

# ARTICLE 16. FLOODPLAIN MANAGEMENT, EROSION AND SEDIMENT CONTROL, AND STORMWATER MANAGEMENT

## Title

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## **TITLE 1. DEFINITIONS AND GENERAL PROVISIONS**

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### **§ 16-1-101. Definitions.**

In this article, the following words have the meanings indicated.

- (1) “Accessory” has the meaning stated in Article 18 of this Code.

- (2) Accessory Structure: Has the meaning stated in Article 18 of this Code. For the purposes of Title 2, an accessory structure shall be used solely for parking of vehicles and limited storage.
- (3) “Adequate outfall” means an outfall that has adequate capacity and stability as determined in the County Procedures Manual.
- (4) “Administration” for the purpose of Title 4 means the Maryland Department of the Environment (MDE), Water Management Administration (WMA).
- (5) “Administrative waiver” for the purpose of Title 4 means a decision by the Anne Arundel County Office of Planning and Zoning to allow construction of a development to be governed by the stormwater management document in effect as of May 4, 2009, and is distinct from a modification granted pursuant to this article or Article 17 of this Code.
- (6) “Agricultural land management practices” means those methods and procedures used in the cultivation of land in order to further crop and livestock production and conservation of related soil and water resources. Import and export of fill material, logging and timber removal operations, or the conversion of forest to pasture or cropland are not part of this definition.
- (7) Alteration of a Watercourse: For the purpose of this Title, alteration of a watercourse includes, but is not limited to widening, deepening or relocating the channel, including excavation or filling of the channel. Alteration of a watercourse does not include construction of a road, bridge, culvert, dam, or in-stream pond unless the channel is proposed to be realigned or relocated as part of such construction.
- (8) Area of Shallow Flooding: A designated Zone AO on the Flood Insurance Rate Map with a 1-percent annual chance or greater of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident; such flooding is characterized by ponding or sheet flow.
- (9) “As-built plan” means a plan drawn to the same scale as the approved plans which shows that the location, dimensions, elevations, and status of the resulting grading, drainage structures, drainage systems, and erosion and sediment control practices are in substantial conformance with the previously approved plans, noting any substantial deviations.
- (10) Base Building: The building to which an addition is being added. This term is used in provisions relating to additions.
- (11) Base Flood: The flood having a one-percent chance of being equaled or exceeded in any given year; the base flood is also referred to as the 1-percent annual chance (100-year) flood.

- (12) **Base Flood Elevation:** The water surface elevation of the base flood in relation to the datum specified on the community's Flood Insurance Rate Map. In areas of shallow flooding, the base flood elevation is the highest adjacent natural grade elevation plus the depth number specified in feet on the Flood Insurance Rate Map, or at least four (4) feet if the depth number is not specified.
- (13) "Basement" means that portion of a structure having its lowest floor below ground or grade elevation on all sides.
- (14) "Best management practice (BMP)" has the meaning stated in COMAR 26.17.02.02.
- (15) **Building Code(s):** The effective Maryland Building Performance Standards (COMAR 05.02.07), including the 2012 International Building Code, the 2012 International Residential Code, and the 2012 International Energy Conservation Code as contained in Article 15 of this Code.
- (16) "Buffer management plan" has the meaning stated in Article 17 of this Code.
- (17) "Certificate of occupancy" means an official form issued by the Director certifying that a structure has been built in accordance with approved plans and providing that the structure may be inhabited or used for the intended purpose.
- (18) "Certification" means a statement signed and sealed by a design professional that specific construction, inspections, or tests have been performed and that they comply with the applicable requirements of this article.
- (19) "Channel protection storage volume (CPv)" has the meaning stated in COMAR 26.17.02.02.
- (20) "Clearing" has the meaning stated in Article 17 of this Code.
- (21) **Coastal High Hazard Area:** 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 high velocity wave action from storms. Coastal high hazard areas also are referred to as "V ZONES" and are designated on FIRMs as Zones VE or V1-30.
- (22) "Concept plan" has the same meaning as COMAR 26.17.02.02.
- (23) "County Procedures Manual" means the Anne Arundel County Stormwater Management Practices and Procedures Manual.
- (24) **Critical And Essential Facilities:** Buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow or earthquakes. [Note: See Article 15 § -2-101-1604.5 and Table 1604.5.]
- (25) "Critical area" has the meaning stated in Article 18 of this Code.

- (26) Declaration of Land Restriction (Nonconversion Agreement): A form signed by the owner to agree not to convert or modify in any manner that is inconsistent with the terms of the permit and this title, certain enclosures below the lowest floor of elevated buildings and certain accessory structures. The form requires the owner to record it in the land records to inform future owners of the restrictions.
- (27) “Department” means the Department of Inspections and Permits.
- (28) “Design Manual” has the meaning stated in COMAR 26.17.02.02.
- (29) “Design professional” means a professional engineer, professional land surveyor, or professional landscape architect licensed by the State.
- (30) “Developed woodlands” has the meaning stated in Article 17 of this Code.
- (31) “Developer” has the meaning stated in Article 17 of this Code.
- (32) “Development” has the meaning stated in Article 17 of this Code.
- (33) “Direct discharge” has the meaning stated in COMAR 26.17.02.02.
- (34) “Director” means the Director of the Department of Inspections and Permits or the Director’s designee.
- (35) “Disturbance” has the meaning stated in Article 17 of this Code.
- (36) “DPW Design Manual” means the Department of Public Works Design Manual and the Standards and Specifications for Construction.
- (37) “Drainage area” has the meaning stated in COMAR 26.17.02.02.
- (38) “Easement” has the meaning stated in Article 17 of this Code.
- (39) “Elevation certificate” means an official FEMA form used to certify the elevation of a structure that is prepared by a design professional authorized to certify elevations.
- (40) Enclosure Below The Lowest Floor: An unfinished or flood-resistant enclosure that is located below an elevated building, is surrounded by walls on all sides, and is usable solely for parking of vehicles, building access or storage, in an area other than a basement area, provided that such enclosure is built in accordance with the applicable design requirements specified in this Title. Also

see “lowest floor.”

- (41) “Environmental site design (ESD)” has the meaning stated in COMAR 26.17.02.02.
- (42) “Erosion” has the meaning stated in COMAR 26.17.01.01.
- (43) “Estimated cost” means the total cost estimated by the Department based on unit prices adopted by the Director.
- (44) “Exemption” means those land development activities that are not subject to the stormwater management requirements contained in Title 4 of this article.
- (45) “Extreme flood volume (Qf)” has the meaning stated in COMAR 26.17.02.02.
- (46) “Federal Emergency Management Agency (FEMA)” means the federal agency responsible for floodplain management and administering the National Flood Insurance Program.
- (47) “Fill” means a deposit of soil, rock, or other materials placed by humans.
- (48) “Final stormwater management plan” has the meaning stated in COMAR 26.17.02.02.
- (49) Flood: 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.
- (50) Flood Damage-Resistant Materials: Any construction material that is capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair in accordance with Article 15 § 2-101-1612 and § 2-102-322. [Note: See NFIP Technical Bulletin #2, “Flood Damage-Resistant Materials Requirements.”]
- (51) Flood Insurance Rate Map (FIRM): an official map on which the Federal Emergency Management Agency has delineated special flood hazard areas to indicate the magnitude and nature of flood hazards, to designate applicable flood zones, and to delineate floodways, if applicable. FIRMs that have been prepared in digital format or converted to digital format are referred to as Digital FIRMs (DFIRM).
- (52) Flood Insurance Study (FIS): the official report in which the federal emergency management agency has provided flood profiles, floodway information, and the water surface elevations.

- (53) **Flood Opening:** A flood opening (non-engineered) is an opening that is used to meet the prescriptive requirement of 1 square inch of net open area for every square foot of enclosed area. An engineered flood opening is an opening that is designed and certified by an authorized design professional as meeting certain performance characteristics, including providing automatic entry and exit of floodwaters; the certification requirement may be satisfied by an individual certification or issuance of an Evaluation Report by the ICC Evaluation Service, Inc. [Note: See NFIP Technical Bulletin #1, “Openings in Foundation Walls and Walls of Enclosures.”]
- (54) “Flooding” means stormwater runoff from a natural or human-made stormwater runoff conveyance system that inundates an existing structure or that overflows onto land that lies outside of floodplain easements, drainage easements, or areas shown on federal insurance rate maps as flood-prone areas.
- (55) “Floodplain” means an area that after total development of the watershed in accordance with applicable zoning would be inundated by water from any source as determined by the County Procedures Manual.
- (56) “Floodplain Administrator” means the Director of the Department of Inspections and Permits or the Director’s designee who will have the responsibility, authority and means to implement and interpret the flood plain management regulations in this Article.
- (57) **Flood Protection Elevation:** The base flood elevation plus one (1) foot of freeboard. Freeboard is a factor of safety that compensates for uncertainty in factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, obstructed bridge openings, debris and ice jams, climate change, and the hydrologic effect of urbanization in a watershed.
- (58) **Flood Zone:** A designation for areas that are shown on Flood Insurance Rate Maps:
- (1) **Zone A:** Special flood hazard areas subject to inundation by the 1-percent annual chance (100-year) flood; base flood elevations are not determined.
  - (2) **Zone AE and Zone A1-30:** special flood hazard areas subject to inundation by the 1-percent annual chance (100-year) flood; base flood elevations are determined; floodways may or may not be determined. In areas subject to tidal flooding, the Limit of Moderate Wave Action may or may not be delineated.
  - (3) **Zone Ah and Zone Ao:** Areas of shallow flooding, with flood depths of 1 to 3 feet (usually areas of ponding or sheet flow on sloping terrain), with or without BFEs or designated flood depths.
  - (4) **Zone B and Zone X (shaded):** Areas subject to inundation by the 0.2-percent annual chance (500-year) flood; areas subject to the 1-percent annual chance (100-year) flood with average depths of less than 1 foot or with contributing drainage area less than 1 square mile; and areas protected from the base flood by levees.
  - (5) **Zone C and Zone X (unshaded):** Areas outside of zones designated A, AE, A1-30, AO, VE, V1-30, B, and X (shaded).
  - (6) **Zone VE and Zone V1-30:** Special flood hazard areas subject to inundation by the 1-

percent annual chance (100-year) flood and subject to high velocity wave action (also see coastal high hazard area).

- (59) “Floodproofing” means any combination of structural or nonstructural changes, adjustments, or actions, which reduce or eliminate flood damage to a structure, contents, utilities, and equipment.
- (60) “Floodproofing certificate” means an official FEMA form prepared by an authorized licensed design professional and used to certify that a nonresidential structure has been designed and constructed to be floodproofed to the flood protection elevation.
- (61) “Flood protection elevation” means the elevation of the 100-year flood plus one foot freeboard.
- (62) “Floodway” means the channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation more than one foot in height.
- (63) “Forest” has the meaning stated in Article 17 of this Code.
- (64) “Forest management plan” has the meaning stated in Article 17 of this Code.
- (65) “Freeboard” means an additional height used as a factor of safety in determining the elevation of a structure or floodproofing to compensate for factors that may increase the flood heights.
- (66) Free-of-Obstruction: A term that describes open foundations (pilings, columns, or piers) without attached elements or foundation components that would obstruct the free passage of floodwaters and waves beneath structures that are elevated on such foundations. [Note: See NFIP Technical Bulletin #5, “Free-of-Obstruction Requirements.”]
- (67) 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.
- (68) “Grading” means to cause the disturbance of the earth, and the term includes clearing, excavating, filling, including hydraulic fill, stockpiling of earth materials, grubbing, rootmat or top soil disturbance, or a combination of any of these operations, including logging and timber removal operations.
- (69) “Grading permit” means a permit issued to authorize grading to be performed in accordance with this article.

- (70) **Highest Adjacent Grade:** The highest elevation of the ground surface, prior to construction, next to the proposed foundation of a structure.
- (71) **“Historic structure”** means a structure that is listed on the Maryland Inventory of Historic Properties, the National Register of Historic Places, or the National Historic Landmarks.
- (72) **Hydrologic and Hydraulic Engineering Analyses:** Analyses performed by a authorized licensed design professional , in accordance with standard engineering practices that are accepted by the Maryland Department of the Environment (Nontidal Wetlands & Waterways) and FEMA, used to determine the base flood, other frequency floods, flood elevations, floodway information and boundaries, and flood profiles.
- (73) **“Impervious surface”** means a human-made surface through which water does not penetrate, including hot bituminous asphaltic pavement, cold mix asphaltic pavement, compacted gravel surfacing, and portland cement concrete used for roads, sidewalks, driveways, curb and gutter, patios, porches, swimming pools, tennis courts, parking areas, and principal and accessory structure coverage areas.
- (74) **“Individual lot development”** means development on a site for which subdivision approval is not required.
- (75) **“Infiltration”** means the passage or movement of water into the soil surface.
- (76) **Letter Of Map Change (LOMC):** A Letter of Map Change is an official FEMA determination, by letter, that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of Map Change include:
- Letter of Map Amendment (LOMA):** An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property or structure is not located in a special flood hazard area.



Letter of Map Revision (LOMR): a revision based on technical data that may show changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. A Letter of Map Revision based on Fill (LOMR-F), is a determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer exposed to flooding associated with the base flood. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.

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 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 or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA, to revise the effective FIRM.

- (77) Lowest Floor: The lowest floor of the lowest enclosed area (including basement) of a building or structure; the floor of an enclosure below the lowest floor is not the lowest floor provided the enclosure is constructed in accordance with this title. The lowest floor of a manufactured home is the bottom of the lowest horizontal supporting member (longitudinal chassis frame beam).
- (78) "Manufactured home" means a structure transportable in one or more sections that is built on a permanent chassis and is designed for use as a dwelling with or without a permanent foundation when connected to the required utilities, and the term includes manufactured homes, trailers, and other similar vehicles placed on a site for more than 180 consecutive days.
- (79) Market Value: For the purposes of this Title, the market value of a building is determined by a licensed real estate appraiser or the most recent, full phased-in assessment value of the building (improvement) determined by the Maryland Department of Assessments and Taxation.
- (80) "Maximum extent practicable (MEP)" has the meaning stated in COMAR 26.17.02.02.
- (81) "Mean high-water line" has the meaning stated in Article 18 of this Code.
- (82) National Flood Insurance Program (NFIP): The program authorized by the U.S. Congress in 42 U.S.C. §§4001 - 4129. The NFIP makes flood insurance coverage available in communities that agree to adopt and enforce minimum regulatory requirements for development in areas prone to flooding (see definition of "Special Flood Hazard Area").
- (83) "New construction" means structures for which construction commenced on or after July 25, 1988.
- (84) "New development" means development on a site where subdivision, site development plan,

or permit approval is required.

- (85) NFIP State Coordinator: The administrator of regulatory programs for development and construction that occur within the waters of the State, including nontidal wetlands, nontidal waters and floodplains, and State and private tidal wetlands (Tidal Wetlands) within the Maryland Department of the Environment.
- (86) “Nonstructural stormwater management practice” means those practices set forth in COMAR 26.17.02.08.B.
- (87) Nontidal Waters Of The State: see “Waters of the State.” As used in this title, “nontidal waters of the state” refers to any stream or body of water within the state that is subject to State regulation, including the “100-year frequency floodplain of free-flowing waters.” COMAR 26.17.04 states that “the landward boundaries of any tidal waters shall be deemed coterminous with the wetlands boundary maps adopted pursuant to Environment Article, §16-301, Annotated Code of Maryland.” Therefore, the boundary between the tidal and nontidal waters of the State is the tidal wetlands boundary.
- (88) “Offsite stormwater management” means the design and construction of a facility necessary to control stormwater from more than one development site.
- (89) “One-hundred year flood” means a flood that has a 1% chance of being equaled or exceeded in a given year. The one hundred year flood is also referred to as the base flood.
- (90) “Onsite stormwater management” means the design and construction of systems necessary to control stormwater within an immediate development site.
- (91) “Outfall” means the point at which a proposed stormwater conveyance system carrying stormwater runoff from a site discharges into an existing stormwater conveyance system.
- (92) “Overbank flood protection volume (Qp)” has the meaning stated in COMAR 26.17.02.02.
- (93) “Planning and Zoning Officer” means the Planning and Zoning Officer or the Officer’s designee.
- (94) “Planning techniques” has the meaning stated in COMAR 26.17.02.02.
- (95) Person: An individual or group of individuals, corporation, partnership, association, or any other entity, including State and local governments and agencies.
- (96) “Point of investigation” means the point located downstream from a site discharge where the post-development runoff is less than or equal to 10 % of the total runoff to that point. All runoff computations shall be based on the 10-year storm, curve number and time of concentration based on ultimate development and no peak management for the total runoff to that point.

- (97) “Private stormwater management” means the ESD planning techniques, treatment practices, and structural stormwater measures used to satisfy the minimum control requirements of Title 4 of this article that are not considered public stormwater management.
- (98) “Public stormwater management” means the ESD planning techniques, treatment practices, and structural stormwater measures used to satisfy the Minimum Control requirements of Title 4 of this article for projects where the stormwater management system is owned or maintained by the Department of Public Works, the Department of Recreation and Parks, the Department of Central Services, or any other County agency or department.
- (99) “Recharge volume (REv)” has the meaning stated in COMAR 26.17.02.02.
- (100) Recreational Vehicle: A vehicle that is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light duty truck, and designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.
- (101) “Redevelopment” has the meaning stated in COMAR 26.17.02.02.
- (102) “Regenerative Step Pool Storm Conveyance (SPSC) system” has the meaning stated in the County Procedures Manual.
- (103) “Responsible personnel” has the meaning stated in COMAR 26.17.01.01.
- (104) “Retrofitting” has the meaning stated in COMAR 26.17.02.02.
- (105) “Sediment” has the meaning stated in COMAR 26.17.01.01.
- (106) “Site” has the meaning stated in COMAR 26.17.02.02.
- (107) “Site improvement” means storm drains, roads, curbs and gutters, concrete work, stabilization, stormwater management facilities, and other structural improvements.
- (108) “Slope” means an inclined surface of a fill, excavation, or natural terrain.
- (109) Special Flood Hazard Area (SFHA): The land in the floodplain subject to a one-percent or greater chance of flooding in any given year. Special flood hazard areas are designated by the Federal Emergency Management agency in Flood Insurance Studies and on Flood Insurance Rate Maps as Zones A, AE, AH, AO, A1-30, and A99, and Zones VE and V1-30. The term

includes areas shown on other flood maps that are identified in Section 16-2-103.

- (110) “Stabilization” means the prevention of soil movement by vegetative or structural means.
- (111) “Standard grading plan” means a plan that may be used in lieu of a grading permit only for certain minor grading and earth disturbance associated with minor commercial and residential construction.
- (112) “Steep slope” has the meaning stated in Article 17.
- (113) “Stormwater” has the meaning stated in COMAR 26.17.02.02.
- (114) “Stormwater management system” has the meaning stated in COMAR 26.17.02.02.
- (115) “Stormwater management site development plan” has the same meaning as “site development plan” as defined in COMAR 27.17.02.02.
- (116) “Structural stormwater management practice” means those practices set forth in COMAR 26.17.02.08C.
- (117) “Structure” has the meaning stated in Article 18 of this Code.
- (118) “Subdivision” has the meaning stated in Article 17 of this Code.
- (119) Substantial Damage: Damage of any origin sustained by a building or structure whereby the cost of restoring the building or structure to its before damaged condition would equal or exceed 50 percent of the market value of the building or structure before the damage occurred. Also used as “substantially damaged” structures.
- (120) “Substantial Improvement” means any reconstruction, rehabilitation, addition or other improvement to a structure other than an historic structure, the cost of which equals or exceeds 50% of the state’s assessed value of the structure or, an appraisal performed by a professional real estate appraiser of the market value of the structure (less land value) before commencement of the reconstruction, rehabilitation, addition or other improvement or, if the structure has substantial damaged and is being restored, before the damage occurred, but the term does not include the minimum repairs needed to correct violations of state or county health, safety, or sanitary codes.
- (121) Temporary Structure: as defined in Article 15 § 2-101-3103.
- (122) “Tributary streams” has the meaning stated in Article 17.

- (123) “Water quality volume (WQv)” has the meaning stated in COMAR 26.17.02.02.
- (124) “Watercourse” means any natural or artificial stream, river, creek, ditch, channel, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows continuously or intermittently, and the term includes any adjacent area that is subject to inundation from overflow or floodwater, the channel, channel banks and bed, of nontidal waters of the State.
- (125) Waters of the State: Waters of the State include:
- (1) Both surface and underground waters within the boundaries of the State subject to its jurisdiction;
  - (2) That portion of the Atlantic Ocean within the boundaries of the State;
  - (3) The Chesapeake Bay and its tributaries;
  - (4) All ponds, lakes, rivers, streams, public ditches, tax ditches, and public drainage systems within the state, other than those designed and used to collect, convey, or dispose of sanitary sewage; and
  - (5) the floodplain of free-flowing waters determined by mde on the basis of the 100-year flood frequency.
- (126) “Watershed” has the meaning stated in COMAR 26.17.02.02.

### **§ 16-1-102. Scope.**

The provisions of this article are minimum requirements that apply in addition to other requirements of this Code and other law and regulations.

### **§ 16-1-103. Conflict of laws.**

If any provision of this article conflicts with other County law, the provision that establishes the higher standard for protection of the natural environment shall prevail.

### **§ 16-1-104. Compliance with other law.**

Except as otherwise provided by this article, all development, grading, and other activity under this article shall comply with all applicable federal, State, and County law and regulations, the County Procedures Manual, and the DPW Design Manual.

### **§ 16-1-105. Federal and State permits.**

The County may issue a permit conditioned on the applicant having obtained all necessary permits from all applicable State and federal agencies. The issuance of federal or State permits does not exempt development from compliance with this article.

### **§ 16-1-106. Right of entry.**

It is a condition of a permit applied for or issued under this article that officers and employees of the County and, for purposes of Title 4, the Administration may enter onto the site to inspect for compliance with the provisions of this article.

### **§ 16-1-107. Liability for damages.**

The issuance of a permit under this article or compliance with this article does not relieve a person from responsibility for damage to persons or property otherwise imposed by law or impose liability on the County for damages.

### **§ 16-1-108. Unit prices.**

The Director shall adopt unit prices to be used by applicants in connection with the submission of cost estimates required by this article.

### **§ 16-1-109. Denial of permits after notice of violation.**

(a) **Denial of permit.** The County may deny the issuance of permits under this article if it determines that the applicant has been served with notice of any violation on the property for which the permit is sought and the violation has not been resolved.

(b) **Notice of intent.** The Director of Inspection and Permits shall give notice of intent to enforce this section by including in any notice of violation a provision stating that the property may be subject to denial of additional permits under this section until the violation is corrected.

(c) **Remedies and penalties.** The remedies and penalties set forth in this section are in addition to and do not supersede remedies and penalties provided in Title 5 of this article or elsewhere in this Code or imposed by a court.

(d) **No appeal.** The applicant may not appeal the denial of additional permits based on enforcement of this section.

**§ 16-1-110. Severability.**

Should any section or provision of this title be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof other than the part so declared to be unconstitutional or invalid.

## **TITLE 2. FLOODPLAIN MANAGEMENT**

Section

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**Subtitle 4. Requirements in Coastal High Hazard Areas (V Zones) and Coastal Zones**

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**Subtitle 5. Modifications**

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**SUBTITLE 1. GENERAL PROVISIONS**

**§ 16-2-101. Scope; overlay.**

- (a) **Scope.** This title applies to all development, new construction and substantial improvements to existing structures in a floodplain district. An application for subdivision or for a building or grading permit is an application for development under this title.
- (b) **Overlay.** This title is an overlay that applies to all land located in the County. (Bill No. 58-10)

### **§ 16-2-102. Disclaimer of County's liability.**

The degree of flood protection provided by this title is considered reasonable for regulatory purposes and is based on engineering experience and scientific methods of study. Nothing in this title means that land outside the areas of special flood hazard or development within those areas will be free from flooding or flood damage. Larger floods can and will occur on rare occasions, and flood heights may be increased by manmade or natural causes. The issuance of a permit or the grant of any other approval is not a representation, guarantee, or warranty and does not create liability on the part of the County, its officials, or employees.

This Title shall not create liability on the part of Anne Arundel County, any officer or employee thereof, the Maryland Department of the Environment (MDE) or the Federal Emergency Management Agency (FEMA), for any *flood* damage that results from reliance on this title or any administrative decision lawfully made hereunder.

### **§ 16-2-103. Establishment of Special Flood Hazard Areas and BFEs.**

- (a) For the purposes of this title, the minimum basis for establishing special flood hazard areas and base flood elevations is the Flood Insurance Study and Wave Height Study for Anne Arundel County, Maryland (Unincorporated Areas), dated November 2, 1982, and the Flood Insurance Study and Wave Height Study for the Town of Highland Beach, Maryland (Incorporated Area), dated April 15, 1982, or the most recent revision dated October 16, 2012, thereof, and the accompanying Flood Insurance Rate Map(S) and all subsequent amendments and revisions to the FIRMs. The FIS and FIRMs are retained on file and available to the public at the Anne Arundel County's Office of Planning and Zoning or at FEMA and MDE offices.
- (b) Where field surveyed topography or digital topography indicates that ground elevations are below the closest applicable base flood elevation, even in areas not delineated as a special flood hazard on the FIRM, the area shall be considered as special flood hazard area.
- (c) To establish base flood elevations in special flood hazard areas that do not have such elevations shown on the FIRM, the Floodplain Administrator may provide the best available data for base flood elevations, may require the applicant to obtain available information from federal, state or other sources, or may require the applicant to establish special flood hazard areas and base flood elevations as set forth in Section 16-2-109, Section 16-2-110, and Section 16-2-111 of this Title.

**§ 16-2-104. Abrogation and Greater Restrictions:** Except as specifically provided herein, this title is not intended to repeal or abrogate any existing ordinances, including subdivision ordinances, zoning ordinances, building codes, or any existing easements, covenants, or deed restrictions. In the event of a conflict between this title and any other ordinance, the more restrictive shall govern.

**§ 16-2-105. Interpretation:** in the interpretation and application of this title, all provisions shall be:

- (a) Considered as minimum requirements;

- (b) Liberally construed in favor of the governing body; and,
- (c) Deemed neither to limit nor repeal any other powers granted under state statutes; where a provision of this title may be in conflict with a state or federal law, such state or federal law shall take precedence.

Notes referencing publications of the Federal Emergency Management Agency refer to the most recent edition of those publications, are intended only as guidance, and do not bind or alter the authority of the Floodplain Administrator to interpret and apply this Title.

#### **§ 16-2-106. Amendments.**

This title and all amendments to it are subject to the approval of FEMA and the State.

#### **§ 16-2-107. Unsafe structures.**

The Department shall declare a structure that is constructed, enlarged, altered, or relocated in violation of this title to be an unsafe structure and abatable as an unsafe structure under §§ 15-2-101 and 15-1-105 of this Code and shall immediately notify FEMA and the State Water Resources Administration in writing of any structure or property in violation of this title.

#### **§ 16-2-108. Use and Interpretation of Firms**

The Floodplain Administrator shall make interpretations, where needed, as to the exact location of special flood hazard areas, floodplain boundaries, and floodway boundaries. The following shall apply to the use and interpretation of FIRMs and data:

- (A) Where field surveyed topography indicates that ground elevations:
  - (1) Are above the base flood elevation, the area shall be regulated as special flood hazard area unless the applicant obtains a Letter of Map Change that removes the area from the special flood hazard area.

- (B) In FEMA-identified special flood hazard areas where base flood elevation and floodway data have not been identified and in areas where FEMA has not identified special flood hazard areas, any other flood hazard data available from a federal, state, or other source shall be reviewed and reasonably used.
- (C) Base flood elevations and designated floodway boundaries on FIRMs and in FISs shall take precedence over base flood elevations and floodway boundaries by any other sources if such sources show reduced floodway widths and/or lower base flood elevations.
- (D) Other sources of data shall be reasonably used if such sources show increased base flood elevations and/or larger floodway areas than are shown on firms and in FISs.
- (E) Request for map amendment. A developer or owner who believes that property has been erroneously included in a designated floodplain district on the flood insurance rate maps may submit scientific or technical information to FEMA for review for a possible map amendment. Any development in a floodway that may result in an increase in water surface elevations or a change to the floodway shall be submitted to FEMA for a conditional letter of map revision.

#### **§ 16-2-109. Permits Required and Expiration**

- (A) It shall be unlawful for any person to begin any development or construction which is wholly within, partially within, or in contact with any flood hazard area until a permit is obtained from the county. No such permit shall be issued until the requirements of this article have been met.
- (B) Requests for permit extensions shall be submitted in writing and justifiable cause demonstrated in accordance with Article 16-3-209 and Article 15-2-101-105.5 of this Code.

#### **§16-2-110. Application Required**

Application for a building or grading permit shall be made in accordance with Article 15-2-101-105.3 and Article 16-3-203 of this Code.

- (A) Application within a special flood hazard area shall include at a minimum:
  - (1) Site plans drawn to scale showing the nature, location, dimensions, and existing and proposed topography of the area in question, and the location of existing and proposed structures, excavation, filling, storage of materials, drainage facilities, and other proposed activities.
  - (2) Elevation of the existing natural ground where buildings or structures are proposed, referenced to the datum on the FIRM.
  - (3) Delineation of flood hazard areas, designated floodway boundaries, flood zones, base flood elevations, and flood protection setbacks. Base flood elevations shall be used to delineate the boundary of flood hazard areas and such delineations shall prevail over the boundary of SFHAs shown on FIRMs.

- (4) Where floodways are not delineated or base flood elevations are not shown on the FIRMs, the floodplain administrator has the authority to require the applicant to use information provided by the Floodplain Administrator, information that is available from federal, State, or other sources, or to determine such information using accepted engineering practices or methods approved by the Floodplain Administrator. [Note: See “Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations” (FEMA 265).]
- (5) Determination of the base flood elevations, for development proposals and subdivision proposals, , in special flood hazard areas where base flood elevations are not shown on the FIRM; if hydrologic and hydraulic engineering analyses are submitted, such analyses shall be performed in accordance with the requirements and specifications of MDE and FEMA.
- (6) Hydrologic and hydraulic engineering analyses for proposals in special flood hazard areas where FEMA has provided base flood elevations but has not delineated a floodway; such analyses shall demonstrate that the cumulative effect of proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood by more than one foot or a lower increase if required by MDE.
- (7) For encroachments in floodways, an evaluation of alternatives to such encroachments, including different uses of the site or portion of the site within the floodway, and minimization of such encroachment.
- (8) If fill is proposed to be placed for a purpose other than to elevate structures, the applicant shall indicate the intended purpose for the fill.
- (9) For proposed buildings and structures, including substantial improvement and repair of substantial damage, and placement and replacement of manufactured homes, including substantial improvement and repair of substantial damage:
  - (a) The proposed elevation of the lowest floor, including basement, referenced to the datum on the FIRM.
  - (b) A written evaluation of alternative methods considered to elevate structures and manufactured homes, if the location is in nontidal waters of the State and fill is proposed to achieve the elevation required in Section 16-2-303.
- (10) For proposed work on existing buildings, structures, and manufactured homes, including any improvement, addition, repairs, alterations, rehabilitation, or reconstruction, sufficient information to determine if the work constitutes substantial improvement or repair of substantial damage, including but not limited to:

- (a) Documentation of the market value of the building or structure before the improvement or, if the work is repair of damage, before the damage occurred.
  - (b) Documentation of the actual cash value of all proposed work, including the actual cash value of all work necessary to repair and restore damage to the before-damaged condition, regardless of the amount of work that will be performed. The value of work performed by the owner or volunteers shall be valued at market labor rates; the value of donated or discounted materials shall be valued at market rates.
- (11) Certifications and/or technical analyses prepared or conducted by a licensed professional engineer or licensed architect, as appropriate, including:
- (a) The determination of the base flood elevations or hydrologic and hydraulic engineering analyses prepared by a licensed professional engineer that are required by the Floodplain Administrator or are required by this title in: Section 16-2-202 for certain subdivisions and development; Section 16-2-302(a) for development in designated floodways; Section 16-2-302(b) for development in flood hazard areas with base flood elevations but no designated floodways; and Section 16-2-302(c) for deliberate alteration or relocation of watercourses.
  - (b) The Floodproofing Certificate for nonresidential structures that are floodproofed as required in Section 16-2-303.
  - (c) Certification that engineered flood openings are designed to meet the minimum requirements of section 16-2-303(b) to automatically equalize hydrostatic flood forces.
  - (d) Certification that the proposed elevation, structural design, specifications and plans, and the methods of construction to be used for structures in coastal high hazard areas (V Zones) and Coastal A Zones, are in accordance with accepted standards of practice and meet the requirements of Section 16-2-401.
- (12) For nonresidential structures that are proposed with floodproofing, an operations and maintenance plan as specified in Section 16-2-303.
- (13) Such other material and information as may be requested by the Floodplain Administrator and necessary to determine conformance with this Title.

(B) Application for Subdivision. An application for subdivision on land that includes areas within a special flood hazard area shall include:

(1) a delineation of the 100-year flood elevation if determined by the flood insurance study or watershed studies conducted by the County; and

(2) if the 100-year floodplain elevation has not been determined, the developer shall determine the 100-year floodplain elevation in accordance with the County Procedures Manual and delineate the elevation on the proposed plans. Plans shall be certified by a design professional.

### **§16-2-111. Review of Application**

The Floodplain Administrator shall:

- (A) Review applications for development in special flood hazard areas to determine the completeness of information submitted. The applicant shall be notified of incompleteness or additional information that is required to support the application.
- (B) Notify applicants that permits from MDE and the U.S. Army Corps of Engineers, and other State and Federal authorities may be required.
- (C) The applicant shall be responsible for obtaining such permits, including permits issued by:
  - (1) The U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act;
  - (2) MDE pursuant to COMAR 26.23 (Nontidal Wetlands) and Section 401 of the Clean Water Act;
  - (3) MDE for construction on nontidal waters of the State pursuant to COMAR 26.17.04; and
  - (4) MDE pursuant to COMAR 26.24 (Tidal Wetlands).

- (D). Review Certifications and/or technical analyses that must be submitted prior to permit issuance prepared or conducted by a Design Professional may include by not limited by:
- (1) Base flood elevations or hydrologic and hydraulic engineering analysis as required
  - (2) Floodproofing Certificate for nonresidential structures
  - (3) Certification of engineered flood openings
  - (4) Certification that the requirements of 16-2-401 are being met
- (E) Record. The department shall maintain a record of all floodplain district permit actions and shall make the record available on request by FEMA or by the State. The record shall include the date the permit was issued, the as-built lowest floor elevation of all new construction or substantial improvement, the issuance date of a certificate of occupancy, a copy of the completed elevation certificate, and any map amendments issued by FEMA.
- (F) Tracking. All permits subject to this title shall be tracked by property location to determine if the cumulative value of improvements over a three-year period constitutes a substantial improvement of the structure.

#### **§16-2-112. Inspection**

Periodic inspections of development permitted in special flood hazard areas will be done, at appropriate times throughout the period of construction as specified in the building code Article 15 Section 109 in order to monitor compliance.

#### **§ 16-2-113. Certificate of Occupancy**

A Certificate of Occupancy may not be issued in a floodplain district until the Director has been provided with a completed FEMA elevation certificate that verifies the as-built elevation of the construction.



## **SUBTITLE 2: REQUIREMENTS IN ALL FLOOD HAZARD AREAS**

### **§ 16-2-201. Application of Requirements**

The general requirements of this section apply to all development proposed within all special flood hazard areas identified in Section 16-2-103. This section does not apply to piers or structures for the wet storage of watercraft if the piers or storage structures do not contain habitable space.

### **§ 16-2-202. Subdivision Proposals and Development Proposals**

(A) In all flood zones:

- (1) Subdivision proposals and development proposals shall be consistent with the need to minimize flood damage and are subject to all applicable standards in this Title.
- (2) Subdivision proposals and development proposals shall have utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (3) Subdivision proposals and development proposals shall have adequate drainage paths provided to reduce exposure to flood hazards and to guide floodwaters around and away from proposed structures.
- (4) Subdivision proposals and development proposals that are wholly or partially in flood hazard areas where base flood elevation data are not provided by the floodplain administrator or available from other sources, shall be supported by determinations of base flood elevations as required in Section 16-2-111 of this Title.
- (5) Subdivision access roads shall have the driving surface at or above the base flood elevation.
- (6) Subdivision proposals shall be laid out such that proposed building pads are located outside of the special flood hazard area and any portion of platted lots that include land areas that are below the base flood elevation shall be used for other purposes, deed restricted, or otherwise protected to preserve it as open space.

### **§ 16-2-203. Protection of Water Supply and Sanitary Sewage Systems**

- (A) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems.
- (B) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters.
- (C) On-site waste disposal systems shall be located to avoid impairment to or contamination from them during conditions of flooding.

### **§ 16-2-204. Buildings and Structures**

New buildings and structures and substantial improvement of existing structures that are located, in whole or in part, in any special flood hazard area shall be in accordance with § 15-2-101 of this code for commercial structures and § 15-2-102 of this code for residential structures, and:

- (A) Be designed (or modified) and constructed to safely support flood loads. The construction shall provide a complete load path capable of transferring all loads from their point of origin through the load-resisting elements to the foundation. Structures shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses, including hydrodynamic and hydrostatic loads and the effects of buoyancy, from flooding equal to the flood protection elevation or the elevation required by this title or the building code, whichever is higher.
- (B) Use flood damage-resistant materials below the elevation of the lowest floor required in section 16-2-303.
- (C) Electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment are permitted to be located below the elevation of the lowest floor provided they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to that elevation.
- (D) If located in flood hazard areas (A Zones) that are not identified as coastal high hazard areas (V Zones), comply with the specific requirements of Section 16-2-301 to 304.
- (E) If located in coastal high hazard areas (V Zones), comply with the specific requirements of Section 16-2-401.
- (F) Comply with the requirements of the most restrictive designation if located on a site that has more than one flood zone designation (A Zone, designated floodway, V Zone).

**§ 16-2-205. Placement of Fill**

- (A) Disposal of fill, including but not limited to earthen soils, rock, rubble, construction debris, woody debris, and trash, shall not be permitted in special flood hazard areas.
- (B) Fill shall not be placed in coastal high hazard areas (V Zones).
- (C) Fill proposed to be placed to elevate structures in flood hazard areas (A Zones) shall comply with the floodway requirements in Section 16-2-301 and 16-2-303.

**§ 16-2-206. Historic Structures**

Repair, alteration, addition, rehabilitation, or other improvement of historic structures shall be subject to the requirements of this title if the proposed work is determined to be a substantial improvement, unless a determination is made that the proposed work will not preclude the structure's continued designation as a historic structure. The Floodplain Administrator may require documentation of a structure's continued eligibility and designation as a historic structure.

**§ 16-2-207. Manufactured Homes**

- (A) New manufactured homes shall not be placed or installed in floodways or coastal high hazard areas (V Zones).
- (B) For the purpose of this title, the lowest floor of a manufactured home is the bottom of the lowest horizontal supporting member (longitudinal chassis frame beam).
- (C) New manufactured homes located outside of floodways and coastal high hazard areas (V Zones), replacement manufactured homes in any flood hazard areas, and substantial improvement (including repair of substantial damage) of existing manufactured homes in all flood hazard area, shall be in accordance with the Federal Emergency Management Agency's Coastal Construction Manual (FEMA 55), Manufactured Home Installation in Flood Hazard Areas (FEMA 85), Flood Resistant Design and Construction (ASCE 24-05) and NFIP Technical Bulletin 5 and 9.

### **§ 16-2-208. Temporary Structures and Temporary Storage**

Temporary structures and temporary storage in floodways shall meet the limitations of Section 16-2-302 of this Title. In addition:

(A) Temporary structures shall:

- (1) Be designed and constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic loads and hydrostatic loads during conditions of the base flood;
- (2) Have electric service installed in compliance with the electric code; and
- (3) Comply with all other requirements of the applicable state and local permit authorities.

(B) Temporary storage shall not include hazardous materials.

### **§ 16-2-209. Gas or Liquid Storage Tanks**

UNDERGROUND TANKS IN FLOOD HAZARD AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARTICLE 15 SECTION \_\_\_\_\_. ALL TANKS THAT ARE EITHER UNDERGROUND OR ABOVE GROUND SHALL BE CONSTRUCTED IN ACCORDANCE WITH FLOOD RESISTANT DESIGN AND CONSTRUCTION (ASCE 24-05).

### **§ 16-2-210. Functionally Dependent Uses**

Functionally dependent uses shall be approved only by modification issued pursuant to Subtitle 5. If approved, functionally dependent uses shall be protected by methods that minimize flood damage during the base flood, including measures to allow floodwaters to enter and exit, use of flood damage-resistant materials, and elevation of electric service and equipment to the extent practical given the use of the building.

### **SUBTITLE 3: REQUIREMENTS IN FLOOD HAZARD AREAS (A ZONES) THAT ARE NOT COASTAL HIGH HAZARD AREAS (V ZONES)**

#### **§ 16-2-301. General Requirements**

In addition to the general requirements of Section 16-2-200, the requirements of this Section shall:

- (A) Apply in flood hazard areas that are not identified as coastal high hazard areas (V Zones) . These flood hazard areas, referred to collectively as “A Zones,” include special flood hazard areas along nontidal waters of the State, landward of coastal high hazard areas (V Zones).
- (B) Apply to all development, new construction, substantial improvements (including repair of substantial damage), and placement, replacement, and substantial improvement (including repair of substantial damage) of manufactured homes.

#### **§ 16-2-302. Development that Affects Flood-Carrying Capacity of Nontidal Waters of the State**

##### **(A) Development in Designated Floodways**

All residential development, manufactured homes and the placement of fill are prohibited in a floodway. New construction of or a substantial improvement to a structure in a floodway is prohibited unless hydrologic and hydraulic analyses based on floodway models and performed in accordance with standard engineering practices demonstrate that the construction or improvement will not cause an increase in downstream or upstream flooding or erosion. Structures and fences, except two-wire fences, that impede, retard, or change the direction of the flow of water, that catch or collect debris carried by water, or that are placed where the natural flow of the stream or floodwaters will carry debris downstream are prohibited.

## **(B) Development in Areas with Base Flood Elevations but No Designated Floodways**

For development in special flood hazard areas of nontidal waters of the state with base flood elevations but no designated floodways:

- (1) The applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting the proposed activity and shall submit such technical data to the Floodplain Administrator as required in Section 16-2-111 (a)(6). The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and fees shall be the responsibility of the applicant.
- (2) The proposed development may be permitted if the applicant has received a permit by MDE and if the analyses demonstrate that the cumulative effect of the proposed development, when combined with all other existing and potential flood hazard area encroachments will not increase the base flood elevation more than 1.0 foot at any point.

## **(C) Construction of Roads, Bridges, Culverts, Dams and In-Stream Ponds**

Construction of roads, bridges, culverts, dams, and in-stream ponds in nontidal waters of the state shall not be approved unless they comply with this section and the applicant has received a permit from MDE.

## **(D) Alteration of a Watercourse**

For any proposed development that involves alteration of a watercourse not subject to paragraph (b), unless waived by MDE, the applicant shall develop hydrologic and hydraulic engineering analyses and technical data reflecting such changes, including the floodway analysis required in Section 16-2-111 (A), and submit such technical data to the Floodplain Administrator and to FEMA. The analyses shall be prepared by a licensed professional engineer in a format required by mde and by FEMA for a Conditional Letter of Map Revision or Letter of Map Revision. Submittal requirements and fees shall be the responsibility of the applicant.

Alteration of a watercourse may be permitted only upon submission, by the applicant, of the following:

- (1) A description of the extent to which the watercourse will be altered or relocated;
- (2) A certification by a licensed professional engineer that the flood-carrying capacity of the watercourse will not be diminished;
- (3) Evidence that adjacent communities, the U.S. Army Corps of Engineers, and MDE have been notified of the proposal, and evidence that such notifications have been submitted to FEMA; and
- (4) Evidence that the applicant shall be responsible for providing the necessary maintenance for the altered or relocated portion of the watercourse so that the flood carrying capacity will not be diminished. The floodplain administrator may require the applicant to enter into an agreement with the County specifying the maintenance responsibilities; if an agreement is required, the permit shall be conditioned to require that the agreement be recorded in the land records and shall be binding on future owners.

**§ 16-2-303. Residential and Nonresidential Structures and Residential and Nonresidential Portions of Mixed Use Structures**

New residential and nonresidential structures and residential and nonresidential portions of mixed use structures, and substantial improvement (including repair of substantial damage) of existing residential and nonresidential structures and residential and nonresidential portions of mixed use structures shall comply with the applicable requirements of Subtitle 2 and this Section.

**(A) Elevation to flood protection elevation; exceptions.** All structures, new construction, substantial improvements, and new habitable space shall have the lowest floor elevated to the flood protection elevation, except that:

- (1) An expansion that increases the footprint of a structure is not required to have the lowest floor elevated to the flood protection elevation if the expansion is the minimum necessary to correct violations of state or county health, safety, or sanitary codes;
- (2) an accessory structure or attached garage is not required to have the enclosed area below the lowest floor elevated to the flood protection elevation if the provisions of this Section and § 16-2-304 are met; and
- (3) New construction of or substantial improvements to nonresidential structures may be floodproofed in lieu of having the lowest floor elevated to the flood protection elevation if:
  - (i) The floodproofing designs ensure that areas below the flood protection elevation are watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy for flooding to the flood protection elevation; and
  - (ii) A FEMA floodproofing certificate is provided

**(B) Enclosures below the lowest floor**

- (1) Enclosures below the lowest floor shall be used solely for parking of vehicles, building access, crawl/underfloor spaces, or limited storage.
- (2) Enclosures below the lowest floor shall be constructed using flood damage-resistant materials.
- (3) Enclosures below the lowest floor shall be provided with flood openings which shall meet the following criteria: [Note: See NFIP Technical Bulletin #1, "Openings in Foundation Walls and Walls of Enclosures Below Elevated Buildings."]
  - (a) There shall be a minimum of two flood openings on different sides of each enclosed area; if a building has more than one enclosure below the lowest floor, each such enclosure shall have flood openings on exterior walls.
  - (b) The total net area of all flood openings shall be at least 1 square inch for each square foot of enclosed area (non-engineered flood openings), or the flood openings shall be engineered flood openings that are designed and certified by a licensed professional engineer to automatically allow entry and exit of floodwaters; the certification requirement may be satisfied by an individual certification or an evaluation report issued by the ICC Evaluation Service, Inc.
  - (c) The bottom of each flood opening shall be 1 foot or less above the higher of the interior floor or grade, or the exterior grade, immediately below the opening.
  - (d) Any louvers, screens or other covers for the flood openings shall allow the automatic flow of floodwaters into and out of the enclosed area.
  - (e) If installed in doors, flood openings that meet requirements of paragraphs (a) through (d), are acceptable; however, doors without installed flood openings do not meet the requirements of this section.



**§ 16-2-304. Attached Garages; Accessory Structures.**

- (a) **Scope.** *This section applies to attached garages and to all accessory structures, including detached garages, of less than 600 square feet, except that it does not apply to piers or structures for the wet storage of watercraft if the piers or storage structures do not contain habitable space.*
- (b) **Accessory structures of 300 square feet or less.** *An accessory structure of 300 square feet or less may be constructed below the flood protection elevation if:*
- (1) *The structure is used for parking, storage, or building access only;*
  - (2) *The floor elevation is at or above existing grade and does not qualify as a basement and is equipped with flood equalization vents in accordance with the applicable provisions of the International Building Code or the International Residential Code as required by Article 15 of this Code;*
  - (3) *The structure is constructed and located so as to minimize flood damage; and*
  - (4) *The structure is anchored to prevent flotation.*
- (c) **Other accessory structures and garages; non-conversion agreement.** *The developer of an attached garage, or an accessory structure that has more than 300 but less than 600 square feet shall comply with the requirements of subsection (b) and execute a non-conversion agreement provided by the County that prohibits conversion of the area to habitable space unless elevated to the flood protection elevation. The agreement shall be recorded among the land records.*

## **SUBTITLE 4: REQUIREMENTS IN COASTAL HIGH HAZARD AREAS (V ZONES)**

### **§ 16-2-401. General Requirements**

Manufactured homes and the placement of fill are prohibited in coastal high hazard areas. New construction of or a substantial improvement to a structure or an accessory structure in a coastal high hazard area is prohibited unless the construction or improvement is in accordance with requirements of the Building Code adopted by Article 15, title 2 of this Code, the Federal Emergency Management Agency's Coastal Construction Manual (FEMA 55), Manufactured Home Installation in Flood Hazard Areas (FEMA 85), Flood Resistant Design and Construction (ASCE 24-05) and NFIP Technical Bulletin 5 and 9.

## **SUBTITLE 5: MODIFICATIONS**

### **§ 16-2-501. General Requirements**

**Where application is filed.** An application for a modification from the requirements of this title shall be filed with the Office of Planning and Zoning if it relates to roads, utilities, storm drains, stormwater structures, stream restoration, or other infrastructure proposed in the subdivision process. Otherwise, the application shall be filed with the Department .

Upon consideration of the purposes of this title, the individual circumstances, and the considerations and limitations of this section, the department may attach such conditions to modifications as it deems necessary to further the purposes of this title.

The department shall notify, in writing, any applicant to whom a modification is granted to construct or substantially improve a building or structure with its lowest floor below the elevation required by this title that the modification is to the floodplain management requirements of this title only, and that the cost of Federal flood insurance will be commensurate with the increased risk, with rates up to \$25 per \$100 of insurance coverage.

### **§ 16-2- 502. Application for a Modification**

- (A) An application for a modification to Office of Planning and Zoning shall be done in accordance with § 17-2-108 of this code. A modification application to the Department shall:
- (1) Set forth good cause accompanied by an engineering analysis;
  - (2) Demonstrate that no reasonable alternative exists outside the floodplain district;
  - (3) Explain the non-economic hardship to the applicant if relief is not granted; and
  - (4) Demonstrate that the grant of a modification will not result in increased flood heights.
- (B) if the application is for a modification for a historic structure pursuant to Section 16-2-205 of this title, the application shall contain documentation that the proposed work does not preclude the structure's continued eligibility and designation as a historic structure. The documentation shall be obtained from a source that is authorized to make such determinations (see definition of "Historic Structure").

### **§16-2-503. Limitations for Granting Modifications**

The county may grant a modification, with or without conditions, if it determines that:

- (1) The applicant has demonstrated good cause;
- (2) No reasonable alternative exists outside the floodplain district;
- (3) A failure to grant the modification would result in non-economic hardship to the applicant;
- (4) The granting of the modification will not result in increased flood heights, a threat to public safety, extraordinary public expense, a nuisance, a fraud on or victimization of the public, or a conflict with State Or County law; and
- (5) The modification is consistent with sound management and is the minimum necessary, considering the flood hazard, to afford relief.

### **§16-2-504. Prohibited Modifications**

A modification to the provisions contained in § 16-2-202(f) and (g) relating to development in coastal high hazard areas and floodways is prohibited. A modification to the requirement that the lowest floor of a new or substantially improved residential structure be elevated to the flood protection elevation is prohibited.

## TITLE 5. VIOLATIONS, ENFORCEMENT, AND PENALTIES

### Section

- 16-5-101. Violations.
- 16-5-102. Enforcement.
- 16-5-103. Stop work order.
- 16-5-104. Notice of violation.
- 16-5-105. Civil fines.
- 16-5-106. Clearing in violation of the law.

### *§ 16-5-101. Violations.*

It is a violation of this article to:

- (1) use property in violation of this article;
- (2) permit another person to use property in violation of this article;
- (3) perform work for another person in violation of this article;
- (4) violate any notice or order issued by the Department;
- (5) discharge or permit the discharge of stormwater runoff from a site to a storm drain or watercourse without first obtaining the approval of the Department;
- (6) spill, dump or dispose of any material or substance other than natural stormwater runoff to a stormdrain or watercourse unless authorized by a valid NPDES permit issued by the State of Maryland;
- (7) alter the ESD planning techniques, treatment practices and structural stormwater measures used to satisfy the Minimum Control requirements of Title 4;
- (8) alter the site runoff characteristics on which a prior approval was based without the prior approval of the Department;

(9) occupy a building or dwelling prior to the completion of the stormwater management system to the satisfaction of the Department;

(10) clear a developed woodland or forest in the critical area unless authorized under an issued grading permit, building permit, buffer or forest management plan, or standard grading plan;

(11) create a source of offsite erosion or sediment deposition; or

(12) fail to comply with the approved grading permit plans or standard grading plan; OR

(13) fail to comply with Title 2. Floodplain Management; and

(14) the disposal of debris, grading or filling in a floodplain unless authorized under a building permit or grading permit issued by the County.

(Bill No. 58-10; Bill No. 74-11)

DRAFT