

Introduced 9/5/17
 Public Hearing 9/19/17
 Council Action 10/2/17
 Executive Action 10/5/17
 Effective Date 12/5/17

County Council of Howard County, Maryland

2017 Legislative Session

Legislative Day No. 12

Bill No. 71-2017

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

AN ACT adopting the 2017 National Electrical Code as the Electrical Code for Howard County; regulating the design, construction, alteration, improvement or modification to electrical equipment; adopting certain local amendments to the Electrical Code; making certain technical corrections; and generally relating to the electrical code in Howard County.

Introduced and read first time September 5, 2017. Ordered posted and hearing scheduled.
 By order Jessica Feldmark
 Jessica Feldmark, Administrator

Having been posted and notice of time & place of hearing & title of Bill having been published according to Charter, the Bill was read for a second time at a public hearing on September 18 2017.
 By order Jessica Feldmark
 Jessica Feldmark, Administrator

This Bill was read the third time on October 2, 2017 and Passed , Passed with amendments _____, Failed _____.
 By order Jessica Feldmark
 Jessica Feldmark, Administrator

Sealed with the County Seal and presented to the County Executive for approval this 4th day of October 2017 at 1 a.m./p.m.
 By order Jessica Feldmark
 Jessica Feldmark, Administrator

Approved Vetoed by the County Executive Oct 5, 2017
Allan Kittleman
 Allan Kittleman, 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
2 Howard County Code is amended as follows:

3 By repealing and reenacting:

4 1. Title 3. Buildings.

5 Subtitle 2. Electrical Regulations.

6 Section 3.214. Adoption of National Electrical Code.

7
8 **Title 3. Buildings.**

9 **Subtitle 2. Electrical Regulations.**

10
11 **SECTION 3.214. ADOPTION OF NATIONAL ELECTRICAL CODE.**

12 (A) (1) THE 2017 EDITION (NFPA 70) OF THE NATIONAL ELECTRICAL CODE, WITH
13 AMENDMENTS AS LISTED IN SUBSECTION (B) OF THIS SECTION, IS HEREBY
14 ADOPTED AS THE ELECTRICAL CODE FOR HOWARD COUNTY, AS IF THE
15 NATIONAL ELECTRICAL CODE WERE SET OUT IN FULL IN THIS SECTION.

16 (2) A PERSON PERFORMING OR CAUSING THE PERFORMANCE OF ELECTRICAL
17 WORK SHALL CONFORM TO THE HOWARD COUNTY ELECTRICAL CODE AND
18 TO THE PROVISIONS OF THE HOWARD COUNTY BUILDING CODE ADOPTED IN
19 TITLE 3, SUBTITLE 1 OF THIS CODE.

20 (3) IF A CONFLICT EXISTS BETWEEN THE HOWARD COUNTY BUILDING CODE
21 AND THE HOWARD COUNTY ELECTRICAL CODE, THE CODE REQUIRING THE
22 HIGHER STANDARD SHALL GOVERN.

23 (B) THE FOLLOWING AMENDMENTS MODIFY CERTAIN PROVISIONS OF THE ADOPTED CODE:

24 (1) *SECTION 90.4. ENFORCEMENT.*

25 ADD A SENTENCE AT THE END OF THIS SECTION AS FOLLOWS: "IF THERE IS A
26 CONFLICT BETWEEN THIS SECTION AND ANY OTHER PROVISION OF THIS
27 SUBTITLE, THE REQUIREMENT OF THE OTHER PROVISION SHALL GOVERN."

28 (2) *ARTICLE 100. DEFINITIONS.*

29 DELETE THE SENTENCE FOLLOWING "AUTHORITY HAVING JURISDICTION
30 (AHJ)." AND SUBSTITUTE THE FOLLOWING, "THE AUTHORITY HAVING

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JURISDICTION IS THE BUILDING OFFICIAL AS SET FORTH IN SECTION 3.101(A)(2) OF THIS CODE.

(3) *SECTION 210.8. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.*

IN SUBSECTION (A), DWELLING UNITS, ADD EXCEPTION NUMBER 1 AS FOLLOWS:

EXCEPTION NO. 1: A SINGLE RECEPTACLE THAT SUPPLIES SUMP PUMPS AND SEWER EJECTOR PUMPS IS NOT REQUIRED TO HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION PROVIDED THAT A GFCI RECEPTACLE IS ADJACENT TO THE SINGLE RECEPTACLE.

(4) *SECTION 210.12. ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION.*

IN SUBSECTION (D), BRANCH CIRCUIT EXTENSIONS OR MODIFICATIONS – DWELLING UNITS AND DORMITORY UNITS, ADD EXCEPTION NUMBER 2 AS FOLLOWS:

EXCEPTION NO. 2: ARC-FAULT-CIRCUIT-INTERRUPTER PROTECTION IS NOT REQUIRED FOR NEWLY INSTALLED 120 VOLT INTERCONNECTED SMOKE DETECTORS.

(5) *SECTION 230.71. MAXIMUM NUMBER OF DISCONNECTS.*

IN SUBSECTION (A), GENERAL, DELETE “FOR THE PURPOSE OF THIS SECTION,” THROUGH THE END OF NUMBER (4), INCLUSIVE.

(6) *SECTION 240.21. LOCATION IN CIRCUIT.*

AMEND SUBSECTION (B), FEEDER TAPS, BY ADDING A SECOND EXCEPTION TO ITEM (B)(1) AND A NEW EXCEPTION TO ITEM (B)(2), BOTH AS FOLLOWS:
EXCEPTION: IN METER ROOMS, THE CONDUCTORS WITHIN THE AUXILIARY GUTTER THAT SUPPLIES THE METER SHALL NOT COUNT AS A PART OF THE TOTAL LENGTH.”.

(7) *SECTION 250.52. GROUNDING ELECTRODES.*

ADD THE FOLLOWING TO THE BEGINNING OF SUBSECTION 250.52(A)(3):
“CONCRETE-ENCASED ELECTRODES: EXCEPT AS OTHERWISE APPROVED BY THE DEPARTMENT, THE PRINCIPAL GROUNDING ELECTRODE FOR A NEW

1 STRUCTURE IS A CONCRETE ENCASED ELECTRODE INSTALLED IN
2 ACCORDANCE WITH THIS SUBSECTION.”.

3 (8) *SECTION 310.106. CONDUCTORS.*

4 ADD THE FOLLOWING AT THE END OF SUBSECTION (A), MINIMUM SIZE OF
5 CONDUCTORS:

6 “WHETHER SOLID OR STRANDED, A CONDUCTOR SHALL NOT BE SMALLER
7 THAN NUMBER 14 COPPER, NUMBER 12 COPPERCLAD ALUMINUM, OR
8 NUMBER 6 ALUMINUM OR ALUMINUM ALLOY.”.

9 (9) *ANNEX H. ADMINISTRATION AND ENFORCEMENT.*

10 ONLY THE PROVISIONS OF SUBSECTION 80.9 ARE ADOPTED. THE REMAINDER
11 OF ANNEX H IS SPECIFICALLY AND INTENTIONALLY NOT ADOPTED.

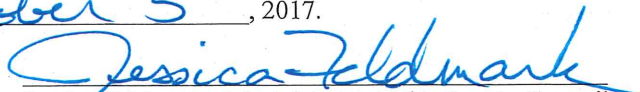
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13 *Section 2. And Be It Further Enacted by the County Council of Howard County,*
14 *Maryland, that this Act shall become effective 61 days after its enactment.*

BY THE COUNCIL

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

October 5, 2017.


Jessica Feldmark, 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 _____, 2017.

Jessica Feldmark, 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 _____, 2017.

Jessica Feldmark, 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 _____, 2017.

Jessica Feldmark, 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 _____, 2017.

Jessica Feldmark, 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 _____, 2017.

Jessica Feldmark, Administrator to the County Council



HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS

3430 Courthouse Drive

Ellicott City, Maryland 21043

410-313-2433

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

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

Subject: Testimony Regarding Adoption of 2017 National Electrical Code

To: Lonnie Robbins
Chief Administrative Officer

From: Robert J. Frances, P.E., Director
Department of Inspections, Licenses, and Permits

R. J. Frances

Date: August 9, 2017

The Department of Inspections, Licenses, and Permits has proposed legislation to adopt the 2017 Edition of the National Electrical Code (NEC) as the Howard County Electrical Code. There have been very few changes made, mostly corrective language to maintain current construction practices.

The previous edition of the NEC (2014) delayed required Arc-Fault Circuit-Interrupter Protection until January 1, 2017; therefore, this requirement is already in effect. Overall, there are no significant changes from the previous adopted version of the NEC. The amendments as proposed enable us to stay current with the most up to date construction codes and allow us to maintain our current construction practices.

I have attached a detailed list of all code changes that were made that are different from the previously approved code adoption.

If you have any questions, I can be reached at ext 3946.

Copy: Donald L. Mock, P.E., Chief, DILP Plan Review (x3948)
Jennifer Sager, County Administration

110.11 Deteriorating Agents. New Informational Note intended to make *Code* users aware that there are minimum flood provisions contained in other building codes as they relate to electrical installations.

110.14 Conductor Termination and Splicing. A properly calibrated tool must be used when torquing terminal connections. In 2014 NEC contained an informational note. For 2017 this code is enforceable.

210.8 GFCI Protection. New informational note added, the methods used for measuring GFCI requirements are now addressed, some three-phase circuits now require protection, and new requirements for crawl spaces have been added.

210.11 Branch Circuits Required. The rules for the circuiting of dwelling unit garages have been relocated, and an exception was added. At least one branch circuit is required in garages that only serve the garage except for readily accessible receptacle located outdoors.

210.12 Arc-Fault Circuit-Interrupter Protection. The AFCI requirements have been expanded. Now dormitory rooms and guestrooms require AFCI protection.

210.52 Dwelling Unit Receptacle Outlet Requirements. Changes have been made to dwelling unit receptacle location rules, most having to do with countertops and work surfaces.

230.42 Size and Rating. The sizing requirements for service conductors have been revised for consistency with similar rules elsewhere in the *NEC*.

240.24 Location of Overcurrent Devices. The accessibility of overcurrent devices was clarified.

250.24 Service Equipment—Grounding and Bonding. Sizing the service neutral conductor when using a cable wiring methods is now addressed.

250.52 Grounding Electrode Types. The description of what used to be known as structural metal was revised, coatings for plate electrodes must be electrically conductive, and swimming pools can't be used as a grounding electrode now.

300.4 Protection Against Physical Damage. An Informational Note was added to address superficial damage of cables or conduits.

300.11 Securing and Supporting. The rules for securing and supporting wiring methods were revised to clarify it is a general rule.

334.6 Listing Requirements. Type NM Cable fittings must now be listed.

334.12 Uses Not Permitted. An editorial change was made to the language regarding ceilings. The *NEC* now clearly states dropped or suspended ceiling cavity.

334.30 Securing and Supporting. Cable ties for securing and supporting must now be listed.

406.12 Tamper-Resistant Receptacles. The locations requiring tamper-resistant receptacles have been expanded, as have the types of receptacles requiring such protection.

422.5 Ground-Fault Circuit-Interrupter (GFCI) Protection for Personnel. The rules for providing GFCI protection for specific appliances found throughout Article 422 have been relocated to this section, the voltage and current ratings for equipment requiring GFCI's have been specified, and the options for protection methods have been expanded.

422.16 Flexible Cords. The cord requirements for dishwashers and trash compactors have been revised to reflect product standards.

550.13 Receptacle Outlets. Dishwashers in mobile and manufactured homes must now be GFCI protected.

550.25 AFCI Protection. The AFCI protection requirements for manufactured and mobile homes now mirror the rules for dwellings in 210.12.

680.4 Approval of Equipment. A new rule requires electrical equipment associated with pools to be listed.

680.7 Grounding and Bonding Terminals. Grounding and bonding terminals now have specific location-driven requirements.

680.12 Equipment Rooms and Pits. A reminder was added that pools and similar installations are considered corrosive environments.

680.14 Corrosive Environment. A new section provides the requirements for equipment subject to corrosion.

680.28 Gas-Fired Water Heaters. New GFCI provisions for gas-fired water heaters were added.

680.74 Equipotential Bonding. The rules for bonding hydro-massage tubs have been revised.

695.14 Control Wiring. The fire pump control wiring methods have been expanded.

695.15 Surge Protection. Fire pump controllers must now have surge protection.

700.3 Tests and Maintenance. The equipment that might require maintenance is no longer limited to just batteries.



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