COUNTY COMMISSIONERS OF CHARLES COUNTY, MARYLAND

2015 Legislative Session Legislative Day # ____

BILL NO. 2015-01

Introduced by: Charles County Planning and Growth Management

Flood Damage Control

Date introduced: <u>02</u> / <u>10</u> / <u>2015</u>
Public Hearing: <u>02</u> / <u>24</u> / <u>2015</u> @ 6:00 p.m.
Commissioners Action: 02 / 24 / 2015
Commissioner Votes: PM: Y , KR: Y , DD: Y , AS: Y , BR: Y
Pass/Fail: Pass
Effective Date:05/_04/_2015
Remarks:

NOTE: CAPITALS indicate matter added to existing text. [Brackets] indicate matter deleted from existing law.

1	COUNTY COMMISSIONERS OF CHARLES COUNTY, MARYLAND
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4	2015 Legislative Session
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6	Bill No.: <u>2015-01</u>
7	Chapter. No.: 238
8	Introduced by: Board of Charles County Commissioners
9	Date of Introduction: February 10, 2015
10	
11	BILL
12	AN ACT concerning
13	FLOOD DAMAGE CONTROL
14	
15	FOR the purpose of
16	Amending the code to meet the requirements of the Federal Emergency Management
17	Agency (FEMA) and Maryland Department of Environment as part of the adoption of revised
18	Flood Insurance Rate maps by FEMA.
19	
20	BY repealing and reenacting, with amendments:
21	Chapter 238, Article II- Floodplain Management
22	Sections 238-5 through 238-11
23	Code of Charles County, Maryland
24	(2013 Edition)
25	
26	SECTION 1. BE IT ENACTED BY THE COUNTY COMMISSIONERS OF
27	CHARLES COUNTY, MARYLAND, that the Laws of Charles County, Maryland read as
28	follows:
29	
30	CHAPTER 238
31	ARTICLE II – FLOODPLAIN MANAGEMENT ORDINANCE
32	Section 238-5. General Provisions.
33	(A) Findings. The federal emergency management agency (FEMA) has identified special
	NOTE: CAPITALS indicate language added to existing law. [Brackets] indicate language deleted from existing law. Asterisks *** mean intervening code language remaining unchanged.

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flood hazard areas within the boundaries of Charles County, Maryland. special flood hazard areas are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. structures that are inadequately elevated, improperly floodproofed, or otherwise unprotected from flood damage also contribute to flood losses.

- (B) Charles county, Maryland, by resolution, agreed to meet the requirements of the national flood insurance program and was accepted for participation in the program on June 5, 1985. As of that date or as of June 5, 1985, the initial effective date of the Charles County, Maryland flood insurance rate map, all development and new construction as defined herein, are to be compliant with these regulations.
- (C) Statutory authorization. the Maryland general assembly, in the land use article of the annotated code of Maryland, section 4-101, et seq., has established, as policy of the state, that the orderly development and use of land and structures requires comprehensive regulation through the implementation of planning and zoning control, and that planning and zoning controls shall be implemented by local government in order to, among other purposes, secure the public safety, promote health and general welfare, and promote the conservation of natural resources. Therefore, the commissioners of Charles County, Maryland do hereby adopt the following floodplain management regulations.
- (D) Statement of purpose. It is the purpose of these regulations to promote the public health, safety and general welfare, and to:
 - (1) Protect human life, health and welfare;
 - (2) Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future;
 - (3) Minimize flooding of water supply and sanitary sewage disposal systems;
 - (4) Maintain natural drainage;
 - (5) Reduce financial burdens imposed on Charles County, its governmental units, and its residents, by discouraging unwise design and construction of development in areas subject to flooding;
 - (6) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - (7) Minimize prolonged business interruptions;

1	to 1.5	feet. The inland	limit of the Coast	tal A Zone ma	y be delineate	ed on FIRMs as	the "limit of
2	mode	rate wave action ((LIMWA)."				
3	*	*	*	*	*	*	*
4	Eleva	tion Certificate -	FEMA Form [81	-31], on which	h surveyed ele	evations and other	er data
5	pertin	ent to a property	and a building ar	e identified ar	nd which shall	be completed b	y a licensed
6	profe	ssional land surve	yor [or], a licens	ed profession	al engineer, O	R A LICENSEI)
7	ARC	HITECT, WHO IS	S AUTHORIZEI	D BY LAW T	O CERTIFY	ELEVATION	
8	INFO	RMATION, as sp	pecified by the flo	oodplain adm	inistrator. Wh	en used to docur	nent the
9	heigh	t above grade of b	ouildings in speci	ial flood hazaı	rd areas for wl	nich base flood e	elevation data
10	are no	ot available, the el	evation certification	te shall be cor	npleted in acc	ordance with the	instructions
11	issued	d by FEMA. Note	: FEMA Form [8	31-31] 86-0-33	3 and instructi	ons are available	online at
12	http://	/www.fema.gov/l	ibrary/viewrecor	d.do?id=1383	[.]		
13	*	*	*	*	*	*	*
14	Flood	Opening -A floo	d opening (none	ngineered) is a	an opening tha	at is used to mee	t the
15	presc	riptive requiremen	nt of one square i	inch of net ope	en area for eve	ery square foot o	f enclosed
16	area.	An engineered flo	ood opening is an	opening that	is designed ar	nd certified by a	licensed
17	profe	ssional engineer o	or licensed archite	ect as meeting	certain perfo	rmance characte	ristics,
18	includ	ding providing au	tomatic entry and	d exit of flood	waters; [the]	ΓHIS certification	n requirement
19	may ł	be satisfied by an	individual certifi	cation FOR A	SPECIFIC S	TRUCTURE or	issuance of
20	an ev	aluation report by	the ICC Evaluat	tion Service, I	nc. (Note: See	NFIP Technica	l Bulletin #1,
21	Open	ings in Foundatio	n Walls and Wal	ls of Enclosur	res.)		
22	*	*	*	*	*	*	*
23	Flood	lproofing Certific	ate - FEMA Form	n [81-65] that	is to be comp	leted, signed and	d sealed by a
24	licens	sed professional e	ngineer or licens	ed architect to	certify that the	ne design of floo	dproofing and
25	propo	sed methods of co	onstruction are in	accordance v	with the applic	eable requiremen	nts of § 238-
26	9E(2)	of these regulation	ons. (NOTE: FEN	MA FORM 86	5-0-34 IS AV	AILABLE ONLI	NE AT
27	HTTI	P://WWW.FEMA	.GOV/LIBRAR	Y/VIEWREC	ORD.DO?ID=	=1600)	
28	*	*	*	*	*	*	*
29	Histo	ric Structure - An	y structure that is	s:			
30	A.	Individually list	ted in the Nation	al Register of	Historic Place	es (a listing mair	ntained by the
31			nt of Interior) or				
32		as meeting the	requirements for	individual list	ting on the Na	tional Register	

1	B.	Certified or preliminarily determined by the Secretary of the Interior as contributing to					
2		the historical significance of a registered historic district or a district preliminarily					
3		determined by the Secretary to qualify as a registered historic district;					
4	C.	Individually listed on the Maryland [Inventory of Historic Properties maintained by the					
5		Maryland Historic Trust] REGISTER OF HISTORIC PLACES; or					
6	D.	Individually listed on the Inventory of Historic Places maintained by Charles County,					
7		Maryland, whose historic preservation program has been certified by the Maryland					
8		Historic Trust or the Secretary of the Interior.					
9	*	* * * * * *					
10	Letter	of Map Change (LOMC) - An official FEMA determination, by letter, that amends or					
11	1	an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of map change					
12	includ						
13	A.	Letter of Map Amendment (LOMA) - An amendment based on technical data showing					
14		that a property was incorrectly included in a designated special flood hazard area. A					
15		LOMA amends the currently effective Flood Insurance Rate Map and establishes that a					
16		specific property or structure is not located in a special flood hazard area.					
17	B.	Letter of Map Revision(LOMR) - A revision based on technical data that may show					
18		changes to flood zones, flood elevations, floodplain and floodway delineations, and					
19		planimetric features. A letter of map revision based on fill (LOMR-F) is a determination					
20		that a structure or parcel of land has been elevated by fill above the base flood elevation					
21	and is, therefore, no longer exposed to flooding associated with the base flood. In order to						
22		qualify for this determination, the fill must have been permitted and placed in accordance					
23		with Charles County's floodplain management regulations.					
24	C.	Conditional Letter of Map Revision (CLOMR) - A formal review and comment as to					
25		whether a proposed flood protection project or other project complies with the minimum					
26		NFIP requirements for such projects with respect to delineation of special flood hazard					
27		areas. A CONDITIONAL LETTER OF MAP REVISION BASED ON FILL (CLOMR-					
28		F) IS A DETERMINATION THAT A PARCEL OF LAND OR PROPOSED					
29		STRUCTURE THAT WILL BE ELEVATED BY FILL WOULD NOT BE					
30		INUNDATED BY THE BASE FLOOD IF FILL IS PLACED ON THE PARCEL AS					
31		PROPOSED OR THE STRUCTURE IS BUILT AS PROPOSED. A CLOMR does not					
32		revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon					

1	B.	Any a	alteration of a	an historic str	ucture, provi	ded that the alter	ration will not p	reclude the
2					on as an histor			
3	NOTE	E: SEE	"SUBSTAN	TIAL IMPRO	OVEMENT/S	UBSTANTIAL	DAMAGE DE	ESK
4	REFE	RENC	E" FEMA P-	758.				
5	*		*	*	*	*	*	*
6	Sectio	n 238-	7. Administr	ration.				
7	A.	Desig	nation of the	floodplain a	dministrator.	The Chief is her	reby appointed	to administer
8						red to herein as		
9		admir	nistrator." Th	e floodplain	administrator	may:	•	
10		(1)	Delegate d	uties and resp	ponsibilities s	et forth in these	regulations to c	qualified
11						inspectors, and		77
12		(2)				tten contract wi		
13						e regulations. A		
14						all not relieve C		07 (30.1)
15						ipation requiren	•	
16						h in the Code of		
17					TION 59.22.		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
18	B.	Dutie	s and respons	sibilities of th	ne floodplain	administrator. T	he duties and re	esponsibilities
19						but are not limi		1.0
20		(1)	Review app	olications for	permits to de	etermine whethe	r proposed activ	vities will be
21			located in f	lood hazard	areas.			
22		(2)	Interpret flo	oodplain bou	ndaries and p	rovide available	base flood elev	vation and
23				d informatio				
24		(3)	Review app	olications to	determine wh	ether proposed a	activities will be	e reasonably
25			safe from f	looding and i	require new c	onstruction and	substantial imp	rovements to
26			meet the re	quirements o	of these regula	tions.		
27		(4)	Review app	olications to	determine wh	ether all necessa	ary permits have	e been
28			obtained fro	om the federa	al, state or loc	al agencies from	n which prior o	r concurrent
29			approval is	required; in	particular, pe	rmits from MDI	E for any constr	uction,
30						a dam, reservo		
31						s), any alteratio		
32			change of t	he course, cu	irrent, or cros	s section of a str	eam or body of	water,

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- including any change to the one-hundred-year-frequency floodplain or free-flowing nontidal waters of the state.
- (5) Verify that applicants proposing an alteration of a watercourse have notified adjacent communities and MDE (NFIP State Coordinator), and have submitted copies of such notifications to FEMA.
- (6) Advise applicants for new construction or substantial improvement of structures that are located within an area of the coastal barrier resources system established by the Coastal Barrier Resources Act that federal flood insurance is not available on such structures; areas subject to this limitation are shown on Flood Insurance Rate Maps as coastal barrier resource system areas (CBRS) or otherwise protected areas (OPA).
- (7) Approve applications and issue permits to develop in flood hazard areas if the provisions of these regulations have been met, or disapprove applications if the provisions of these regulations have not been met.
- (8) Inspect, or cause to be inspected, buildings, structures, and other development for which permits have been issued to determine compliance with these regulations or to determine if noncompliance has occurred or violations have been committed.
- (9) Review elevation certificates and require incomplete or deficient certificates to be corrected.
- (10) Submit to FEMA, or require applicants to submit to FEMA, data and information necessary to maintain FIRMs, including hydrologic and hydraulic engineering analyses prepared by or for Charles County, Maryland, within six months after such data and information become available if the analysis indicated in base flood elevations OR BOUNDARIES.
- (11) Maintain and permanently keep records that are necessary for the administration of these regulations, including:
 - (a) Flood Insurance Studies, Flood Insurance Rate Maps (including historic studies and maps and currently effective studies and maps) and letters of map change; and
 - (b) Documentation supporting issuance and denial of permits, elevation certificates, documentation of the elevation (in relation to the datum on the FIRM) to which structures have been floodproofed, other required design

certifications, variances, and records of enforcement actions taken to correct violations of these regulations.

- (12) Enforce the provisions of these regulations, investigate violations, issue notices of violations or stop-work orders, and require permit holders to take corrective action.
- (13) Advise the Director regarding the intent of these regulations and, for each application for a variance, prepare a staff report and recommendation.
- (14) Administer the requirements related to proposed work on existing buildings:
 - (a) Make determinations as to whether buildings and structures that are located in flood hazard areas and that are damaged by any cause have been substantially damaged.
 - (b) Make reasonable efforts to notify owners of substantially damaged structures of the need to obtain a permit to repair, rehabilitate, or reconstruct, and prohibit the noncompliant repair of substantially damaged buildings except for temporary emergency protective measures necessary to secure a property or stabilize a building or structure to prevent additional damage.
- Undertake, as determined appropriate by the floodplain administrator due to the circumstances, other actions which may include, but are not limited to, issuing press releases, public service announcements, and other public information materials related to permit requests and repair of damaged structures; coordinating with other federal, state, and local agencies to assist with substantial damage determinations; providing owners of damaged structures information related to the proper repair of damaged structures in special flood hazard areas; and assisting property owners with documentation necessary to file claims for [i]Increased [c]Cost of [c]Compliance (ICC) coverage under NFIP flood insurance policies.
- (16) Notify FEMA when the corporate boundaries of Charles County, Maryland have been modified and:
 - (a) Provide a map that clearly delineates the new corporate boundaries or the new area for which the authority to regulate pursuant to these regulations has either been assumed or relinquished through annexation; and

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- (b) If the FIRM for any annexed area includes special flood hazard areas that have flood zones that have regulatory requirements that are not set forth in these regulations, prepare amendments to these regulations to adopt the FIRM and appropriate requirements, and submit the amendments to the governing body for adoption; such adoption shall take place within six months of the date of annexation and a copy of the amended regulations shall be provided to MDE (NFIP State Coordinator) and FEMA.
- (17) Upon the request of FEMA, complete and submit a report concerning participation in the NFIP, which may request information regarding the number of buildings in the SFHA, number of permits issued for development in the SFHA, and number of variances issued for development in the SFHA.
- C. 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:
 - (1) Where field-surveyed topography indicates that ground elevations:
 - (a) Are below the base flood elevation, even in areas not delineated as a special flood hazard area on a FIRM, the area shall be considered as a special flood hazard area and subject to the requirements of these regulations.
 - (b) Are above the base flood elevation, the area shall be regulated as a special flood hazard area unless the applicant obtains a letter of map change that removes the area from the special flood hazard area.
 - (2) 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.
 - (3) 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.

- (4) 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.
- (5) If a preliminary Flood Insurance Rate Map and/or a preliminary Flood Insurance Study has been provided by FEMA:
 - (a) Upon the issuance of a letter of final determination by FEMA, IF the preliminary flood hazard data IS MORE RESTRICTIVE THAN THE EFFECTIVE DATA, IT shall be used and shall replace the flood hazard data previously provided from FEMA for the purposes of administering these regulations.
 - (b) Prior to the issuance of a letter of final determination by FEMA, the use of preliminary flood hazard data shall be deemed the best available data pursuant to § 238-5F(3) and used where no base flood elevations and/or floodway areas are provided on the effective FIRM.
 - (c) Prior to issuance of a letter of final determination by FEMA, the use of preliminary flood hazard data is permitted where the preliminary base flood elevations, FLOODPLAIN or floodway BOUNDARIES [areas] exceed the base flood elevations and/or designated floodway widths in existing flood hazard data provided by FEMA. Such preliminary data may be subject to change and/or appeal to FEMA.
- D. Permits required and expiration.
 - (1) 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 established in § 238-5F, including but not limited to, filling; grading; construction of new structures; the substantial improvement of buildings or structures, including repair of substantial damage; placement or replacement of manufactured homes, including substantial improvement or repair of substantial damage of manufactured homes; erecting or installing a temporary structure, or alteration of a watercourse, until a permit is obtained from Charles County. No such permit shall be issued until the requirements of these regulations have been met.
 - (2) In addition to the permits required in Subsection D(1), applicants for permits in nontidal waters of the state are advised to contact MDE unless waived by MDE,

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pursuant to COMAR 26.17.04, Construction on Nontidal Waters and Floodplains; MDE regulates the "one-hundred-year-frequency floodplain of free-flowing waters," also referred to as "nontidal waters of the state." To determine the one-hundred-year-frequency floodplain, hydrologic calculations are based on the ultimate development of the watershed; assuming existing zoning the resulting flood hazard areas delineated using the results of such calculations may be different than the special flood hazard areas established in § 238-5F of these regulations.

- (3) A permit is valid provided the actual start of work is within 180 days of the date of permit issuance. Requests for extensions shall be submitted in writing and justifiable cause demonstrated. The floodplain administrator may grant, in writing, one or more extensions of time, for additional periods not exceeding 90 days each, and provided there has been no amendment or revision to the basis for establishing special flood hazard areas and BFEs set forth in § 238-[8]5F.
- (4) Permits for incremental improvements and additions shall be tracked by the Department, and if cumulative improvements constitute substantial improvement, no further permits may be issued unless the structure conforms to the provisions of this article.
- E. Application required. Application for a permit shall be made by the owner of the property or the owner's authorized agent (herein referred to as the "applicant") prior to the start of any work. The application shall be on a form furnished for that purpose.
 - (1) Application contents. At a minimum, applications shall include:
 - (a) 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.
 - (b) Elevation of the existing natural ground where buildings or structures are proposed, referenced to the datum on the FIRM.
 - (c) 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.

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- (d) 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).
- (e) Determination of the base flood elevations, for development proposals and subdivision proposals, each with at least five lots or at least five acres, whichever is the lesser, 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.
- (f) 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.
- (g) 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.
- (h) 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.
- (i) 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:

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- (1) The proposed elevation of the lowest floor, including basement, referenced to the datum on the FIRM and a signed agreement to submit an elevation certificate.
- (2) The signed declaration of land restriction (nonconversion agreement), which shall be recorded on the property deed prior to issuance of the certificate of use and occupancy, if the application includes an enclosure below the lowest floor or a crawl/underfloor space that is more than four feet in height.
- (3) 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 § 238-9D(1) or § 238-9E(1).
- (j) For accessory structures that are 300 square feet or larger in area (footprint) AND that are below the base flood elevation, A VARIANCE IS REQUIRED AS SET FORTH IN SECTION 238-11. IF A VARIANCE IS GRANTED, a SIGNED declaration of land restriction (nonconversion agreement) shall be recorded on the property deed prior to issuance of the certificate of use and occupancy.
- (k) For temporary structures and temporary storage, specification of the duration of the temporary use.
- (l) 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:
 - (1) If the existing building or structure was constructed after June 5, 1985, evidence that the work will not alter any aspect of the building or structure that was required for compliance with the floodplain management requirements in effect at the time the building or structure was permitted.
 - (2) If the proposed work is a horizontal addition, a description of the addition and whether it will be independently supported or

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- structurally connected to the base building and the nature of all other modifications to the base building, if any.
- (3) 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.
- (4) 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.
- (m) Certifications and/or technical analyses prepared or conducted by a licensed professional engineer, or licensed architect, as appropriate, including:
 - (1) 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 these regulations in:
 - (a) Section 238-8B for certain subdivisions and development;
 - (b) Section 238-9C(1) for development in designated floodways;
 - (c) Section 238-9C(3) for development in flood hazard areas with base flood elevations but no designated floodways; and
 - (d) Section 238-9[D]C(5) for deliberate alteration or relocation of watercourses.
 - (2) The floodproofing certificate for nonresidential structures that are floodproofed as required in § 238-9E(2).
 - (3) Certification that engineered flood openings are designed to meet the minimum requirements of § 238-9D(3)(c) to automatically equalize hydrostatic flood forces.

- (4) 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 § 238-10C(3).
- (n) For nonresidential structures that are proposed with floodproofing, an operations and maintenance plan as specified in § 238-9[E(2)(c)] E(2)(C)(6).
- (o) Such other material and information as may be requested by the floodplain administrator and necessary to determine conformance with these regulations.
- (2) New technical data.
 - (a) The applicant may seek a letter of map change by submitting new technical data to FEMA, such as base maps, topography, and engineering analyses to support revision of floodplain and floodway boundaries and/or base flood elevations. Such submissions shall be prepared in a format acceptable to FEMA and any fees shall be the sole responsibility of the applicant. A copy of the submittal shall be attached to the application for a permit.
 - (b) If the applicant submits new technical data to support any change in floodplain and designated floodway boundaries and/or base flood elevations but has not sought a letter of map change from FEMA, the applicant shall submit such data to FEMA as soon as practicable, but not later than six months after the date such information becomes available. Such submissions shall be prepared in a format acceptable to FEMA and any fees shall be the sole responsibility of the applicant.
- F. Review of application. The floodplain administrator shall:
 - (1) 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.
 - (2) Notify applicants that permits from MDE and the U.S. Army Corps of Engineers, and other state and federal authorities, may be required.

1		(3)	Review all permit applications to assure that all necessary permits have been				
2			received from the federal, state or local governmental agencies from which prior				
3			approval is required. The applicant shall be responsible for obtaining such				
4			permits, including permits issued by:				
5			(a) The U.S. Army Corps of Engineers under Section 10 of the Rivers and				
6			Harbors Act and Section 404 of the Clean Water Act;				
7			(b) MDE pursuant to COMAR 26.23 (Nontidal Wetlands) and Section 401 of				
8			the Clean Water Act;				
9			(c) MDE for construction on nontidal waters of the state pursuant to COMAR				
10			26.17.04; and				
11			(d) MDE pursuant to COMAR 26.24 (Tidal Wetlands).				
12		(4)	Review applications for compliance with these regulations after all information				
13			required in Subsection B of this section or identified and required by the				
14			floodplain administrator has been received.				
15	G.	Inspec	tions. The floodplain administrator shall make periodic inspections of development				
16		permit	ted in special flood hazard areas, at appropriate times throughout the period of				
17		constr	action, in order to monitor compliance. Such inspections may include:				
18		(1)	Stake-out inspection, to determine location on the site relative to the flood hazard				
19			area and designated floodway.				
20		(2)	Foundation inspection, upon placement of the lowest floor and prior to further				
21			vertical construction, to collect information or certification of the elevation of the				
22			lowest floor.				
23		(3)	Inspection of enclosures below the lowest floor, including crawl/underfloor				
24			spaces, to determine compliance with applicable provisions.				
25		(4)	Utility inspection, upon installation of specified equipment and appliances, to				
26			determine appropriate location with respect to the base flood elevation.				
27		(5)	Final inspection prior to issuance of the certificate of use and occupancy.				
28	Н.	Submi	ssions required prior to final inspection. Pursuant to the agreement to submit an				
29		elevati	on certificate submitted with the application as required in Subsection				
30			n)](I)(1), the permittee shall have an elevation certificate prepared and submitted				
31			o final inspection and issuance of a certificate of use and occupancy for elevated				
32		structures and manufactured homes, including new structures and manufactured homes,					

substantially improved structures and manufactured homes, and additions to structures and manufactured homes.

Section 238-8. Requirements in flood hazard areas.

hazard area shall:

D. Buildings and structures. New buildings and structures (including the placement and replacement of manufactured homes) and substantial improvement of existing structures (including manufactured homes) that are located, in whole or in part, in any special flood

(1) 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 these regulations or the Building Code, whichever is higher.

- (2) Be constructed by methods and practices that minimize flood damage.
- (3) Use flood-damage-resistant materials below the elevation of the lowest floor required in § 238-[9E(1)] 9D(3) (for RESIDENTIAL A Zones), or FLOODPROOFING REQUIRED IN SECTION 238-9E(2) (FOR NONRESIDENTIAL A ZONES), OR THE REQUIREMENTS OF Section § 238-10C[(2)] (for V Zones and Coastal A Zones).
- (4) Have electrical systems, equipment and components, and mechanical, heating, ventilating, air-conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment located at or above the elevation of the lowest floor required in § 238-9[E]D(1) FOR RESIDENTIAL STRUCTURES OR SECTION 238-9E(1) FOR NON-RESIDENTIAL STRUCTURES (A Zones) or § 238-10C (V Zones AND COASTAL A ZONES). Electrical wiring systems are permitted to be located below the elevation of the lowest floor, provided they conform to the provisions of the electrical part of the Building Code for wet locations. If replaced as part of a substantial improvement, electrical systems, equipment and components, and heating, ventilation, air-conditioning; and

- plumbing appliances, plumbing fixtures, duct systems, and other service equipment shall meet the requirements of this section.
- (5) As an alternative to Subsection D(4), 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 the base flood.
- (6) Have the electric panel board elevated at least three feet above the BFE.
- (7) Comply with the specific requirements of § 238-9 if located in flood hazard areas (A Zones) that are not identified as Coastal A Zones and coastal high-hazard areas (V Zones).
- (8) Comply with the specific requirements of § 238-9 or § 238-10, if applicable, if located in Coastal A Zones.
- (9) Comply with the specific requirements of § 238-10 if located in coastal highhazard areas (V Zones).
- (10) 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, Coastal A Zone, V Zone).
- E. Placement of fill.
 - (1) 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.
 - (2) Fill shall not be placed in Coastal A Zones or coastal high-hazard areas (V Zones) except as provided in § 238-10B.
 - (3) Fill proposed to be placed to elevate structures in flood hazard areas (A Zones) that are not Coastal A Zones or coastal high-hazard areas (V Zones) shall comply with the limitations in § 238-9 and the requirements of § 238-9D(2).
- F. Historic structures. Repair, alteration, addition, rehabilitation, or other improvement of historic structures shall be subject to the requirements of these regulations 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 an historic

1		structu	ire. The	floodplain administrator may require documentation of a structure's			
2		continued eligibility and designation as an historic structure.					
3	G.	Manut	anufactured homes.				
4		(1)	New n	nanufactured homes shall not be placed or installed in floodways or coastal			
5			high-h	azard areas (V Zones) OR COASTAL A ZONES. EXCEPTION:			
6			REPL	ACEMENT OF MANUFACTURED HOMES ARE PERMITTED			
7			WITH	IN COASTAL A ZONES IF REPLACED WITHIN 12 MONTHS.			
8		(2)	For the	e purpose of these regulations, the lowest floor of a manufactured home is			
9				ttom of the lowest horizontal supporting member (longitudinal chassis			
10				beam).			
11		(3)	New n	nanufactured homes located outside of floodways and coastal high-hazard			
12				V Zones) AND COASTAL A ZONES, replacement manufactured homes			
13			in any	flood hazard areas, and substantial improvement (including repair of			
14			substa	ntial damage) of existing manufactured homes in all flood hazard area shall:			
15			(a)	Be elevated on a permanent, reinforced foundation in accordance with			
16				§ 238-9 or § 238-10, as applicable to the flood zone;			
17			(b)	Be installed in accordance with the anchor and tie-down requirements of			
18				the Building Code or the manufacturer's written installation instructions			
19				and specifications; and			
20			(c)	Have enclosures below the lowest floor of the elevated manufactured			
21				home, if any, including enclosures that are surrounded by rigid skirting or			
22				other material that is attached to the frame or foundation, that comply with			
23				the requirements of § 238-9 or § 238-10, as applicable to the flood zone.			
24		Note:	See "Pr	otecting Manufactured Homes from Floods and Other Hazards: A Multi-			
25		Hazard	d Found	lation and Installation Guide" (FEMA 85)			
26	Н.	Recrea	ational v	vehicles. Recreational vehicles shall:			
27		(1)	Meet t	he requirements for manufactured homes in Subsection G; or			
28		(2)	Be ful	ly licensed and ready for highway use; or			
29		(3)	Be on	a site for less than 180 consecutive days.			
30	I.	Critica	al and es	ssential facilities. Critical and essential facilities shall:			
31		(1)	Not be	e located in coastal high-hazard areas (V Zones), COASTAL A ZONES OR			
32			FLOO	DWAYS[.]; OR			

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- (3) 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:
 - (a) 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 § 238-7[D] E

 (1). The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a conditional letter of map revision [or]

 AND A letter of map revision UPON COMPLETION OF THE PROJECT. Submittal requirements and fees shall be the responsibility of the applicant.
 - (b) 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 one foot at any point.
- (4) 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 it complies with this section and the applicant has received a permit from MDE.
- (5) Alteration of a watercourse for any proposed development that involves alteration of a watercourse not subject to Subsection C. 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 § 238-7E(1), 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] AND A letter of map revision UPON COMPLETION OF THE PROJECT. 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:
 - (a) A description of the extent to which the watercourse will be altered or relocated;

- (b) A certification by a licensed professional engineer that the flood-carrying capacity of the watercourse will not be diminished;
- (c) 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
- (d) 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 Charles County specifying the maintenance responsibilities; if an agreement is required, the permit shall be conditioned to require that the agreement be recorded on the deed of the property which shall be binding on future owners.
- D. Residential structures and residential portions of mixed-use structures. New residential structures and residential portions of mixed-use structures, and substantial improvement (including repair of substantial damage) of existing residential structures and residential portions of mixed-use structures shall comply with the applicable requirements of § 238-8 and this section. See Subsection F for requirements for horizontal additions.
 - (1) Elevation requirements.
 - (a) Lowest floors shall be elevated to or above the flood protection elevation.
 - (b) In areas of shallow flooding (Zone AO), the lowest floor (including basement) shall be elevated at least as high above the highest adjacent grade as the depth number specified in feet on the FIRM plus two feet, or at least four feet if a depth number is not specified.
 - (c) Enclosures below the lowest floor shall meet the requirements of [Subsection C] 3.
 - (2) Limitations on use of fill to elevate structures. Unless otherwise restricted by these regulations, especially by the limitations in Subsection C(1), (2), and (3), fill placed for the purpose of raising the ground level to support a building or structure shall:
 - (a) Consist of earthen soil or rock materials only.

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- (b) Extend laterally from the building footprint to provide for adequate access as a function of use; the floodplain administrator may seek advice from the State Fire Marshal's office and/or the local fire services agency;
- (c) Comply with the requirements of the Building Code and be placed and compacted to provide for stability under conditions of rising and falling floodwaters and resistance to erosion, scour, and settling;
- (d) Be sloped no steeper than one vertical to two horizontal, unless approved by the floodplain administrator;
- (e) Be protected from erosion associated with expected velocities during the occurrence of the base flood; unless approved by the floodplain administrator, fill slopes shall be protected by vegetation if the expected velocity is less than five feet per second, and by other means if the expected velocity is five feet per second or more; and
- (f) Be designed with provisions for adequate drainage and no adverse effect on adjacent properties.
- (3) Enclosures below the lowest floor.
 - (a) Enclosures below the lowest floor shall be used solely for parking of vehicles, building access, crawl/underfloor spaces, or limited storage.
 - (b) Enclosures below the lowest floor shall be constructed using flood-damage-resistant materials.
 - (c) 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.):
 - (1) 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.
 - (2) The total net area of all flood openings shall be at least one square inch for each square foot of enclosed area (nonengineered 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

- (1) The placement of structural fill for the purpose of elevating buildings is prohibited.
- (2) Buildings shall be located landward of the reach of mean high tide.
- (3) Minor grading, and the placement of minor quantities of fill, shall be permitted for landscaping and for drainage purposes under and around buildings and for support of parking slabs, pool decks, patios and walkways.
- (4) Site preparations shall not alter sand dunes unless an engineering analysis demonstrates that the potential for flood damage is not increased.
- C. Residential and nonresidential structures. New structures and substantial improvement (including repair of substantial damage) of existing structures shall comply with the applicable requirements of § 238-8 and the requirements of this section.
 - (1) Foundations.
 - (a) Structures shall be supported on pilings or columns and shall be adequately anchored to such pilings or columns. Pilings shall have adequate soil penetrations to resist the combined wave and wind loads (lateral and uplift). Water loading values used shall be those associated with the base flood. Wind loading values shall be those required by applicable building codes. Pile embedment shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the piling.
 - (b) Slabs, pools, pool decks and walkways shall be located and constructed to be structurally independent of structures and their foundations to prevent transfer of flood loads to the structures during conditions of flooding, scour, or erosion from wave-velocity flow conditions, and shall be designed to minimize debris impacts to adjacent properties and public infrastructure.
 - (2) Elevation requirements.
 - (a) The bottom of the lowest horizontal structural member that supports the lowest floor shall be located at or above the flood protection elevation.
 - (b) Basement floors that are below grade on all sides are prohibited.
 - (c) The space below an elevated building shall either be free of obstruction or, if enclosed by walls, shall meet the requirements of Subsection [D] 4.
 Note: See NFIP Technical Bulletin #5, Free-of-Obstruction Requirements.

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- (3) Certification of design. As required in § 238-7E(1)(m), the applicant shall include in the application a certification prepared by a licensed professional engineer or a licensed architect that the design and methods of construction to be used meet the requirements of Subsections [A, B and D] 1, 2 and 4 and the Building Code.
- (4) Enclosures below the lowest floor.
 - (a) Enclosures below the lowest floor shall be used solely for parking of vehicles, building access or limited storage.
 - (b) Enclosures below the lowest floor shall be less than 299 square feet in area (exterior measurement).
 - (c) Walls and partitions are permitted below the elevated floor, provided that such walls and partitions are designed to break away under flood loads and are not part of the structural support of the building or structure. Note: See NFIP Technical Bulletin #9, Design and Construction Guidance for Breakaway Walls.
 - (d) Electrical, mechanical, and plumbing system components shall not be mounted on or penetrate through walls that are designed to break away under flood loads.
 - (e) Walls intended to break away under flood loads shall be constructed with insect screening or open lattice, or shall be designed to break away or collapse without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. Such walls, framing and connections shall have a design-safe loading resistance of not less than 10 pounds per square foot and no more than 20 pounds per square foot; or
 - (f) Where wind loading values of the building code exceed 20 pounds per square foot, the applicant shall submit a certification prepared and sealed by a licensed professional engineer or licensed architect that:
 - (1) The walls and partitions below the lowest floor have been designed to collapse from a water load less than that which would occur during the base flood.
 - (2) The elevated portion of the building and supporting foundation system have been designed to withstand the effects of wind and flood loads acting simultaneously on all building components

1				(structural and nonstructural). Water loading values used shall be
2				those associated with the base flood; wind loading values used
3				shall be those required by the Building Code.
4				(3) In Coastal A Zones, in addition to the requirements of this section,
5				walls below the lowest floor shall have flood openings that meet
6				the requirements of § 238-9D(3)(c).
7	D.	Horiz	contal ac	dditions to structures.
8		(1)	A hor	rizontal addition proposed for a building or structure that was constructed
9			after 1	the date specified in § 238-5B shall comply with the applicable requirements
10				238-8 and this section.
11		(2)	For h	orizontal additions, whether structurally connected or not structurally
12			conne	ected, to the base building:
13			(a)	If the addition combined with other proposed repairs, alterations, or
14				modifications of the base building constitutes substantial improvement,
15				the base building and the addition shall comply with the applicable
16				requirements of § 238-8 and this section.
17			(b)	If the addition constitutes substantial improvement, the base building and
18				the addition shall comply with all of the applicable requirements of § 238-
19				8 and this section. Note: The base building is required to comply;
20				otherwise, it is an obstruction that does not comply with the free-of-
21				obstruction requirement that applies to the elevated addition. See
22				Subsection C(2)(c).
23			(c)	If the addition alone or combined with other proposed repairs, alterations,
24				or modifications of the base building does not constitute a substantial
25				improvement, then the addition must be elevated to one foot above the
26				base flood elevation.
27	E.	Acces	ssory st	ructures.
28		(1)	Acces	ssory structures shall be limited to [no] NOT more than 300 square feet in
29			TOTA	AL floor area.
30		(2)	Acces	ssory structures shall comply with the elevation requirements and other
31			requi	rements of Subsection C or, if not elevated, shall:
32			(a)	Be usable only for parking of vehicles or limited storage;

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- (b) Be constructed with flood-damage-resistant materials below the base flood elevation;
- (c) Be constructed and placed to offer the minimum resistance to the flow of floodwaters;
- (d) Be anchored to prevent flotation;
- Have electrical service and mechanical equipment elevated to or above the base flood elevation; and
- (f) If larger than 100 square feet in size, have walls that meet the requirements of Subsection C(4)(c) through (f), as applicable for the flood zone; and if located in Coastal A Zones, walls shall have flood openings that meet the requirements of § 238-9D(3)(c).

Section 238-11. Variances.

A. General.

- (1) The Director shall have the power to consider and authorize or deny variances from the strict application of the requirements of these regulations, provided that those variances are of a nontechnical nature requiring engineering judgment. A variance shall be approved only if it is determined to not be contrary to the public interest and where, owing to special conditions of the lot or parcel, a literal enforcement of the provisions of these regulations would result in an unnecessary hardship.
- (2) Upon consideration of the purposes of these regulations, the individual circumstances, and the considerations and limitations of this section, the Director may attach such conditions to variances as the Director deems necessary to further the purposes of these regulations.
- (3) The Director shall notify, in writing, any applicant to whom a variance is granted to construct or substantially improve a building or structure with its lowest floor below the elevation required by these regulations that the variance is to the floodplain management requirements of these regulations 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.
- (4) A record of all variance actions, including justification for issuance, shall be maintained pursuant to § 238-7B(11) of these regulations.

- B. Application for a variance.
 - (1) The owner of property, or the owner's authorized agent, for which a variance is sought shall submit an application for a variance to the floodplain administrator.
 - (2) At a minimum, the application shall contain the following information: name, address, and telephone number of the applicant and property owner; legal description of the property; parcel map; description of the existing use; description of the proposed use; site map showing the location of flood hazard areas, designated floodway boundaries, flood zones, base flood elevations, and flood protection setbacks; description of the variance sought; and reason for the variance request. Variance applications shall specifically address each of the considerations in Subsection C.
 - (3) If the application is for a variance to allow the lowest floor (A Zones) or bottom of the lowest horizontal structural member (V Zones and Coastal A Zones) of a building or structure below the applicable minimum elevation required by these regulations, the application shall include a statement signed by the owner that, if granted, the conditions of the variance shall be recorded on the deed of the property.
 - [(4) If the application is for a variance for an historic structure pursuant to § 238-8F of these regulations, the application shall contain documentation that the proposed work does not preclude the structure's continued eligibility and designation as an historic structure. The documentation shall be obtained from a source that is authorized to make such determinations (see definition of "historic structure").]
- C. Considerations for variances.
 - (1) The floodplain administrator shall request comments on variance applications from MDE (NFIP State Coordinator) and shall provide such comments to the Director.
 - (2) In considering variance applications, the Director shall consider and make findings of fact on all evaluations, all relevant factors, requirements specified in other sections of these regulations, and the following factors:
 - (a) The danger that materials may be swept onto other lands to the injury of others.
 - (b) The danger to life and property due to flooding or erosion damage.

NOTE: CAPITALS indicate language added to existing law.
[Brackets] indicate language deleted from existing law.
Asterisks *** mean intervening code language remaining unchanged.