

#2229

Adopted: 9/20/2022

AN ORDINANCE

REPLACING CHAPTER 9 OF THE CODE OF ORDINANCES, CHARLESTON COUNTY, ENTITLED "FLOOD DAMAGE PREVENTION AND PROTECTION" AND OTHER MATTERS RELATED THERETO:

WHEREAS, it is in the best interests of the citizens of Charleston County to have an updated Ordinance for the management of the flood hazard areas in the County in order for the citizens of Charleston County to be able to receive federal flood insurance through the National Flood Insurance Program, and to receive discounts thereto as a result of the participation by Charleston County in the Community Rating System; and

WHEREAS, the Charleston County flood insurance rate maps have been updated by the Federal Emergency Management Agency (FEMA) into a County-wide format that provides more accurate risk data than previously available; and

WHEREAS, as the environment changes, rising floodwaters due to sea level rise, increasing rainfall events, and outdated or incomplete drainage systems is a growing concern in Charleston County; and

WHEREAS, this Ordinance takes strides to reduce flooding risk in adaptive and innovative ways to protect citizens and build resilience; and

WHEREAS, Charleston County Council finds it in the public interest and a benefit to the general health, safety and welfare of the residents of Charleston County to adapt this Ordinance replacing the County's current floodplain management regulations.

NOW, THEREFORE, BE IT ORDAINED by Charleston County Council, in meeting duly assembled, that Chapter 9 of the *Code of Ordinances, Charleston County, South Carolina* is amended by replacing the provisions of the "Flood Damage Prevention and Protection" Ordinance as follows:

ARTICLE I.
IN GENERAL

Sec. 9-1. Statutory authorization.

The Legislature of the State of South Carolina has in Code of Laws, §4-9-30(5), delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the County Council, of Charleston County, South Carolina, does ordain these flood damage prevention and protection regulations.

Sec. 9-2. Findings of fact.

1. The flood hazard areas of Charleston County are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
2. These flood losses are caused by the cumulative effect of obstructions in flood plains,

rising ocean and tidal waters, increasing intensity and duration of rainfall events, and outdated or incomplete drainage systems, causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood proofed, or otherwise unprotected from flood damage.

3. In order for owners of property located in Charleston County to obtain flood insurance through the National Flood Insurance Program, through regulations promulgated by the Federal Emergency Management Agency (FEMA), Charleston County is required to enact floodplain regulations designed to reduce the amount of potential flood losses and to reduce the development of a property negatively impacting surrounding property, which is detrimental to the public benefit.

Sec. 9-3. Statement of purpose.

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

1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
2. Require that structures vulnerable to floods, including appurtenant structures, be protected against flood damage.

Sec. 9-4. Objectives.

The objectives of this Ordinance are:

1. To protect human life and health;
2. To minimize expenditure of public money for costly flood control projects;
3. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
4. To minimize prolonged business interruptions;
5. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, street and bridges located in floodplains;
6. To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize flood blight areas;
7. To ensure that potential homebuyers are notified that property is in a flood area;
8. To provide protection to assets and infrastructure against sea level rise;

9. To build resilience throughout the community to better respond to recurrent burdens and sudden disasters;
10. To increase property protection for all structures during flooding events due to hurricanes and rainwater flooding, and;
11. To protect the natural floodplain functions and capacity for flooding within the community.

Secs. 9-5 - 9-9. Reserved.

ARTICLE II. **DEFINITIONS**

Sec. 9-10. Definitions.

Unless specifically defined below, 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 in light of its stated objectives. Where it states “means” is the literal definition.

“*A*” *Zones* is an area subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown.

“*AE*” *Zones* is an area subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown within these zones.

Accessory residential structure is a structure on the same parcel of property as the principal structure, used for parking of vehicles or typical residential equipment, or for limited storage. A SMALL ACCESSORY STRUCTURE is defined as one that has a footprint of less than 120 square feet, and a LOW VALUE ACCESSORY STRUCTURE as one that has a value of less than \$1,000.

Addition is an extension or increase in the floor area or height of a building or structure. Where a firewall or load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and must comply with the standards for new construction.

Appeal is a request for a review of the Building Official’s interpretation of any provision of the chapter to the Construction Board of Adjustment and Appeals.

Appurtenant Structure is a structure which is on the same parcel of property as the principal structure, the use of which is incidental to the use of the principal structure in light of its stated objectives.

Area of Special Flood Hazard is the land in the floodplain within a community, subject to a one (1) percent or greater chance of flooding in any given year. For purposes of these regulations, the term “special flood hazard area (SFHA)” is synonymous in meaning with the phrase “area of special flood hazard”.

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

Basement is area of a building having its floor subgrade (below ground level) on all sides.

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

Building see structure.

Building Official is the individual charged with administration and enforcement of the building codes for the County.

Building Permit includes mechanical, electrical, plumbing, and any other permits issued by the County Building Official.

CLOMR see *Conditional Letter of Map Revision*

Coastal "A" Zone is an area subject to inundation by at least 1-percent-annual-chance flood event as determined by detailed methods, and where wave action is expected with wave heights between 1.5 and 3.0 feet. Coastal A Zones are landward of the VE Zone up to the Limit of Moderate Wave Action (LiMWA) line.

Coastal High Hazard Area is an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to flooding and high velocity waters caused by, but not limited to, hurricane wave wash.

Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum National Flood Insurance Program (NFIP) requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map (FIRM) or Flood Insurance Study (FIS). Upon submission and approval of certified as-built documentation, a Letter of Map Revision (LOMR) may be issued by FEMA to revise the effective FIRM. Building permits and/or flood development permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map.

Critical Facility is a structure or facility that:

1. Produces, uses, or stores highly volatile, flammable, explosive, toxic and/or water-reactive materials; or
2. Is a hospital, nursing home, or housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood; or
3. Is a police station, fire station, vehicle/equipment storage facility, shelter, school or emergency operations center that is needed for flood response activities before, during or

after a flood; or

4. Is a public or private utility facility that is vital to maintaining or restoring normal services to flooded areas before, during or after a flood.

Critical Feature is an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

Curvilinear Line is the border on either a FHBM or FIRM that delineates the special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazard areas and consists of a curved or contour line that follows the topography.

Datum is National Geodetic Vertical Datum of 1929 (NGVD 29) on FIRMs dated November 17, 2004 or before and North American Vertical Datum of 1988 (NAVD 88) on FIRMs dated after November 17, 2004.

Design Flood Elevation is the base flood elevation (BFE) plus freeboard.

Development is any man-made change to improved or unimproved real estate, including but not limited to building, construction, renovation, paving, mining, extraction, dredging, filling, excavation, drilling, storage of equipment or materials, or comparable activity or operation; any material change in the use or appearance of any structure or in the land itself; the division of land into parcels; any change in the intensity of use of land (such as an increase in the number of dwelling units in a structure); any change from one use of another use; and any activity that alters a river, stream, lake, pond, canal, woodland, wetland, endangered species habitat, or other natural resource area. Development does include agriculture and forestry operations.

Director of Public Works is the director of the Charleston County Department of Public Works.

Elevated Building is a non-basement building which has its lowest elevated floor raised above the ground level by means of fill, solid foundation perimeter walls, pilings, columns, piers, or shear walls.

Existing Construction is, for the purposes of determining rates, structures for which the start of construction commenced before November 15, 1973. "Existing construction" may also be referred to as "existing structures" or "Pre-FIRM Structure".

Existing Manufactured Home Park or Subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before November 15, 1973.

Expansion to an Existing Manufactured Home Park or Subdivision is the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

Farm Structure is a structure which is constructed on a farm, other than a residence or a

structure attached to it, for use on the farm including, but not limited to, barns, sheds and poultry houses, but not including public livestock areas.

FEMA is the Federal Emergency Management Agency.

FIS see Flood Insurance Study

Flood or *Flooding* is 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/or
2. The unusual and rapid accumulation or runoff of surface waters from any source.

Note: A flood inundates a floodplain. Most floods fall into three major categories: riverine flooding, coastal flooding, and shallow flooding. Structures could fall in the floodplain.

Flood Elevation Study is an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Flood Hazard Boundary Map (FHBM) is an official map of a community, issued by the Federal Insurance Administrator, where the boundaries of the flood, mudslide (i.e., mudflow) and related erosion areas having special hazards have been designated.

Flood Insurance Rate Map (FIRM) is an official map of a community, on which the Federal Insurance Administrator has delineated both the areas of special flood hazard and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM). A FIRM may also refer to a Flood Insurance Risk Map.

Flood Insurance Study see flood elevation study.

Floodplain or *Flood-prone Area* is any land area susceptible to being inundated by water from any source.

Floodplain Management is the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

Floodplain Management Regulations is such federal, state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Flood Proofing is any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway see regulatory floodway.

Floodway Encroachment Lines is the lines marking the limits of floodways on federal, state and local floodplain maps.

Freeboard is a factor of safety usually expressed in feet above a mandatory base flood elevation for purposes of flood plain management.

Functionally Dependent use is a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding or ship repair. The term does not include long-term storage or related manufacturing facilities.

Hazardous Velocities is the hydrodynamic pressure must be considered in the design of any foundation system where velocity waters or the potential for debris flow exists. If flood velocities are excessive (greater than 5 feet per second), foundation systems other than solid foundations walls should be considered so that obstructions to damaging flood flows are minimized.

Highest Adjacent Grade (HAG) - is an elevation of the highest ground surface that touches any deck support, exterior walls of a building or proposed building walls.

Historic Building see historic structure.

Historic Structure is any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the 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 state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
4. Individually listed on a local inventory of historic places as approved by Council.

Increased Cost of Compliance (ICC) – applies to all new and renewed flood insurance policies effective on and after June 1, 1997. The NFIP shall enable the purchase of insurance to cover the cost of compliance with land use and control measures established under Section 1361. It provides coverage for the payment of a claim to help pay for the cost to comply with State or community floodplain management laws or ordinances after a flood event in which a building has been declared substantially or repetitively damaged.

Improvement is any alteration, addition, or structural repair to an existing structure where “substantial improvement” or “substantial damage” is not a factor.

Land Characteristic is an attribute of land that can be measured or estimated.

Letter of Map Amendment (LOMA): An official amendment, by letter, to an effective National

Flood Insurance Program (NFIP) map. A LOMA establishes a property's or structure's location in relation to the special flood hazard area (SFHA). LOMAs are usually issued because a property or structure has been inadvertently mapped as being in the floodplain but is actually on natural high ground above the base flood elevation.

Letter of Map Change (LOMC): An official FEMA determination, by letter, to amend or revise effective flood insurance rate maps, flood boundary and floodway maps, and flood insurance studies. LOMCs are issued in the following categories:

Letter of Map Revision (LOMR): FEMA's modification to an effective flood insurance rate map (FIRM) or a flood boundary and floodway map (FBFM) or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations (BFEs), or the special flood hazard area (SFHA). The LOMR officially revises the Flood Insurance Rate Map (FIRM) or Flood Boundary and Floodway Map (FBFM), and sometimes the flood insurance study (FIS) report, and when appropriate, includes a description of the modifications. The LOMR is generally accompanied by an annotated copy of the affected portions of the FIRM, FBFM, or FIS report.

Letter of Map Revision Based On Fill (LOMR-F): FEMA's modification of the special flood hazard area (SFHA) shown on the flood insurance rate map (FIRM) based on the placement of fill outside the existing regulatory floodway. The LOMR-F does not change the FIRM, FBFM, or FIS report.

Limit of Moderate Wave Action (LIMWA) is the line shown on FIRMs to indicate the inland limit of the area expected to receive 1.5-foot or greater breaking waves during a 1-percent-annual flood event.

Limited storage - an area used for storage and intended to be limited to incidental items that can withstand exposure to the elements and have low flood damage potential. Such an area must be of flood resistant or breakaway material, void of utilities except for essential lighting and cannot be temperature controlled. If the area is located below the design flood elevation in an A, AE and A1-A30 zone it must meet the requirements of ARTICLE V SECTION 9-40 & 9-41 of this ordinance. If the area is located below the design flood elevation in a V, VE and V1-V30 zone it must meet the requirements of ARTICLE V SECTION 9-40 & 9-42 of this ordinance.

LOMA see Letter of Map Amendment

LOMC see Letter of Map Change

LOMR see Letter of Map Revision

LOMR-F see letter of Map Revision Based on Fill

Low Value Structure see "Accessory Structure."

Lowest Adjacent Grade (LAG) - is an elevation of the lowest ground surface that touches any deck support, exterior walls of a building or proposed building walls.

Lowest Floor means the lowest floor of the lowest enclosed area (including basement).

Unfinished or flood resistant enclosure, usable solely for the parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor; provided such enclosure is not built so as to render the structure in violation of this Ordinance.

Mangrove Stand means an assemblage of mangrove trees which is mostly low trees noted for a copious development of interlacing adventitious roots above the ground and which contain one (1) or more of the following species: Black mangrove (*Avicennia nitida*); Red mangrove (*Rhizophora mangle*); White mangrove (*Longunculariaracemosa*); and buttonwood (*Conocarpus erecta*).

Manufactured Home means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designed to meet HUD standards, for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

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

Manufactured Home Permanent Foundation is a foundation designed by a Professional Engineer registered in South Carolina, with said design subject to the approval of the building official. A bolt-on/bolt-off foundation system is considered as a permanent foundation for mobile homes placed into a manufactured home park.

Mean Sea Level is, for the purpose of this ordinance, the Nations Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, to which the base flood elevations shown on a community's Flood Insurance Rate Maps (FIRM) are shown.

Modular Building Unit is a building or set of building components manufactured off-site and transported to the point of use for installation or erection, with or without other specified components, as a finished building and not designed for ready removal to another site, and built in accordance to the Modular Construction Act of the State of South Carolina. This term is not to be limited to residential dwellings.

New Construction is, for flood plain management purposes, structures for which the start of construction commenced on or after the effective date of a Flood Plain Management Ordinance adopted by the community, November 15, 1973 and includes subsequent improvements to such structures. Also known as Post-FIRM structure. (Exception: An addition to an existing structure (built prior to November 15, 1973) is not considered "new construction" unless it is a substantial improvement.)

New Development is any of the following actions undertaken by any person, including, without limitation, any public or private individual entity: a) division or combination of lots, tracts, or parcels or other divisions by plat or deed; b) the construction, installation, or alteration of land, a structure, impervious surface or drainage facility; c) clearing, scraping, grubbing or otherwise significantly disturbing the soil, vegetation, mud, sand or rock of a site, or changing the physical drainage characteristics of the site; or d) adding, removing, exposing excavating, leveling, grading, digging, burrowing, dumping, piling, dredging, or otherwise disturbing the soil, vegetation, mud, sand or rock of a site. The transition from native landscapes to a developed condition reduces the infiltration, evapotranspiration, and surface roughness onsite, regardless

of the amount of green space and BMPs implemented into the site design.

New Manufactured Home Park or Subdivision is a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed on or after November 15, 1973.

NFIP is the *National Flood Insurance Program*

Planning and Zoning Official is the individual charged with administration and enforcement of planning and zoning for the County.

Post-FIRM Structure is a building for which construction or substantial improvement occurred after November 15, 1973 See “new construction.”

Pre-Development is the conditions that existed prior to the initiation of the land disturbing or redevelopment activity, or at the time of application, whichever is earlier, in terms of topography, vegetation, land use and rate, volume, quality, and direction of stormwater runoff.

Pre-FIRM Structure is a building for which construction or substantial improvement occurred on or before November 15, 1973. See “existing construction”

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

Recreational Vehicle is a vehicle, for flood insurance purposes, which is:

1. Built on a single chassis;
2. Four Hundred (400) square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Redevelopment is development on a previously developed site where the impervious surface on the previously developed site is equal to or greater than 20 percent of the total site or where any repair, reconstruction, or improvement to that site or to any structures located on that site such that the cumulative costs of repairs, reconstruction, or improvements, over a five-year period equals or exceeds 49 percent of the fair market value of the property and the structures located on that property. The cost of repairs, reconstruction, or improvements includes remodeling of existing building interiors, resurfacing of paved areas, and exterior building changes. The cost of repairs excludes ordinary maintenance activities that do not materially increase or concentrate stormwater runoff, or cause additional nonpoint source pollution.

Regulatory Floodway is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation to a designated height.

Remedy a Violation means to bring the structure or other development into compliance with state or local flood plain management regulations, or, if this is not reasonably possible as provided in the standards for grant of a variance, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the Ordinance or otherwise deterring future similar violations, or reducing federal, state or local financial exposure with regard to the structure or other development.

Repetitive Loss – a building covered by a contract for flood insurance that has incurred flood-related damages on 2 occasions during a 10 year period ending on the date of the event for which a second claim is made, in which the cost of repairing the flood damage, on the average, equaled or exceeded 25% of the market value of the building at the time of each such flood event.

Repetitive Loss Area is an area with one or more repetitive loss structures and includes at-risk properties for flooding who may or may not be in a special flood hazard area (SFHA) as well as those who have made a flood insurance claim previously but do not qualify as a repetitive loss property.

Repetitive Loss Property is any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP.

Resilience is the ability of a community to respond, adapt, and thrive under changing conditions, including, but not limited to, recurrent burdens and sudden disasters.

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

Sand Dune is a naturally occurring accumulations of sand in ridges or mounds landward of the beach.

Sea Level Rise is an increase in sea level that is primarily related to climate change: added water from melting ice sheets and glaciers and the expansion of seawater as it warms. Global sea level has been increasing over the past century, and the rate has increased in recent decades.

Section 1316 of the National Flood Insurance Act of 1968 - The act provides that no new flood insurance shall be provided for any property found by the Federal Emergency Management Agency to have been declared by a state or local authority to be in violation of state or local ordinances.

60-year Setback is a distance equal to sixty (60) times the average annual long term recession rate at a site, measured from the reference feature.

Severe Repetitive Loss Property is a properties with at least four claims for buildings and/or contents of more than \$5,000 or at least two building-only payments that cumulatively exceeded the value of the property.

Small Accessory Structure see “accessory structure”

Special Flood Hazard Area (SFHA) see “area of special flood hazard.”

Special Hazard Area is an area having special flood, mudslide (i.e., mudflow), or flood-related erosion hazards, and shown on a flood hazard boundary map or flood insurance rate map.

Start of Construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348)), includes substantial improvement, and means the date the construction permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Stem Walls are a solid perimeter foundation wall on a continuous spread footing backfilled to the underside of the floor slab. Refer to Flood Elevation Diagram Number 1B.

Structure is, for floodplain management purposes, a walled and roofed building, including gas or liquid storage tanks that is principally above ground, as well as modular and manufactured homes.

Subdivision is all divisions of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose, whether immediate or future, of sale, lease, or building development, and includes all division of land involving a new street or change in existing streets, and includes re-subdivision which would involve the further division or relocation of lot lines of any lot or lots within a subdivision previously made and approved or recorded according to law; or, the alteration of any streets or the establishment of any new streets within any subdivision previously made and approved or recorded according to law, and includes combination of lots of record. (Stormwater and Planning/Zoning)

Substantial Damage is damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed forty-nine (49) percent of the market value of the structure before the damage occurred as determined by the Building Official. Floodplain management requirements for new construction apply to substantial damage.

Substantial Improvement is any reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any five (5) consecutive years in the life of a building, the cumulative cost of which equals or exceeds forty-nine (49) percent of the market value of the existing

structure at the date of “start of construction” of the improvement as determined by the Building Official. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local 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 by the Department of Interior.

30 year Setback is a distance equal to thirty (30) times the average annual long term recession rate at a site, measured from the reference feature.

Unnumbered A Zone is a zone without base flood elevations determined. These are still considered special flood hazard areas.

“VE” Zone is a high risk areas subject to inundation by at least a 1-percent-annual-chance flood event as determined by detailed methods, and where wave action is expected with wave heights of more than 3.0 feet. BFEs or base flood depths are shown within these zones.

Variance is a grant of relief from the requirements of this Ordinance which permits construction in a manner otherwise prohibited by this Ordinance where specific enforcement would result in exceptional hardship.

Violation is the failure of a structure or other development to be fully compliant with the county’s flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this Ordinance is presumed to be in violation until such time as that documentation is provided.

Watersheds are areas of land that drains to a single point, bounded by higher elevations at the edges. Within a watershed, water travels over land until it reaches a body of water, and as the water passes farther downstream, draining a larger area, eventually everything leads to the ocean. In coastal areas, wetlands border the land, and many of the local streams and creeks enter wetlands before discharging to the ocean. Wetlands perform a crucial function in the watershed, intercepting pollutants carried downstream and removing them from the water in a natural treatment process. Additionally, wetlands slow the water down, acting as a buffer for hurricanes and reducing severity of flooding.

Water Surface Elevation is the height, of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

“X” Zone (Shaded) is the moderate risk areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where the average depths are less than one (1) foot. No BFEs or base flood depths are shown within these zones

“X” Zone (Unshaded) is the minimal risk areas outside the 1-percent and 0.2-percent-annual-

chance floodplains. No BFEs or base flood depths are shown within these zones.

100 Year Flood see Base Flood.

Secs. 9-11 - 9-19. Reserved.

ARTICLE III. GENERAL PROVISIONS

Sec. 9-20. Lands to which this Ordinance applies.

This Ordinance shall apply to all areas of special flood hazard within the jurisdiction of Charleston County.

Sec. 9-21. Basis for establishing the areas of special flood hazard.

Charleston County declares that the Charleston County Flood Insurance Study, including the FIRMS, dated January 29, 2021, copies of which are on file in the Office of Building Inspection Services and online at charlestoncounty.org and msc.fema.gov, is hereby adopted and declared to be as fully a part of this chapter as if set forth herein. Letters of Map Change (LOMC) to these adopted maps authorized by the National Flood Insurance Program (NFIP) shall become effective immediately upon the date established by the NFIP. Permits of any kind from the Building Inspection Services Department will only be issued based on the current effective data set by the most recent applicable FIRM or LOMC authorized by the National Flood Insurance Program/FEMA.

Sec. 9-22. 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 areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This Ordinance shall not create liability on the part of Charleston County or by any officer or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made thereunder.

Sec. 9-23. Severability.

If any provision of this Ordinance or its application to any circumstance is held by a court of competent jurisdiction to be invalid for any reason, then this holding does not affect other provisions or applications of this Ordinance which can be given effect without the invalid provision or application, and, to this end, the provisions of this Ordinance are severable.

Secs. 9-24 - 9-29. Reserved.

ARTICLE IV. ADMINISTRATION

Sec. 9-30. Designation of Building Official.

The County Building Official ("Building Official"), and/or his designee, is hereby appointed to administer and implement the provisions of this Ordinance.

Sec. 9-31. Duties and responsibilities of the Building Official.

1. Duties of the Building Official shall include, but not be limited to:
 - a. Review all applications for construction permits to assure that proposed work meets all of the requirements of this Ordinance, the requirements of 44 CFR, and are adequate to determine whether proposed building sites will be reasonably safe from flooding.
 - b. Review Application for a construction permit prior to authorizing the commencement of any construction activities. The following information, as a minimum, is required to be reviewed:
 - i. A complete set of building plans drawn to scale and showing, at a minimum, elevations for each exterior wall; floor plan(s); foundation and wall sections and details; stair details; and electrical, plumbing and mechanical riser diagrams. The plans shall give a full description of proposed construction including a site plan identifying area(s) having special flood related hazards as applicable.
 - ii. Plans shall indicate the Base Flood Elevation (BFE) and the Design Flood Elevation (DFE) elevation of the proposed building, verification that materials proposed below the DFE are flood resistant per FEMA Technical Bulletin 2; If applicable, include flood proofing certification (non-residential), hydrostatic venting information, breakaway wall details and certifications from a Registered Architect/Engineer.
 - c. Maintain permanent copy of building permits issued and copies of all required certifications for the life of the structure.
 - d. Where interpretation is needed as to the exact location and elevation of all areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), the Building Official shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this Ordinance.
 - e. Maintain a copy of letter of map changes (LOMC) issued by FEMA in the Office of the Building Official.
 - f. Maintain on file for public access flood maps issued by the Federal Emergency Management Agency (FEMA).
 - g. Review violations that occur during the course of construction. Failure of the contractor to make required changes shall be cause for issuance of a stop-work order

for the project.

- h. When base flood elevation or floodway data have not been provided by the applicants, the Building Official shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source.
- i. Advise owners that no new flood insurance coverage may be provided for any new construction of, or substantial improvement to, a structure located within the coastal barrier resources system as defined in Section 4 of the Coastal Barrier Resources Act.
- j. Determine the elevation requirement for construction in flood zones.
- k. Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334 and that no adverse impact occurs during the development process as authorized by the 44 CFR 59 and 60.
- l. Notify adjacent communities and the South Carolina Department of Natural Resources prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency.
- m. Ensure that maintenance and inspections are provided within the altered or relocated portion of watercourses so that the flood-carrying capacity is not diminished, and maintain records of the same until completion of the project.
- n. Notify all repetitive loss area structures of their risk of flooding and the services available to them.

Sec. 9-32. Duties and responsibilities of the Planning and Zoning Official shall include, but not be limited to: require a zoning permit to be issued in conformance with the provisions of the Charleston County Zoning and Land Development Regulations, as amended, and/or the *Charleston County Comprehensive Plan* prior to the commencement of any development or construction activities. The permit shall give a full description of proposed construction.

Sec. 9-33. Duties and responsibilities of the Public Works Official shall include, but not be limited to: requiring stormwater permit approval in conformance with the provisions of the Charleston County Stormwater Management Program, and the Charleston County Stormwater Program Permitting Standards and Procedures Manual prior to the commencement of any land disturbance or development activities and requiring encroachment permit approval in conformance with the Encroachment Permit Procedure prior to impacting public right-of-way or easement. The stormwater approval should provide a full description of the proposed construction.

- 1. To coordinate, implement, maintain, and manage Charleston County's drainage systems.
- 2. To deny an applicant connection to Charleston County stormwater systems or facilities if County requirements are not met.

Sec 9-34 – 9-39. Reserved.

**ARTICLE V.
PROVISIONS FOR FLOOD HAZARD REDUCTION**

Sec. 9-40. General standards.

1. All new construction and substantial improvements within the areas of special flood hazard and when established as a flood area outside the special flood hazard areas shall comply with the following:
 - a. Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy and debris impact.
 - b. Be constructed to meet or exceed the required Design Flood Elevation (DFE), which is the base flood elevation plus two (2) feet of freeboard.
 - c. When proposed new construction and substantial improvements are partially located in an area of special flood hazard, the entire structure shall meet the standards for new construction.
 - d. When proposed new construction and substantial improvements are located in multiple flood hazard risk zones or in a flood hazard risk zone with multiple base flood elevations, the entire structure shall meet the standards for the most hazardous flood hazard risk zone and the highest base flood elevation.
 - e. Be constructed with Class 4 or 5 materials resistant to flood damage as per FEMA Technical Bulletin 2, entitled "Flood-Resistant Materials Requirements for Buildings Located in Special Flood Hazard Areas", incorporated herein by reference, in all areas below the design flood elevation,
 - f. Be constructed by methods and practices that minimize potential for flood damages.
 - g. A temporary construction trailer may only be permitted to be on site for fewer than 180 consecutive calendar days at a time, and must be fully ready for highway use, and shall be attached to the site only by quick disconnect type utilities and security devices.
 - h. Electrical, ventilation, plumbing, heating and air conditioning equipment (including ductwork), and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of the base flood plus (2) feet of freeboard.
 - i. Be constructed with methods and practices outlined in ASCE24 or an at least equally stringent standard.
2. Elevation Certificate Requirements when a structure is constructed or substantially improved in the area of special flood hazard:

- a. A certified under construction Elevation Certificate is required, after the lowest floor is completed and before any further inspections are accepted and vertical construction commences.
 - b. Floodproofing Certificate for non-residential construction including flood-proofing level is required immediately after the flood-proofing is completed. When flood-proofing is utilized for non-residential structures, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same.
 - c. A certified finished construction Elevation Certificate shall be provided after completion of construction including final grading of the site. No Final Inspections can occur without an approved finished construction Elevation Certificate on file with the BIS Department.
 - d. Elevation Certificates shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same.
 - e. Any work undertaken prior to approval of these certifications shall be at the permit holder's risk. The Building Official shall review the above referenced certification data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being allowed to proceed.
 - f. Failure to submit certification or failure to make the corrections required hereby shall be cause to issue a stop work order for the project and/or the Certificate of Occupancy may be withheld.
3. New development in the area of special flood hazard shall minimize disruption to shorelines, stream channels, stream banks, and the regulatory floodway.
 4. Water Supply Systems - All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system. Sanitary Sewage Systems – New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters,
On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
 5. Existing buildings and structures (Pre-FIRM Structures):
 - a. Where substantial improvement or substantial damage is not a factor, replacement of electrical, heating, plumbing, heating and air conditioning equipment to existing structures shall be elevated to at least the existing lowest floor level or to the design flood elevation; and replacement ductwork installed below DFE shall be designed so as to prevent water from entering or accumulating within during conditions of flooding.
 - b. Improvements to a structure where substantial improvement or substantial damage is not a factor shall be designed and constructed so as to meet the requirements of this Ordinance, with an exception that the minimum elevation of the lowest floor of

an improvement may match the existing legally non-conforming structure existing lowest floor.

6. Modular construction shall be consistent with the South Carolina Modular Building Construction Act (South Carolina Code Section 23-43-10 *et seq.*) as may be amended from time to time, which is incorporated herein by reference.
7. Enclosures below the design flood elevation, shall be the minimum necessary to allow for parking of vehicles, limited storage, or entry to the living area.
8. An exterior door with a landing shall be installed at the top of the stairs that provides access to the building.
9. Accessory Residential Structure Specific Standards:
 - a. New construction or substantial improvements to residential accessory structures that contain habitable space shall meet the requirements of new construction as contained in this Ordinance.
 - b. Small and/or low value accessory structures that do not contain habitable space may be exempted from the elevation requirements in AE Zones only (not applicable to Coastal A), provided the following conditions are met:
 - c. The building is constructed of flood-resistant materials below the design flood elevation.
 - d. Exterior perimeter walls are provided with openings to relieve hydrostatic pressure and the interior is not partitioned or finished into separate rooms.
 - e. Electrical, heating, ventilation, plumbing, air conditioning, and other service facilities are prohibited, except for essential lighting and power circuits. Flood elevation certificates may be required to determine the elevation of electric or other utility services provided to the accessory structure. Services facilities such as electrical and heating equipment shall be elevated or floodproofed to DFE.
 - f. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters. Accessory structures shall be firmly anchored to prevent flotation which may result in damage to other structures.
 - g. The building is used only for parking of vehicles and/or limited storage of equipment used to service the principal building.
10. Manufactured Home Additional Specification Standards:
 - a. Permits shall be obtained for placement of manufactured homes or temporary construction trailers.

- b. All manufactured homes permitted to be placed shall be installed using methods and practices which minimize flood damage, which include but are not limited to elevating the lowest floor of the manufactured home on a permanent foundation, as defined herein as a *manufactured home permanent foundation*, to or above the design flood elevation in A or AE zones only.
 - i. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement.
 - ii. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors.
 - iii. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.
 - iv. Designs for manufactured home permanent foundations are subject to approval of the Building Official.

11. Recreational Vehicles Additional Specific Standards:

All recreational vehicles, other than those parked at another permanent structure temporarily while not in use, placed or sited within special flood hazard areas must:

- a. Be on the site for fewer than 180 consecutive calendar days, and
- b. Be fully registered 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 security devices, and has no permanently attached additions.
- c. If the vehicle is to remain in an A or AE zone, it must be elevated in accordance with requirements for manufactured homes as provided in section 9-41 of this article.

Sec. 9-41. Specific standards in addition to 9.40 general standards for Unnumbered A Zones and AE Zones

- 1. All new construction and substantial improvements of residential structures shall be elevated so that the top of the lowest floor level (including basement) is elevated to or above the design flood elevation.
- 2. All new construction and substantial improvements of non-residential structures may be floodproofed below DFE if they are designed so that below the design flood elevation the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy including attendant utilities and sanitary facilities.
 - a. Where a non-residential structure is intended to be made watertight below the base flood level,
 - i. A Registered Professional Engineer or Architect licensed in South Carolina shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of this Ordinance, including but not limited to *Floodproofing Non-*

Residential Buildings (FEMA P-936) as published by the Federal Emergency Management Agency incorporated herein by reference, and

- ii. A record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are flood proofed shall be maintained with the Building Official.
3. Enclosed areas below the design flood elevation, including foundation crawl space areas, shall be designed to automatically equalize hydrostatic and hydrodynamic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered Professional Engineer or Architect licensed in South Carolina or meet or exceed the following minimum criteria.
 - a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - b. The bottom of all openings shall be no higher than one foot above grade.
 - c. Only the portions of openings that are below the design flood elevation (DFE) can be counted towards the required net open area.
 - d. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of flood waters.
 - e. The area of the opening is the net clear opening calculated as the open area (excluding area of screening or other coverings that prohibit the free flow of water through the opening).
 - f. Fill placed around foundation walls must be graded so that the grade inside the enclosed area is equal to or higher than the adjacent grade outside the building on at least one side of the building.
 4. In special flood hazard areas without base flood elevation data, new construction or substantial improvements of structures shall be elevated to at least two (2) feet above the anticipated flood elevation during a *base flood*, as determined through an engineering analysis meeting the Federal Emergency Management Agency guidelines for flood insurance studies with the floodway to be established with no more than 0.5 ft. rise.

Sec. 9-42. Specific standards in addition to 9.40 general standards for VE and Coastal A Zones.

1. VE zones and Coastal A Zones are areas designated as coastal high hazard areas. These areas have special flood hazards associated with wave wash, and therefore, the following provisions shall apply:
 - a. All new construction and buildings that are substantially damaged or improved within VE zones and Coastal A Zones are to be located landward of the reach of 2 feet above the nationally recognized mean high tide.
 - b. Provide that all new construction and substantial improvements in zone VE and Coastal A Zone on the Charleston County FIRM, are elevated on pilings or columns so that:
 - i. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the design flood

elevation, and

- ii. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by the *International Building Code* or *International Residential Code* as adopted and periodically amended by the State.
 - iii. A Registered Professional Engineer or Architect licensed in South Carolina shall develop and/or review the structural design, specifications and plans for construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions.
- c. New construction and substantial improvements shall have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood latticework, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. A breakaway wall shall be permitted only if a Registered Professional Engineer or Architect licensed in South Carolina certifies that the designs proposed meet the following conditions:
- i. Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and,
 - ii. The elevated portion of the building and supporting foundations system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non- structural). Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards.
 - iii. Electrical, mechanical and plumbing system components are not to be mounted on or penetrate through walls that are designed to break away under flood loads.
- d. There shall be no fill used as structural support. Non-compacted fill may be used around the perimeter of a building for landscaping/aesthetic purposes provided the fill will wash out from storm surge, thereby rendering the building free of obstruction prior to generating excessive loading forces, ramping effects, or wave deflection. The Building Official shall approve design plans for landscaping/aesthetic fill only after the applicant has provided an analysis by an Engineer, Architect, and/or Soil Scientist licensed in South Carolina which demonstrates that the following factors have been fully considered:
- i. Particle composition of fill material does not have a tendency for excessive natural compaction;

- ii. Volume and distribution of fill will not cause wave deflection to adjacent properties; and,
 - iii. Slope of fill will not cause wave run-up or ramping.
- e. Man-made alteration of sand dunes and mangrove stands within VE and Coastal A Zones which would increase potential flood damage shall be prohibited.
 - f. Pre-construction and as-built design and breakaway wall certifications, where applicable, shall be provided by Registered Professional Engineers and/or Architects licensed in South Carolina for new and substantially improved structures in VE and Coastal A Zones on the Charleston County FIRM. These certificates shall also be provided for all lateral additions to structures in the VE and Coastal A Zones.
 - g. Enclosed areas below the lowest floor shall be the minimum necessary to allow for parking of vehicles, limited storage, and access to the primary occupancy.
 - h. Walls intended to break away under flood loads as specified shall have flood openings that meet the criteria in the general standards section for enclosed space below design flood elevation.
2. Appurtenant features; defined as swimming pools, decks, gazebos, fences, and other features as determined by the building official as potentially causing an obstruction in the *coastal high hazard area*; must comply with the Federal Emergency Management Agency (FEMA) Technical Bulletin 5, *Free of Obstruction Requirements*, or any revisions thereto, incorporated herein by reference.
 3. Any and all other obstructions located in the VE Zone and Coastal A shall meet all applicable requirements of this Ordinance.
 4. Additional Specifications for Manufactured Homes and Recreational Vehicles in VE and Coastal A Zones:
 - a. New or replacement manufactured homes (e.g. those designed to meet HUD standards) shall not be placed within property located in VE and Coastal A Zones.
 - b. Existing manufactured homes in VE and Coastal A Zones may be permitted to remain as long as the structure complies with minimum health and safety standards and is anchored to resist flotation, collapse, lateral movement or debris impacts.
 - c. The placement of a permanent recreational vehicle is prohibited in VE and Coastal A Zones.
 5. In Coastal A Zones, stem wall foundations supporting a floor system above and backfilled with soil or gravel to the underside of the floor system shall be permitted provided that the foundations are designed to account for wave action, debris impact, erosion and local scour. Where soils are susceptible to erosion and local scour, stem wall foundations shall have deep footings to account for the loss of soil. Stem walls are to be limited to a height of two feet above existing grade.

Sec. 9-43. Standards for Floodways.

1. Areas of special flood hazard established as regulatory floodways in the Charleston County Flood Insurance Rate Map (FIRM) and/or the Charleston County Flood Insurance Study are the Charleston County designated floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and has erosion potential, the following provisions shall apply:
 - a. Prohibition of encroachments, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice in accordance with the Charleston County Flood Insurance Study or as otherwise deemed appropriate by FEMA or the Building Official, certified by a South Carolina licensed Engineer, that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharges.
 - b. Encroachments may be permitted within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the applicant first applies for a conditional FIRM and floodway revision, fulfills the requirements for such revisions as established under the provisions of §65.12 of 44 CFR and receives the approval of the federal insurance administrator.
2. Standards for streams with established base flood elevations but without floodways along rivers and streams where base flood elevation data is provided but no floodway is identified for a Special Flood Area on the FIRM or in the FIS. The following provisions apply within such areas:
 - a. No encroachments, including fill material, new construction, or substantial improvement shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood at any point.
 - b. The area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of more than 0.5 foot at any point.

Sec. 9-44. Standards for subdivision proposals and other development.

Standards for subdivision proposals shall meet or exceed the following minimum criteria:

1. All subdivision proposals shall be consistent with the need to minimize flood damage;
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;

3. Base flood elevation data shall be provided for all subdivision proposals (including manufactured home parks and subdivisions).
4. All subdivision proposals and other proposed new development shall have adequate drainage provided to reduce exposure to flood damage.
5. In all areas of special flood hazard where base flood elevation data is not available, the applicant shall provide a hydrologic and hydraulic engineering analysis that generates base flood elevations for all subdivision proposals and other proposed developments.

Secs. 9-45–9-49. Reserved.

ARTICLE VI.
APPEALS AND VARIANCES

Sec. 9-50. Appeal and variance procedures.

1. The Charleston County Construction Board of Adjustment & Appeals as established by County Council shall hear and decide appeals and requests for variance meeting the following provisions from the requirements of this Ordinance:
 - a. Public notice of all meeting of the Board shall be provided by at least electronic delivery to the news television stations, the newspaper of general circulation, the radio communication companies, and several individual town/jurisdictional distribution papers.
 - b. Decisions on which a variance or appeal pertinent to floodplain management issue is requested shall be those made by the Building Official or his designee.
 - c. Requests for a hearing for a variance or appeal of a decision shall be in writing, and shall be received in the Office of the Building Official within 30 calendar days of notice to the appellant of the decision.
 - d. The appellant shall be the owner of the property affected by the decision or his or her duly authorized representative.
2. This Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Building or the Planning and Zoning Official in the enforcement or administration of this Ordinance.
3. Any person aggrieved by the decision of this Board or any taxpayer may appeal such decision, as provided in §4-9-30 of the S.C. Code of Laws.
4. Variances may be issued for the repair or rehabilitation of historic structures upon a 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 to preserve the historic character and design of the structure.
5. Variances may be issued for a new construction and substantial improvements and for

other development necessary for the conduct of a functionally dependent use provided that requirements of this article are met and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

6. Variances may be issued to wet flood proof an expansion to an existing farm structure in accordance with Technical Bulletin 7, *Wet Flood Proofing Requirements for Structures Located in Special Flood Hazard areas in accordance with the National Flood Insurance Program* available from the Federal Emergency Management Agency. The structure must meet all of the conditions and considerations for variances otherwise established within this Ordinance. In addition, the following standards shall apply:
 - a. Use of the structure must be limited to agricultural purposes such as pole frame buildings with open or closed sides used exclusively for the storage of farm machinery and equipment; steel grain bins and steel frame corn cribs; and general purpose barns for temporary feeding of livestock;
 - b. The expansion to an existing farm structure must be built or rebuilt, in the case of an existing building which is substantially damaged, with flood resistant materials for building elements below the base flood elevation;
 - c. The expansion to an existing farm structure must be adequately anchored to prevent flotation, collapse or lateral movement. All of the structure's components must be capable of resisting specific flood-related forces including hydrostatic, buoyancy, hydrodynamic and debris impact forces;
 - d. The expansion to an existing farm structure shall meet the requirements for hydrostatic venting requirements of this Ordinance.
 - e. Electrical, mechanical or other utility equipment must be located at or above the design flood elevation, or must be maintained in a flood proofed enclosure complying with this Ordinance which is capable of resisting damage during flood conditions;
 - f. The expansion to an existing farm structure must comply with floodway encroachment provisions of this Ordinance;
 - g. Major equipment or machinery must be protected from damage by flooding, which may include safely removing the contents of an expansion to an existing farm structure to a specified site out of the flood plain upon notification of potential flooding event.
7. In passing upon such applications, this board shall consider all staff reports and technical evaluations, all relevant factors and all standards specified in other sections of this Ordinance, and
 - a. The danger that materials may be swept onto other lands to the injury of others;
 - b. The danger to life and property due to flooding or erosion damage;

- c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d. The importance of the services provided by the proposed facility to the community;
 - e. The necessity of the facility to a waterfront location, in the case of a functionally dependent usage;
 - f. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - g. The conformance of the proposed use to the *Charleston County Comprehensive Plan* and the *Charleston County Zoning and Land Development Regulations*;
 - h. The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - i. The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site during a base flood event, and
 - j. The costs of providing governmental services to the site during and after flood conditions, including maintenance and repair of public utilities and facilities, such as sewer, gas, electrical and water systems, and streets and bridges.
8. The Board may attach such reasonable conditions to the granting of variances as it deems necessary to further the purpose of this Ordinance.
9. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result, nor shall a variance be based on financial hardship alone; nor solely due to existing or as-built elevation deficiencies that will cause extreme hardship.
10. Conditions for variances:
- a. Variances shall be issued only on a determination that the variance is the minimum necessary needed to afford relief considering the flood hazard; and in the instance of an historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building;
 - b. Variances shall be issued only upon:
 - i. a showing of good and sufficient cause; and
 - ii. a determination that failure to grant the variance would result in exceptional hardship; and
 - iii. a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense,

creation of a nuisance, fraud on or victimization of the public, or conflict with other existing laws or Ordinances.

- c. Any applicant to whom a variance is granted shall be given written notice specifying the differences between the base flood elevation and the elevation of which the building is to be built and a statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation, and
- d. The Building Official shall maintain the records of all appeal actions and report any variances granted to the Federal Emergency Management Agency upon request.
- e. Variances may not be issued when the variance will make the structure in violation of other federal, state or local laws, regulations or Ordinances.

Secs. 9-51 – 9-59. Reserved.

ARTICLE VII.
COMPLIANCE FOR PROPOSED REAL ESTATE TRANSACTIONS

Section 9-60. Provision for Inspections.

- 1. For the purpose of establishing pre-existing conditions which may not be in compliance with the Charleston County Flood Damage Prevention and Protection Ordinance, it is hereby established that the Building Services Department is authorized to conduct inspections of existing structures at the request or with the consent of the owner of the structure or his agent for compliance with the Charleston County Flood Damage Prevention and Protection Ordinance when requested for a proposed real estate transaction or insurance policy issue.
- 2. The County Building Official may promulgate regulations for the implementation of this program, consistent with the intent hereof and with the terms of the remainder of Chapter 9 of the code of Ordinances of Charleston County.
- 3. These inspections are to be conducted at a convenient time for the property owner or his agent and during the normal operating hours of the Building Services Department.
- 4. Reports generated as a result of these inspections are to be considered public records and are to be maintained in the Office of the Building Official in accordance with the County Records Retention schedule.

Secs. 9-61-9-69. Reserved.

ARTICLE VIII.
NUISANCES, PENALTIES, ORDINANCE CUMULATIVE, EFFECTIVE DATE

Sec. 9-70. Nuisances within a special flood hazard area.

- 1. Certain nuisances defined: Notwithstanding anything to the contrary set forth in the

Code of Ordinances, Charleston County, South Carolina, the following activities occurring within a special flood hazard area constitute a danger to the health, safety, and welfare of the residents of the county, are hereby defined as public nuisances and are prohibited within any special flood hazard area.

- a. The manufacture, processing, blending, mixing or refining of the following products as defined in the *International Fire Code* as adopted by County Council:
 - i. explosives;
 - ii. blasting agents
 - b. Storage of the products listed in subsection (a) above, except that the retail sale of packages products off-the-shelf at properly licensed and otherwise authorized retail sales outlets, is allowed.
2. *Defense – Prior use of property.* It shall be a defense to prosecution pursuant to section (1) above if:
- a. Property located within a special flood hazard zone was being used for a purpose defined as a nuisance in section (a) above, before August 3, 1971, has been continuously used for such purpose thereafter, and such use:
 - i. Was a permitted use pursuant to the County zoning Ordinance as of August 3, 1971; or
 - ii. Constituted a lawful non-conforming use under the County’s Zoning Ordinance on August 3, 1971; and
 - b. Property which becomes located within a special flood hazard area as the result of an amendment to the County’s FIRM was being used for a purpose defined as a nuisance in section (a) above, before the effective date of the amended FIRM, has been continuously used for such purpose thereafter, and such use:
 - i. Was permitted use pursuant to the County’s Zoning Ordinance as of the effective date of the FIRM; or
 - ii. Constituted a lawful non-conforming use under the County’s Zoning Ordinance on the effective date of the FIRM.

Sec. 9-71. Penalties.

1. *Criminal penalties:* 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 variance 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 (\$500.00) dollars or imprisoned for not more than thirty (30) days, or both, and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be

considered a separate offense. Nothing herein contained shall prevent Charleston County from taking such other lawful actions as are necessary to prevent or remedy any violation.

2. *Civil Remedies:* In addition to any other criminal or civil remedies that may be available to the County, the County may seek and obtain an injunction against the owner or owner's representative with control over the property in accordance with applicable laws and procedures.

Sec. 9-72. Ordinance cumulative.

The provisions of this Ordinance are to be cumulative of all other Ordinances or parts of Ordinances governing or regulating the same subject matter as that covered herein, provided, however, that all prior Ordinances or parts of Ordinances inconsistent with or in conflict with any of the provisions of this Ordinance, including, but not limited to, Ordinance No. 2164, 2124, 2075 2035, 1838, 1526, and 1349, are hereby expressly repealed to the extent of any such inconsistency or conflict. The enactment of this Ordinance shall not serve to terminate or be cause for the termination of the prosecution of any civil or criminal actions under the prior Ordinances which were pending at the time of the enactment hereof.

Sec. 9-73. Abrogation and Greater Restriction:

This Ordinance shall not in any way impair/remove the necessity of compliance with any other applicable laws, Ordinances, regulations, etc. Where this Ordinance imposes a greater restriction, the provisions of this Ordinance shall control.

Sec. 9-74. Effective date is as follows:

This Ordinance shall be effective immediately for all new permits issued on or after date of ratification.