# South Carolina Model

## Flood Damage Prevention Ordinance

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### ARTICLE I  GENERAL Standards

<table>
<thead>
<tr>
<th>Section A</th>
<th>Statutory Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section B</td>
<td>Findings of Fact</td>
</tr>
<tr>
<td>Section C</td>
<td>Statement of Purpose and Objectives</td>
</tr>
<tr>
<td>Section D</td>
<td>Lands to Which this Ordinance Applies</td>
</tr>
<tr>
<td>Section E</td>
<td>Establishment of Development Permit</td>
</tr>
<tr>
<td>Section F</td>
<td>Compliance</td>
</tr>
<tr>
<td>Section G</td>
<td>Interpretation</td>
</tr>
<tr>
<td>Section H</td>
<td>Partial Invalidity and Severability</td>
</tr>
<tr>
<td>Section I</td>
<td>Warning and Disclaimer of Liability</td>
</tr>
<tr>
<td>Section J</td>
<td>Penalties for Violation</td>
</tr>
</tbody>
</table>

### ARTICLE II  DEFINITIONS

<table>
<thead>
<tr>
<th>Section A</th>
<th>General</th>
</tr>
</thead>
</table>

### ARTICLE III  ADMINISTRATION

<table>
<thead>
<tr>
<th>Section A</th>
<th>Designation of Local Floodplain Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section B</td>
<td>Adoption of Letter of Map Revisions</td>
</tr>
<tr>
<td>Section C</td>
<td>Development Permit and Certification Requirements</td>
</tr>
<tr>
<td>Section D</td>
<td>Duties and Responsibilities of the Local Floodplain Administrator</td>
</tr>
<tr>
<td>Section E</td>
<td>Administrative Procedures</td>
</tr>
</tbody>
</table>

### ARTICLE IV  PROVISIONS FOR FLOOD HAZARD REDUCTION

<table>
<thead>
<tr>
<th>Section A</th>
<th>General Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section B</td>
<td>Specific Standards</td>
</tr>
<tr>
<td></td>
<td>1 - Residential Construction</td>
</tr>
<tr>
<td></td>
<td>2 - Non-Residential Construction</td>
</tr>
</tbody>
</table>

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Article I. General Standards

A. Statutory Authorization

Municipality (this section to be used for municipality only) – The Legislature of the State of South Carolina has in SC Code of Laws, Title 5 and Title 6, and amendments thereto, 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 ___________________________(governing body) of ___________________________(local unit), South Carolina does ordain as follows:

County (this section to be used for county only) – The legislature of the State of South Carolina has in SC Code of Laws, Title 4, Chapters 9 (Article 1), 25, and 27, and amendments thereto, 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 ___________________________(governing body) of ___________________________(local unit), South Carolina does ordain as follows:

B. Findings of Fact – The Special Flood Hazard Areas of the ___________________________(local unit) are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

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

C. Statement of Purpose and Objectives – It is the purpose of this ordinance to protect human life and health, minimize property damage, and encourage appropriate construction practices to minimize public and private losses due to flood conditions by requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction. Uses of the floodplain which are dangerous to health, safety, and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion are restricted or prohibited. These provisions attempt to control the alteration of natural
E. Establishment of Development Permit  A Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities.

F. 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.

G. Interpretation  In the interpretation and application of this ordinance all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under State law. This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions, shall prevail.

H. Partial Invalidity and Severability  If any part of this Ordinance is declared invalid, the remainder of the Ordinance shall not be affected and shall remain in force.

I. 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 ________________ (local unit) or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

J. 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 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 that $500.00 or imprisoned for not more than 30 days, or both. Each day the violation continues shall be considered a separate offense. Nothing herein contained shall prevent ________________ (local unit) from taking such other lawful action as is necessary to prevent or remedy any violation.
7. **Base flood** – the flood having a one percent chance of being equaled or exceeded in any given year.

8. **Basement** – means any enclosed area of a building that is below grade on all sides.

9. **Building** – see structure

10. **Coastal High Hazard Area** – an area of special flood hazard extending from offshore to the inland limit of the primary frontal dune along an open coast and any other area subject to velocity wave action from storms or seismic sources.

11. **Critical Development** – development that is critical to the community's public health and safety, is essential to the orderly functioning of a community, store or produce highly volatile, toxic or water-reactive materials, or house occupants that may be insufficiently mobile to avoid loss of life or injury. Examples of critical development include jails, hospitals, schools, fire stations, nursing homes, wastewater treatment facilities, water plants, and gas/oil/propane storage facilities.

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

13. **Elevated building** – a non-basement building built to have the lowest floor elevated above the ground level by means of solid foundation perimeter walls, pilings, columns, piers, or shear walls parallel to the flow of water.

14. **Executive Order 11988 (Floodplain Management)** – Issued by President Carter in 1977, this order requires that no federally assisted activities be conducted in or have the potential to affect identified special flood hazard areas, unless there is no practicable alternative.

15. **Existing construction** – means, for the purposes of determining rates, structures for which the start of construction commenced before [initial FIRM date, OR January 1, 1975, for FIRMs effective before that date].

16. **Existing manufactured home park or manufactured home subdivision** – a

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

24. **Freeboard** – a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. “Freeboard” tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

25. **Functionally dependent use**– a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long–term storage or related manufacturing facilities.

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

27. **Historic Structure** – any structure that is: (a) listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of the Interior (DOI)) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; (b) 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; (c) individually listed on a State inventory of historic places; (d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified (1) by an approved State program as determined by the Secretary of Interior, or (2) directly by the Secretary of Interior in states without approved programs. Some structures or districts listed on the State or local inventories **MAY NOT**
which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

33. **Manufactured Home Park or subdivision** – a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

34. **Mean Sea Level** – means, 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.

35. **National Geodetic Vertical Datum (NGVD) of 1929** – as corrected in 1929, elevation reference points set by National Geodetic Survey based on mean sea level.

36. **North American Vertical Datum (NAVD) of 1988** – vertical control, as corrected in 1988, used as the reference datum on Flood Insurance Rate Maps.

37. **New construction** – structure for which the start of construction commenced on or after ________________ (initial ordinance date). The term also includes any subsequent improvements to such structure.

38. **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 ________________. (initial ordinance date)

39. **Primary Frontal Dune** – a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and subject to erosion and overtopping from high tides and waves during 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.

40. **Recreational vehicle** – a vehicle which is: (a) built on a single chassis; (b) 400
gas or liquid storage tank that is principally above ground.

46. **Substantial damage** – damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Such repairs may be undertaken successively and their costs counted cumulatively. Please refer to the definition of "substantial improvement".

47. **Substantial improvement** – any repair, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement. This term includes structures that have incurred repetitive loss or substantial damage, regardless of the actual repair work performed. The term does not, however, include either:

   a) any project of improvement to 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,

   b) any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

Permits shall be cumulative for a period of five years. If the improvement project is conducted in phases, the total of all costs associated with each phase, beginning with the issuance of the first permit, shall be utilized to determine whether "substantial improvement" will occur.

48. **Substantially improved existing manufactured home park or subdivision** – where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction, or improvement commenced.

49. **Variance** – is a grant of relief from a term or terms of this ordinance.

50. **Violation** – the failure of a structure or other development to be fully
or the duties and responsibilities of the local floodplain administrator of Article III.D.11 the application for a development permit within the flood hazard area shall show:

(1) the elevation (in relation to mean sea level) of the lowest floor of all new and substantially improved structures, and

(2) if the structure will be floodproofed in accordance with the Non–Residential Construction requirements of Article IV.B.2 the elevation (in relation to mean sea level) to which the structure will be floodproofed.

c) Where base flood elevation data is not provided as set forth in Article I.D or the duties and responsibilities of the local floodplain administrator of Article III.D.11, then the provisions in the standards for streams without estimated base flood elevations and floodways of Article IV.C must be met.

d) Alteration of Watercourse: Where any watercourse will be altered or relocated as a result of proposed development, the application for a development permit shall include a description of the extent of watercourse alteration or relocation, an engineering study to demonstrate that the flood– carrying capacity of the altered or relocated watercourse is maintained and a map showing the location of the proposed watercourse alteration or relocation.

2. Certifications

a) Floodproofing Certification – When a structure is floodproofed, the applicant shall provide certification from a registered, professional engineer or architect that the non–residential, floodproofed structure meets the floodproofing criteria in the non–residential construction requirements of Article IV.B.2 and Article IV.E.2(b).

b) Certification During Construction – A lowest floor elevation or floodproofing certification is required after the lowest floor is completed. As soon as possible after completion of the lowest floor and before any further vertical construction commences, or floodproofing by whatever construction means, whichever is
a) Notify adjacent communities and the South Carolina Department of Natural Resources, Land, Water, and Conservation Division, State Coordinator for the National Flood Insurance Program, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.

b) In addition to the notifications required watercourse alterations per Article III.D.3a, written reports of maintenance records must be maintained to show that maintenance has been provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained. This maintenance must consist of a comprehensive program of periodic inspections, and routine channel clearing and dredging, or other related functions. The assurance shall consist of a description of maintenance activities, frequency of performance, and the local official responsible for maintenance performance. Records shall be kept on file for FEMA inspection.

c) If the proposed project will modify the configuration of the watercourse, floodway, or base flood elevation for which a detailed Flood Insurance Study has been developed, the applicant shall apply for and must receive approval for a Conditional Letter of Map Revision with the Federal Emergency Management Agency prior to the start of construction.

d) Within 60 days of completion of an alteration of a watercourse, referenced in the certification requirements of Article III.C.2.d, the applicant shall submit as-built certification, by a registered professional engineer, to the Federal Emergency Management Agency.

4. **Floodway encroachments** – Prevent encroachments within floodways unless the certification and flood hazard reduction provisions of Article IV.B.5 are met.

5. **Adjoining Floodplains** – Cooperate with neighboring communities with respect to the management of adjoining floodplains and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

6. **Notifying Adjacent Communities** – Notify adjacent communities prior to permitting substantial commercial developments and large subdivisions to
data has not been provided in accordance with Article I.D, obtain, review, and reasonably utilize best available base flood elevation data and floodway data available from a federal, state, or other source, including data developed pursuant to the standards for subdivision proposals outlined in Article IV.B.12, in order to administer the provisions of this ordinance. Data from preliminary, draft, and final Flood Insurance Studies constitutes best available data from a federal, state, or other source. Data must be developed using hydraulic models meeting the minimum requirement of NFIP approved model. If an appeal is pending on the study in accordance with 44 CFR Ch. 1, Part 67.5 and 67.6, the data does not have to be used.

11. Special Flood hazard Area/topographic Boundaries Conflict – When the exact location of boundaries of the areas special flood hazards conflict with the current, natural topography information at the site; the site information takes precedence when the lowest adjacent grade is at or above the BFE, the property owner may apply and be approved for a Letter of Map Amendment (LOMA) by FEMA. The local floodplain administrator in the permit file will maintain a copy of the Letter of Map Amendment issued from FEMA.

12. On–Site inspections – Make on–site inspections of projects in accordance with the administrative procedures outlined in Article III.E.1.

13. Administrative Notices – Serve notices of violations, issue stop–work orders, revoke permits and take corrective actions in accordance with the administrative procedures in Article III.E.

14. Records Maintenance – Maintain all records pertaining to the administration of this ordinance and make these records available for public inspection.

15. Annexations and Detachments – Notify the South Carolina Department of Natural Resources Land, Water and Conservation Division, State Coordinator for the National Flood Insurance Program within six (6) months, of any annexations or detachments that include special flood hazard areas.

16. Federally Funded Development – The President issued Executive Order 11988, Floodplain Management May 1977. E.O. 11988 directs federal agencies to assert a leadership role in reducing flood losses and losses to environmental values served by floodplains. Proposed developments must go through an eight–step review process. Evidence of compliance with the executive order must be submitted as part of the permit review process.
inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the floodplain administrator has a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction at any reasonable hour for the purposes of inspection or other enforcement action.

2. **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.

3. **Revocation of Permits** – The local floodplain administrator may revoke and require the return of the 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 or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable state or local law may also be revoked.

4. **Periodic Inspections** – The local floodplain administrator and each member of his/her 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.

5. **Violations to be Corrected** – When the local floodplain administrator finds violations of applicable state and local laws, it shall be his/her duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law on the property he owns.

6. **Actions in Event of Failure to Take Corrective Action**: If the owner of a building or property shall fail to take prompt corrective action, the floodplain administrator shall give him written notice, by certified or registered mail to his last known address or by personal service, that:
achieve compliance with this ordinance then the local floodplain administrator shall notify the Federal Emergency Management Agency (FEMA) to initiate a Section 1316 of the National Flood insurance Act of 1968 action against the structure upon the finding that the violator refuses to bring the violation into compliance with the ordinance. Once a violation has been remedied the local floodplain administrator shall notify FEMA of the remedy and ask that the Section 1316 be rescinded.

11. The following documents are incorporated by reference and may be used by the local floodplain administrator to provide further guidance and interpretation of this ordinance as found on FEMA’s website at www.fema.gov:

   a) FEMA 55 Coastal Construction Manual

   b) All FEMA Technical Bulletins

   c) All FEMA Floodplain Management Bulletins

   d) FEMA 348 Protecting Building Utilities from Flood Damage

   e) FEMA 499 Home Builder’s Guide to Coastal Construction Technical Fact Sheets

**Article IV. PROVISIONS FOR FLOOD HAZARD REDUCTION**

**A. General Standards**

Development may not occur in the Special Flood Hazard Area (SFHA) where alternative locations exist due to the inherent hazards and risks involved. Before a permit is issued, the applicant shall demonstrate that new structures cannot be located out of the SFHA and that encroachments onto the SFHA are minimized. In all areas of special flood hazard the following provisions are required:

1. **Reasonably Safe from Flooding** – Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding

2. **Anchoring** – All new construction and substantial improvements shall be anchored to prevent flotation, collapse, and lateral movement of the structure.
provisions of this ordinance, shall meet the requirements of "new construction" as contained in this ordinance. This includes post-FIRM development and structures.

11. **Non-Conforming Buildings or Uses** – Non-conforming buildings or uses may not be enlarged, replaced, or rebuilt unless such enlargement or reconstruction is accomplished in conformance with the provisions of this ordinance. Provided, however, nothing in this ordinance shall prevent the repair, reconstruction, or replacement of an existing building or structure located totally or partially within the floodway, provided that the bulk of the building or structure below base flood elevation in the floodway is not increased and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.

12. **American with Disabilities Act (ADA)** – A building must meet the specific standards for floodplain construction outlined in Article IV.B, as well as any applicable ADA requirements. The ADA is not justification for issuing a variance or otherwise waiving these requirements. Also, the cost of improvements required to meet the ADA provisions shall be included in the costs of the improvements for calculating substantial improvement.

**B. Specific Standards**

In all areas of special flood hazard (Zones A, AE, AH, AO, A1–30, V, and VE) where base flood elevation data has been provided, as set forth in Article I.D or outlined in the Duties and Responsibilities of the local floodplain administrator Article III.D., the following provisions are required:

1. **Residential Construction** – New construction and substantial improvement of any residential structure (including manufactured homes) shall have the lowest floor elevated no lower than _____ feet above the base flood elevation. No basements are permitted. Should solid foundation perimeter walls be used to elevate a structure, flood openings sufficient to automatically equalize hydrostatic flood forces, shall be provided in accordance with the elevated buildings requirements in Article IV B.4.

2. **Non-Residential Construction**

   a) New construction and substantial improvement of any commercial, industrial, or non–residential structure (including manufactured
on sites in an existing manufactured home park or subdivision that are not subject to the provisions for residential construction in Article IV.B.1 of this ordinance must be elevated so that the lowest floor of the manufactured home is elevated no lower ________ feet than above the base flood elevation, and be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement.

c) Manufactured homes shall be anchored to prevent flotation, collapse, and lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, and lateral movement in accordance with Section 40–29–10 of the South Carolina Manufactured Housing Board Regulations, as amended. Additionally, when the elevation requirement would be met by an elevation of the chassis 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above 36 inches in height an engineering certification is required.

d) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood-prone areas. This plan shall be filed with and approved by the local floodplain administrator and the local Emergency Preparedness Coordinator.

4. Elevated Buildings – New construction and substantial improvements of elevated buildings that include fully enclosed areas below the lowest floor that are usable solely for the parking of vehicles, building access, or limited storage in an area other than a basement, and which are subject to flooding shall be designed to preclude finished space and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

   a) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet or exceed all of the following minimum criteria:

   (1) Provide a minimum of two openings on different walls having a total net area of not less than one square inch for every square
(3) One wet location switch and/or outlet connected to a ground fault interrupt breaker may be installed below the required lowest floor elevation specified in the specific standards outlined in Article IV.B.1, 2 and 3.

(4) All construction materials below the required lowest floor elevation specified in the specific standards outlined in Article IV.B 1, 2, 3 and 4 should be of flood resistant materials.

5. **Floodways** – Located within areas of special flood hazard established in Article I.D, are areas designated as floodways. The floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris and potential projectiles and has erosion potential. The following provisions shall apply within such areas:

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

   (1) It has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be presented to the local floodplain administrator.

   (2) A Conditional Letter of Map revision (CLOMR) has been approved by FEMA. A Letter of Map Revision must be obtained upon completion of the proposed development.

b) If Article IV.B.5a is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article IV.

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 Article IV B.3 and the encroachment standards of Article IV.B.5(a) are met.
(1) For all development proposals that impact floodway
delineations or base flood elevations, the community shall
ensure that technical or scientific data reflecting such changes
be submitted to FEMA as soon as practicable, but no later than
six months of the date such information becomes available.
These development proposals include; but not limited to:

(a) Floodway encroachments that increase or decrease base
flood elevations or alter floodway boundaries;

(b) Fill sites to be used for the placement of proposed
structures where the applicant desires to remove the site
from the special flood hazard area;

(c) Alteration of watercourses that result in a relocation or
elimination of the special flood hazard area, including
the placement of culverts; and

(d) Subdivision or large scale development proposals
requiring the establishment of base flood elevations in
accordance with Article IV.C.1.

(2) It is the responsibility of the applicant to have technical data,
required in accordance with Article IV.B.7, prepared in a format
required for a Conditional Letter of Map Revision or Letter of
Map Revision, and submitted to FEMA. Submittal and
processing fees for these map revisions shall also be the
responsibility of the applicant.

(3) The local floodplain administrator shall require a Conditional
Letter of Map Revision prior to the issuance of a floodplain
development permit for:

(a) Proposed floodway encroachments that increase the
base flood elevation; and

(b) Proposed development which increases the base flood
elevation by more than one foot in areas where FEMA
has provided base flood elevations but no floodway.
provided below base flood elevation in conformance with Article IV.B.4a, and


9. Swimming Pool Utility Equipment Rooms – If the building cannot be built at or above the BFE, because of functionality of the equipment then a structure to house the utilities for the pool may be built below the BFE with the following provisions:

a) Meet the requirements for accessory structures in Article IV.B.8

b) The utilities must be anchored to prevent flotation and shall be designed to prevent water from entering or accumulating within the components during conditions of the base flood.

10. Elevators

a) Install a float switch system or another system that provides the same level of safety necessary for all elevators where there is a potential for the elevator cab to descend below the BFE during a flood per FEMA’s Technical Bulletin 4–93 Elevator Installation for Buildings Located in Special Flood Hazard Areas.

b) All equipment that may have to be installed below the BFE such as counter weight roller guides, compensation cable and pulleys, and oil buffers for traction elevators and the jack assembly for a hydraulic elevator must be constructed using flood-resistant materials where possible per FEMA’s Technical Bulletin 4–93 Elevator Installation for Buildings Located in Special Flood Hazard Areas.

11. Fill – An applicant shall demonstrate that fill is the only alternative to raising the building to meet the residential and non-residential construction requirements of Article IV B(1) or B (2), and that the amount of fill used will not affect the flood storage capacity or adversely affect adjacent properties. The following provisions shall apply to all fill placed in the special flood
c) All subdivision proposals and other proposed new development shall have adequate drainage provided to reduce exposure to flood damage.

d) The applicant shall meet the requirement to submit technical data to FEMA in Article IV B.7 when a hydrologic and hydraulic analysis is completed that generates base flood elevations.

C. Standards for Streams without Established Base Flood Elevations and Floodways –

Located within the areas of special flood hazard (Zones A and V) established in Article I.D, are small streams where no base flood data has been provided and where no floodways have been identified. The following provisions apply within such areas:

1. In all areas of special flood hazard where base flood elevation data are 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 containing at least 50 lots or 5 acres, whichever is less.

2. No encroachments, including fill, new construction, substantial improvements and new development shall be permitted within 100 feet of the stream bank unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

3. If Article IV.C.1 is satisfied and base flood elevation data is available from other sources, all new construction and substantial improvements within such areas shall comply with all applicable flood hazard ordinance provisions of Article IV and shall be elevated or floodproofed in accordance with elevations established in accordance with Article III.E.11.

4. Data from preliminary, draft, and final Flood Insurance Studies constitutes best available data. Refer to FEMA Floodplain Management Technical Bulletin 1-98 Use of Flood Insurance Study (FIS) Data as Available Data. If an appeal is pending on the study in accordance with 44 CFR Ch. 1, Part 67.5 and 67.6, the data does not have to be used.

5. When base flood elevation (BFE) data is not available from a federal, state, or
1. All new construction and substantial improvements of residential structures shall have the lowest floor elevated to at least as high as the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor shall be elevated at least three (3) feet above the highest adjacent grade.

2. All new construction and substantial improvements of non-residential structures shall:
   
   a) Have the lowest floor elevated to at least as high as the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor shall be elevated at least three (3) feet above the highest adjacent grade; or,
   
   b) Be completely flood-proofed together with attendant utility and sanitary facilities to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as stated in Article III.D.

3. All structures on slopes must have drainage paths around them to guide water away from the structures.

F. **Coastal High Hazard Areas (V-Zones)** (this section can be removed if no V Zones) – Located within the areas of special flood hazard established in Article I.D or Article III.E.11 are areas designated as coastal high hazard areas. These areas have special flood hazards associated with wave wash. The following provisions shall apply within such areas:

1. All new construction and substantial improvements shall be located landward of the reach of mean high tide, first line of stable natural vegetation and comply with all applicable Department of Heath and Environmental Control (DHEC) Ocean and Coastal Resource Management (OCRM) setback requirements.
8. All new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, 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. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Breakaway wall enclosures shall not exceed 299 square feet. Only flood resistant materials shall be used below the required flood elevation specified in Article IV.B. One wet location switch and/or outlet connected to a ground fault interrupt breaker may be installed below the required lowest floor elevation specified in Article IV.B.

Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

a) Breakaway wall collapse shall result from water load less than that which would occur during the base flood.

b) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). The water loading shall be those values associated with the base flood. The wind loading values shall be those required by applicable IBC International Building Code.

c) Such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation, finished or partitioned into multiple rooms, or temperature-controlled.

9. 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 elevation standards of Article IV.B.3.
structurally independent of the main building and must not cause an obstruction.

(3) If an at-grade, structurally independent deck is proposed then a design professional must evaluate the design to determine if it will adversely affect the building and nearby buildings.

12. Parking areas should be located on a stable grade under or landward of a structure. Any parking surface shall consist of gravel or aggregate.

13. 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 base flood event plus _____ feet. This requirement does not exclude the installation of outdoor faucets for shower heads, sinks, hoses, etc., as long as cut off devices and back flow prevention devices are installed to prevent contamination to the service components and thereby minimize any flood damages to the building. No utilities or components shall be attached to breakaway walls.

Article V. VARIANCE PROCEDURES

A. Establishment of Appeal Board – The ________________________, (name of appeal board) as established by ________________________(local unit), shall hear and decide requests for variances from the requirements of this ordinance.

B. Right to Appeal – Any person aggrieved by the decision of the appeal board or any taxpayer may appeal such decision to the Court.

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

D. Functionally Dependant Uses – Variances may be issued for development necessary for the conduct of a functionally dependent use, provided the criteria of this Article are met, no reasonable alternative exist, and the development is protected by
5. Any mechanical, electrical, or other utility equipment must be located above the base flood elevation (BFE), plus any required freeboard, or be contained within a watertight, floodproofed enclosure that is capable of resisting damage during flood conditions in accordance with Article IV.A.5 of this ordinance.

6. The agricultural structure must comply with the floodway encroachment provisions of Article IV.B.5 of this ordinance.

7. Major equipment, machinery, or other contents must be protected. Such protection may include protective watertight floodproofed areas within the building, the use of equipment hoists for readily elevating contents, permanently elevating contents on pedestals or shelves above the base flood elevation, or determining that property owners can safely remove contents without risk to lives and that the contents will be located to a specified site out of the floodplain.

F. Considerations – In passing upon such applications, the appeal board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:

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

2. The danger to life and property due to flooding or erosion damage, and the safety of access to the property in times of flood for ordinary and emergency vehicles;

3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

4. The importance of the services provided by the proposed facility to the community;

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

6. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
minimum necessary, considering the flood hazard, to afford relief.

3. Variances shall only be issued upon a showing of good and sufficient cause, a determination that failure to grant the variance would result in exceptional hardship, and a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

4. Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation (BFE) and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk. Such notification shall be maintained with a record of all variance actions.

5. The local floodplain administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency (FEMA) upon request.

6. Variances shall not be issued for unpermitted development or other development that is not in compliance with the provisions of this ordinance. Violations must be corrected in accordance with Article III.E.5 of this ordinance.

Article VI. LEGAL STATUS PROVISIONS

A. Effect on Rights and Liabilities under the Existing Flood Damage Prevention Ordinance – This Ordinance in part comes forward by re-enactment of some of the provisions of the flood damage prevention ordinance enacted ____________ (previous ordinance adoption date) and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued there under are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the flood damage prevention ordinance of ____________ (local government) enacted on ____________ (previous ordinance adoption date), as amended, which are not reenacted herein, are repealed.

B. Effect upon Outstanding Building Permits – Nothing herein contained shall require any change in the plans, construction, size or designated use of any building, structure or part thereof for which a building permit has been granted by the Chief