) foot above the Community Base Flood Elevation.
- B. 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 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or other foundation elements of at least equivalent strength. When the elevation of the chassis is above 36 inches in height an engineering certification is required.
- C. 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.

Floodplain Overlay District

- D. All enclosures or skirting below the lowest floor shall meet the requirements of Section ~~18.6.2.4.~~

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18.6.2.9 RECREATIONAL VEHICLES

Shall either:

- A. Be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions); or
- B. Meet all the requirements for New Construction.

18.6.2.10 TEMPORARY STRUCTURES

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

- A. 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:
 - 1. 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 year;
 - 2. The name, address, and phone number of the individual responsible for the removal of the structure;
 - 3. The time frame prior to the event at which a structure will be removed;
 - 4. A copy of the contract or other suitable instrument with a trucking company to ensure the availability of removal equipment when needed; and
 - 5. Designation, accompanied by documentation, of a location outside the floodplain to which the temporary structure will be removed.
- B. The above information shall be submitted in writing to the Floodplain Administrator for review and written approval.

18.6.2.11 ACCESSORY STRUCTURE

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

- A. Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);
- B. Accessory structures shall be designed to have a low flood damage potential;
- C. Accessory structures shall be firmly anchored in accordance with Section ~~18.6.1.A.1.~~
- D. Service facilities such as electrical shall be elevated in accordance with Section ~~18.6.1.A.5.~~
- E. Accessory structures shall have hydrostatic openings per Section ~~18.6.2.4.~~

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Floodplain Overlay District

F. Accessory structures under 150 square feet do not require an elevation or floodproofing certificate: and.

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G. Accessory structures shall not be temperature-controlled.

18.6.2.12 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 deep in any parking space during the occurrence of a Community Base Flood.

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18.6.2.13 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.

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Deleted: as set forth in Section 154.08.

A. General Levee Requirements

Deleted: 18.6.3 LEVEES 1

1. Levees will be treated as Development in the Floodplain and are subject to all applicable sections of this Ordinance.
2. The primary purpose of a Levee must be to protect Habitable Buildings from flooding above the Reference Level from a Community Base Flood event. However, the protection of buildings that are not Habitable Buildings or Habitable Buildings that flood in less than the Community Base Flood event are permissible incidental results of the location of the Levee.
3. 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).
4. 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, or his designee, shall conduct an Open House Forum prior to consideration of approval. The Open House Forum initiates a 30-day comment period for the Director or his designee to receive comments from the public.
5. 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 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.
6. After the end of the 30-day comment period, but no more than 60 days from the end of the comment period, the Director shall approve or disapprove the application or

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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 30-day comment period to all parties involved. Consistent with Article IV, the Director's decision may be appealed to the Zoning Board of Adjustment

7. 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.

B. Levee 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:

1. Plans and/or specifications showing the location of the proposed Levee is as far away from the adjacent creek as reasonably possible;
2. A copy of the written approval for the Levee received from the Director of Mecklenburg County Storm Water Services;
3. Verification of notification to owners of land adjacent to the proposed Levee (those within 500 feet 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;
4. Copies of all written comments received from property owners referenced above;
5. Floodway Engineering Analysis showing the proposed-conditions if the Levee is proposed to be located within the Community Encroachment Area and that accounts for the future construction of other Levees;
6. A copy of the contract with the entity responsible for construction of the proposed Levee;
7. A copy of the maintenance plan for the Levee which has been certified by a NC 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.

Commented [CD58]: Rename to "Floodway Engineering Analysis" to be consistent throughout the ordinance.

Deleted: Hydrologic and hydraulic flood models

18.6.2.14 TANKS

When gas and liquid storage tanks are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

- A. Underground tanks. Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the Community and/or FEMA Base Flood, including the effects of buoyancy assuming the tank is empty;
- B. Above-ground tanks, elevated. Above-ground tanks in flood hazard areas shall be elevated to or above the Flood Protection Elevation on a supporting structure that is

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designed to prevent flotation, collapse or lateral movement during conditions of the Community and/or FEMA Base Flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area;

- C. Above-ground tanks, not elevated. Above-ground tanks that do not meet the elevation requirements of Section 9-102 (b) of this ordinance shall be permitted in flood hazard areas provided the tanks are designed, constructed, installed, and anchored to resist all flood-related and other loads, including the effects of buoyancy, during conditions of the Community and/or FEMA Base Flood and without release of contents in the floodwaters or infiltration by floodwaters into the tanks. Tanks shall be designed, constructed, installed, and anchored to resist the potential buoyant and other flood forces acting on an empty tank during design flood conditions;
- D. Tank inlets and vents. Tank inlets, fill openings, outlets and vents shall be:
1. At or above the Flood Protection Elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the Community and/or FEMA Base Flood; and
 2. Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the Community and/or FEMA Base Flood.

18.6.2.15 FILL

Proposed placement of fill within the Special Flood Hazard Area requires demonstration of compliance with Section 9 and 10 of the Federal Endangered Species Act (ESA). The demonstration of compliance must be provided to the Floodplain Administrator.

Commented [CD59]: Per Model Ordinance, insert the Tanks section to meet the state minimum requirements and to prevent tank failure during flooding conditions.

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Commented [CD60]: As of October 1, 2010, FEMA (under 44 CFR 60.3(a)(2)) requires the community to document compliance with the Endangered Species Act and ensure Incidental Take permits are obtained, if needed, prior to issuing a floodplain permit. The form of the demonstration will be specified in the Technical Guidance document and can include proof of a 404 Army Corps permit, an ESA evaluation provided by a qualified professional or other method approved by the Floodplain Administrator

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18.7 LEGAL STATUS PROVISIONS

18.7.1 LEGAL STATUS PROVISIONS

A. Effect on rights and liabilities under the existing Floodplain Regulations.

This ordinance in part comes forward by re-enactment of some of the provisions of the Floodplain Regulations enacted January 10, 1995, as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the Floodplain Regulations enacted on January 10, 1995, 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.

B. Effect upon outstanding Floodplain Development Permits.

Nothing herein contained shall require any change in the plans, construction, size or designated use of any Development or any part thereof for which a Floodplain Development Permit has been granted by the Floodplain Administrator 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 ordinance or any revision thereto, such permit shall become void and construction or use shall be in conformity with the provisions of this ordinance.

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.

C. Expiration of Floodplain Development Permits issued after Floodplain Regulation adoption.

Individual Floodplain Development Permits issued pursuant to this ordinance expire two 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.

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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.

SEVERABILITY

If any section, clause, sentence, or phrase of the 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 Ordinance.

EFFECTIVE DATE

This ordinance shall become effective upon adoption.

ADOPTION CERTIFICATION

I hereby certify that this is a true and correct copy of the floodplain regulations as adopted by the Town of Davidson North Carolina, on the _____ day of _____, 2018.

WITNESS my hand and the official seal of _____, this the _____ day of _____, 2018.

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APPROVED AS TO FORM:

Town Attorney