

Introduced 6-6-2022  
Public Hearing 06-21-2022  
Council Action 07-05-2022 met  
Executive Action 07-06-2022  
Effective Date 07-05-2022

### County Council of Howard County, Maryland

2022 Legislative Session

Legislative Day No. 9

Bill No. 46 -2022

Introduced by: The Chairperson at the request of the County Executive

AN ACT amending provisions related to nonresidential construction in a floodplain in order to require that certain equipment and systems be elevated at least 2 feet above the 100-year flood level; prohibiting the placement of certain equipment and systems below the elevation of the lowest floor; and generally related to floodproofing in Howard County.

Introduced and read first time June 6, 2022. Ordered posted and hearing scheduled.

By order Michelle Harrod  
Michelle Harrod, Administrator

Having been posted and notice of time & place of hearing & title of Bill having been published according to the Charter, the Bill was read for a second time at a public hearing on June 21, 2022.

By order Michelle Harrod  
Michelle Harrod, Administrator

This Bill was read the third time on July 5 met, 2022 and Passed , Passed with amendments \_\_\_\_\_, Failed \_\_\_\_\_.

By order Michelle Harrod  
Michelle Harrod, Administrator

Sealed with the County Seal and presented to the County Executive for approval this 6 met day of July, 2022 at 5:00 a.m./p.m.

By order Michelle Harrod  
Michelle Harrod, Administrator

Approved/Vetoed by the County Executive July 10, 2022

Calvin Ball  
Calvin Ball, County Executive

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; Strike-out indicates material deleted by amendment; Underlining indicates material added by amendment

1 **Section 1. Be It Enacted** by the County Council of Howard County, Maryland that the Howard  
2 County Code is amended as follows:

3  
4 By amending:

5 Title 3, Buildings.  
6 Subsection (b)(77) of Section 3.101 “Amendments to the International Building  
7 Code, 2021 Edition”

8  
9 Title 16, Planning, Zoning and Subdivisions and Land Development Regulations.  
10 Section 16.705 “Requirements and restrictions applicable to the floodplain”.

11  
12 **Title 3. Buildings.**  
13 **Subtitle 1. Building Code.**

14  
15 **Section 3.101. Amendments to the International Building Code, 2021 Edition.**

16 (b) *Local Amendments.* the following amendments modify certain provisions of the adopted  
17 code.

18 (77) *Section 3114 Floodplain.*

19 Delete Section 3114, Public Use Restroom Buildings in Flood Hazard Areas, and  
20 substitute the following:

21 **Section 3114 Floodplain.**

22 **3114.1 General.** For the purpose of this Section, the floodplain is delineated in title 16,  
23 subtitle 7 of the Howard County Code.

24 **3114.2 Within designated floodplain.**

25 The construction, reconstruction, modification, alteration, repair, or improvement of  
26 buildings, manufactured homes, or other structures located within a designated  
27 floodplain shall be done in accordance with the requirements set forth in this section.

28 **3114.2.1 New construction.** New residential or nonresidential construction shall not  
29 occur within a designated floodplain.

30 **Exception 1:** An existing nonconforming structure located within a designated  
31 floodplain which is destroyed by fire or flood, or that sustains substantial damage may

1 be restored to the same size and dimension and in the same location on the same lot as  
2 the destroyed structure, provided construction begins within 12 months of the date of  
3 destruction. Construction shall comply with the elevating and floodproofing  
4 requirements of subsection 3114.4 for new construction adjacent to a floodplain. A  
5 person shall not intentionally demolish or reconstruct any nonconforming structure.  
6 This exception does not apply to manufactured homes. A manufactured home cannot  
7 be restored under any condition within a designated floodplain.

8 **Exception 2:** Transportation networks, utility installations, piers, open pier structures,  
9 and open decks approved by the Department of Public works. Streets, sidewalks,  
10 pathways, and utility systems in accordance with the Howard County Design Manual  
11 and all other applicable codes, ordinances, resolutions, and regulations.

12 **3114.2.2 Additions and enlargements.** Existing nonconforming structures located  
13 within a designated floodplain shall not be expanded or enlarged.

14 **3114.2.3 Modifications, alterations, and repairs.** Modifications, alterations, repairs,  
15 or improvements that cost less than 50% of the fair market value of the structure may  
16 be made to existing nonconforming structures located within a designated floodplain  
17 without floodproofing or elevating if the owner demonstrates through a Maryland State  
18 registered professional engineer that floodproofing or elevating is impractical.

19 **3114.3 Substantial improvements within a designated floodplain.** Substantial  
20 improvements within a designated floodplain shall meet the standards set forth in this  
21 subsection and Title 16, Subtitle 7 of the Howard County Code.

22 **3114.3.1 Residential.** The lowest floor, including a basement, of substantial  
23 improvements to existing nonconforming residential structures located within a  
24 designated floodplain shall be elevated to at least 2 feet above the 100-year flood  
25 elevation.

26 **3114.3.2 Nonresidential.** The lowest floor, including a basement, of substantial  
27 improvements to existing nonconforming nonresidential structures shall be elevated to  
28 at least 2 feet above the 100-year flood elevation or shall be designed so that any area  
29 of the building which is lower than 2 feet above the 100-year flood elevation, as  
30 determined or approved by the Department of Public Works, is watertight with walls  
31 substantially impermeable to the passage of water and with structural components

1 having the capability of withstanding applicable hydrostatic, hydrodynamic, impact,  
2 soil, and, when applicable, hurricane and tidal wave loading conditions. The water  
3 tightness and structural capabilities shall be those described in floodproofing  
4 regulations published by the Office of the Chief of Engineers, U.S. Army, Washington,  
5 D.C., December 1995, or subsequent revisions, and section 16.705(c) of the Howard  
6 County Code.

7 **3114.4 Construction adjacent to a designated floodplain.** Where buildings are  
8 located adjacent to a designated floodplain the following subsections and title 16,  
9 subtitle 7 of the Howard County Code shall apply:

10 **3114.4.1 Residential.** In new construction of residential buildings or additions or  
11 substantial improvements to residential buildings, all floors, including those of  
12 basement and storage areas, shall be elevated at least 2 feet above the 100-year flood  
13 level.

14 **3114.4.2 Nonresidential.** In new construction of nonresidential buildings or additions  
15 or substantial improvements to nonresidential buildings, either:

16 (i) All floors (including those of basement and storage areas) AND ALL ELECTRICAL,  
17 HEATING, VENTILATION, PLUMBING, AIR CONDITIONING EQUIPMENT, AND OTHER  
18 SERVICE FACILITIES ASSOCIATED WITH THE BUILDINGS shall be elevated at least 2  
19 feet above the 100-year flood level, as determined or approved by the Department  
20 of Public Works; or

21 (ii) The construction or improvement [[(including attendant utility or sanitary  
22 facilities)]] shall be designed so that any areas of the building that are lower than  
23 2 feet above the 100-year flood elevation, as determined or approved by the  
24 Department of Public Works, are watertight with walls substantially impermeable  
25 to the passage of water and with structural components having the capability of  
26 withstanding applicable hydrostatic, hydrodynamic, impact, soil, and, when  
27 applicable, hurricane and tidal wave loading conditions. [[Electrical, heating,  
28 ventilation, plumbing, air conditioning equipment, and other service facilities  
29 associated with the buildings shall be designed or located to prevent water from  
30 entering or accumulating within the components during flood conditions.]] The  
31 water tightness and structural capabilities shall be those described in

1 floodproofing regulations, published by the office of the Chief of Engineers, U.S.  
2 Army, Washington, D.C., December 1995, or subsequent revisions, and section  
3 16.705(c) of the Howard County Code.

4 **3114.4.3. Modifications, alterations or repairs.** Modifications, alterations, repairs, or  
5 improvements that costs less than 50% of the fair market value of the structure may be  
6 made to existing nonconforming structures located adjacent to a designated floodplain  
7 without floodproofing or elevating.

8 **3114.4.4. Variances.** Variances to the requirements set forth in this subsection may be  
9 granted by the Building Official in accordance with section 16.711 of the Howard  
10 County Code.

11 **3114.5 Substantial improvements adjacent to a designated floodplain.** Substantial  
12 improvements adjacent to a designated floodplain shall meet the standards set forth in  
13 this subsection and title 16, subtitle 7 of the Howard County Code.

14 **3114.5.1 Residential.** The lowest floor, including a basement, of substantial  
15 improvements to existing nonconforming residential structures located adjacent to a  
16 designated floodplain shall be elevated to at least 2 feet above the 100-year flood  
17 elevation.

18 **3114.5.2 Nonresidential.** The lowest floor, including a basement, of substantial  
19 improvements to existing nonconforming nonresidential structures AND ALL  
20 ELECTRICAL, HEATING, VENTILATION, PLUMBING, AIR CONDITIONING EQUIPMENT, AND  
21 OTHER SERVICE FACILITIES ASSOCIATED WITH THE BUILDINGS SHALL BE located adjacent  
22 to a designated floodplain shall be elevated to at least 2 feet above the 100-year flood  
23 elevation or shall be designed so that any area of the building which is lower than 2  
24 feet above the 100-year flood elevation, as determined or approved by the Department  
25 of Public Works, is watertight with walls substantially impermeable to the passage of  
26 water and with structural components having the capability of withstanding applicable  
27 hydrostatic, hydrodynamic impact, soil, and, when applicable, hurricane and tidal wave  
28 loading conditions. [[Electrical, heating, ventilation, plumbing, air conditioning  
29 equipment, and other service facilities associated with the buildings shall be designed  
30 or located so as to prevent water from entering or accumulating within the components  
31 during conditions of flooding.]] The water tightness and structural capabilities shall be

1 those described in floodproofing regulations published by the Office of the Chief of  
2 Engineers, U.S. Army, Washington, D.C., December 1995, or subsequent revisions,  
3 and section 16.705(c) of the Howard County Code.

4 **3114.6 Verification.** For the purpose of verifying compliance with Section 3114.4 for  
5 construction adjacent to a designated floodplain, the following shall apply:

- 6 (i) When floodproofing by means other than elevating, a document stating that the  
7 proposed construction has been adequately designed to withstand the loading  
8 conditions stated in subsection 3114.4.2(ii) shall be certified by a professional  
9 engineer or architect currently registered in Maryland. This document shall be  
10 required prior to issuance of a building permit.
- 11 (ii) When floodproofing by elevating is used, the owner shall agree, in writing, to  
12 provide a FEMA elevation certificate form 086-0-33, completed by a professional  
13 engineer or professional land surveyor currently registered in Maryland, certifying  
14 that the as-built lowest floor of the structure is elevated at least 2 feet above the  
15 100-year floodplain elevation. The agreement shall be made prior to the issuance  
16 of the building permit and the completed certification shall be submitted prior to  
17 foundation approval by the Building Official.
- 18 (iii) Fair market value of a structure shall be established by a recent (within 6 months)  
19 formal appraisal from a qualified appraiser. Fair market value shall not include  
20 land value.
- 21 (iv) Cost to repair or improve a structure shall be established by a recent (within 6  
22 months) written estimate from a licensed contractor and shall include the  
23 complete cost of repairs or improvements to the point of use or occupancy.

24 **3114.7 Definitions.** Notwithstanding Chapter 2 of the International Building Code, the  
25 following definitions shall apply to Section 3114.0, Floodplain, of this Code:

26 **Accessory structure.** A detached structure on the same parcel or property as the  
27 principal structure that has a use that is incidental to the principal structure including,  
28 but not limited to, a shed or detached garage.

29 **Adjacent to a floodplain.** Sharing a common border with a floodplain.

30 **Basement.** An enclosed area that is below grade on all sides.

31 **Floodplain.** Shall be as delineated in title 16, subtitle 7 of the Howard County Code.

1           **Floodproofing.** Any combination of additions, changes, or adjustments to a structure  
2           which reduce or eliminate flood damage to real estate or improved real property, water  
3           or sanitary facilities, or structures and their contents , such that the buildings or  
4           structures are watertight with walls substantially impermeable to the passage of water  
5           and with structural components having the capability of resisting hydrostatic and  
6           hydrodynamic loads and effects of buoyancy.

7           **Historic structure.** A building listed on the national register of historic places, a state  
8           inventory of historic places, or an inventory of historic structures adopted by resolution  
9           of the County Council. A historic structure also includes a structure that is certified or  
10          preliminarily determined by the United States Secretary of the Interior as contributing  
11          to the historical significance of a registered historic district or a district preliminarily  
12          determined by the Secretary to qualify as a registered historic district.

13          **Lowest floor.** The lowest floor or the lowest enclosed area, including a basement.  
14          Lowest floor does not include an unfinished or flood resistant enclosure used solely for  
15          parking vehicles, building access, or storage in an area other than a basement area. The  
16          enclosure shall not be built so as to render the structure in violation of the applicable  
17          non-elevation design requirements of subsections 3114.4 and 3114.6 of this Code.

18          **Manufactured home.** A manufactured home shall have the meaning set forth in title  
19          16, subtitle 7 of the Howard County Code.

20          **New construction.** Structures, including additions and improvements, and the  
21          placement of manufactured homes, for which the start of construction commenced on  
22          or after 3/15/1977, the initial effective date of the Howard County Flood Insurance  
23          Rate Map, including any subsequent improvements, alterations, modifications, and  
24          additions to such structures.

25          The repair or replacement of a manufactured home because of substantial damage is  
26          considered to be new construction and is prohibited in accordance with Section  
27          3114.2.1 of this Code.

28          **Structure.** For purposes of this Subsection 3114 to this Code, shall have the meaning  
29          set forth in title 16, subtitle 7 of the Howard County Code.

1           **Substantial damage.** Damage of any origin sustained by a structure where the cost of  
2           returning the structure to its condition prior to damage would equal or exceed 50% of  
3           the structure's fair market value before the damage occurred.

4           **Substantial improvement.** The repair, reconstruction, or improvement of a building or  
5           structure, the cost of which is equal to or greater than 50% of the fair market value of  
6           the building or structure prior to damage, improvement, or repair. For the purpose of  
7           this definition, "substantial improvement" occurs when the first alteration of a wall,  
8           ceiling, floor, or other structural part of the building begins, whether or not that  
9           alteration affects the external dimensions of the building or structure. The term does  
10          not include any project for improving a building or structure to comply with existing  
11          State or local health, sanitary, or housing code requirements which are necessary to  
12          assure safe living conditions. This term does not include an alteration of a historic  
13          structure provided that the alteration will not preclude the structure's continued  
14          designation as a historic structure.

15          **Variance.** The grant of relief from a term of this subtitle.

16          **3114.8 Variances and waivers.** Except as provided in Section 3114.4 of this Code, a  
17          variance or waiver of this section is not allowed. The building official shall consider a  
18          variance in accordance with the provisions of section 16.711 of the Howard County  
19          Code.

20          **3114.9 Other agencies.** A permit issued by the Building Official under this subtitle is  
21          not valid until all necessary permits for the development are obtained. Receipt of  
22          federal or State permits do not exempt a development from the provisions of this  
23          subtitle.

24  
25           **Title 16. Planning, Zoning and Subdivisions and Land Development Regulations.**

26                   **Subtitle 7. Floodplain.**

27  
28           **Section 16.705. Requirements and restrictions applicable to the floodplain.**

- 29           (a) Within the floodplain, no development shall be permitted except as provided in this subtitle,  
30           the Howard County Building Code adopted at title 3, subtitle 1 of the Howard County Code  
31           and the Subdivision Regulations adopted at title 16, subtitle 1 of the Howard County Code.



1 (b) Within the approximate floodplain for new subdivisions, site development plans, or single  
2 lots, the 100-year flood elevations (base flood elevations) shall be certified by a qualified  
3 design professional as determined by the Director of the Department of Public Works based  
4 on hydrologic and hydraulic analyses which include a floodway analysis. For a single lot, if  
5 no data are available, methods described in Federal Emergency Management Agency  
6 Publication No. 265, "Managing Floodplain Development in Approximate Zone A Areas",  
7 or a method approved by the Department of Planning and Zoning shall be used to determine  
8 the BASE flood elevation.

9 (c) *Buildings and Structures.* In addition to the requirements set forth in the Howard County  
10 Building Code, new buildings and structures (including the placement and replacement of  
11 manufactured homes) and substantial improvement of existing structures (including  
12 manufactured homes) that are located, in whole or in part, in any special flood hazard area  
13 shall:

- 14 (1) Be designed (or modified) and constructed to safely support flood loads. The  
15 construction shall provide a complete load path capable of transferring all loads from  
16 their point of origin through the load-resisting elements to the foundation. Structures  
17 shall be designed, connected and anchored to resist flotation, collapse or permanent  
18 lateral movement due to structural loads and stresses, including hydrodynamic and  
19 hydrostatic loads and the effects of buoyancy, from flooding equal to the flood  
20 protection elevation or the elevation required by these regulations or the Howard  
21 County Building Code, whichever is higher.
- 22 (2) Be constructed by methods and practices that minimize flood damage.
- 23 (3) Use flood damage-resistant materials below the elevation of the lowest floor required  
24 in section [[3112]]3114 of the Howard County Building Code.
- 25 (4) Have electrical systems, equipment and components, and mechanical, heating,  
26 ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct  
27 systems, and other service equipment located at or above the elevation of the lowest  
28 floor required in section [[3112]]3114 of the Howard County Building Code. Electrical  
29 wiring systems are permitted to be located below elevation of the lowest floor provided  
30 they conform to the provisions of the electrical part of the Howard County Building  
31 Code for wet locations. If replaced as part of a substantial improvement, electrical

1 systems, equipment and components, and heating, ventilation, air conditioning, and  
2 plumbing appliances, plumbing fixtures, duct systems, and other service equipment  
3 shall meet the requirements of this section.

4 [[(5) As an alternative to paragraph (4), electrical systems, equipment and components, and  
5 heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct  
6 systems, and other service equipment are permitted to be located below the elevation  
7 of the lowest floor provided they are designed and installed to prevent water from  
8 entering or accumulating within the components and to resist hydrostatic and  
9 hydrodynamic loads and stresses, including the effects of buoyancy, during the  
10 occurrence of flooding to that elevation.]]

11 ([[6]]5) Have the electric panelboard elevated at least three feet above the BFE.

12 ([[7]]6) Comply with the requirements of the most restrictive designation if located on a  
13 site that has more than one flood zone designation (a zone, designated floodway).

14 (d) *Recreational Vehicles.* Recreational vehicles shall not be parked or stored in special flood  
15 hazard areas.

16 (e) *Protection of Water Supply and Sanitary Sewage Systems.*

17 (1) New and replacement water supply systems shall be designed to minimize or eliminate  
18 infiltration of floodwaters into the systems.

19 (2) New and replacement sanitary sewage systems shall be designed to minimize or  
20 eliminate infiltration of floodwaters into systems and discharges from systems into  
21 floodwaters.

22 (3) In addition to the requirements of section 3.808 of this Code, on-site waste disposal  
23 systems shall be located to avoid impairment to or contamination from them during  
24 conditions of flooding.

25  
26 ***Section 2. And Be It Further Enacted by the County Council of Howard County, Maryland that***  
27 ***this Act shall become effective 61 days after its enactment.***



HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS

3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2433

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Robert J. Frances, P.E., Director  
bfrances@howardcountymd.gov

FAX 410-313-3298  
TDD 410-313-2323

Date: May 25, 2022

To: Lonnie Robbins, Chief Administrative Officer  
Department of County Administration

From: Robert Frances, P.E., Director *R. J. Frances*  
Department of Inspections, Licenses & Permits

Subject: Testimony Regarding Floodplain Changes to Titles 3 and 16

The Departments of Inspections, Licenses, & Permits (DILP) and Planning & Zoning (DPZ), in coordination with the Department of Public Works (DPW) have proposed legislation changes to the County's floodplain regulations. This is being done to be compliant with revised FEMA flood proofing requirements, as well as requirements of the National Flood Insurance Program (NFIP). The proposed changes are needed to maintain the County's current rating under the Community Rating System (CRS). The CRS is used by insurance companies to set flood insurance rates in the County, where applicable.

The proposed changes involve eliminating the ability to protect electrical, heating, ventilation, plumbing, air conditioning equipment and other associated building service facilities and utilities by water tightness and structural floodproofing methods, as previously allowed under FEMA. These methods are no longer recognized and the only permitted way to protect service equipment is by elevation. Since Howard County requires a two foot (2') freeboard, all service equipment will be required to be elevated two feet (2') above the flood elevation.

The proposed changes are being made to both Titles 3 and 16 of the County Code to be consistent.

Fiscal Impact:

There is no fiscal impact to these code changes and review of this new requirement can be absorbed by current staff.

If you have any questions, I can be reached at extension x3946.

Copy: Don Mock, P.E., Chief of Plan Review, DILP  
Amy Gowan, Director, DPZ  
Mark Richmond, P.E., Bureau of Environmental Services, DPW  
Thomas Meunier, P.E., Director, DPW  
Jennifer Sager, County Administration

BY THE COUNCIL

This Bill, having been approved by the Executive and returned to the Council, stands enacted on July 6, 2022.

Michelle Harrod  
Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, having been passed by the yeas and nays of two-thirds of the members of the Council notwithstanding the objections of the Executive, stands enacted on \_\_\_\_\_, 2022.

\_\_\_\_\_  
Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, having received neither the approval nor the disapproval of the Executive within ten days of its presentation, stands enacted on \_\_\_\_\_, 2022.

\_\_\_\_\_  
Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, not having been considered on final reading within the time required by Charter, stands failed for want of consideration on \_\_\_\_\_, 2022.

\_\_\_\_\_  
Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, having been disapproved by the Executive and having failed on passage upon consideration by the Council stands failed on \_\_\_\_\_, 2022.

\_\_\_\_\_  
Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, the withdrawal of which received a vote of two-thirds (2/3) of the members of the Council, is withdrawn from further consideration on \_\_\_\_\_, 2022.

\_\_\_\_\_  
Michelle Harrod, Administrator to the County Council