

COUNTY COUNCIL OF PRINCE GEORGE'S COUNTY, MARYLAND
2015 Legislative Session

Bill No. CB-91-2015

Chapter No. 80

Proposed and Presented by The Chairman (by request – County Executive)

Introduced by Council Members Turner, Lehman, Harrison, Franklin, Davis, Glaros,
Taveras and Patterson

Date of Introduction October 20, 2015

BILL

1 AN ACT concerning

2 Electrical Code

3 For the purpose of updating the Prince George’s County Electrical Ordinance by adopting certain
4 amendments pursuant to the 2014 Edition of the National Electrical Code and amending certain
5 sections to include modifications related to the Electrical Code

6 BY repealing and reenacting with amendments:

7 SUBTITLE 9. ELECTRICITY.

8 Sections 9-101, 9-104, 9-104.01, 9-106, 9-107.01, 9-
9 108.01, 9-108.02, 9-108.03, 9-109.01, 9-109.02, 9-
10 117, 9-118, 9-122, 9-123, and 9-124

11 The Prince George's County Code
12 (2011 Edition; 2014 Supplement).

13 BY repealing:

14 SUBTITLE 9. ELECTRICITY.

15 Sections 9-101.01, 9-105, 9-108.00.01, and 9-109
16 The Prince George's County Code
17 (2011 Edition; 2014 Supplement).

18 BY adding:

19 SUBTITLE 9. ELECTRICITY.

20 Sections 9-110, AND 9-111
21 The Prince George's County Code

(2011 Edition; 2014 Supplement).

SECTION 1. BE IT ENACTED by the County Council of Prince George's County, Maryland, that Sections 9-101, 9-104, 9-104.01, 9-106, 9-107.01, 9-108.01, 9-108.02, 9-108.03, 9-109.01, 9-109.02, 9-117, 9-118, 9-122, 9-123, and 9-124 of the Prince George's County Code be and the same are hereby repealed and reenacted with the following amendments:

SUBTITLE 9. ELECTRICITY.

DIVISION 1. ELECTRICAL CODE.

SUBDIVISION 1. ADOPTION BY REFERENCE.

Sec. 9-101. Code- Adoption by Reference.

The National Electrical Code (NEC), [2002] 2014 Edition, published by the National Fire Protection Association, is hereby adopted by reference and made a part of this Subtitle with the same force and effect as though set out in full herein as the Official Electrical Code of Prince George's County, together with the changes, deletions, or modifications prescribed in this Subtitle. All electrical work performed or contracted to be performed in the County shall be included within the [purview] authority of this Subtitle.

* * * * *

Sec. 9-104. General.

Any provision of the National Electrical Code adopted by Section 9-101 of this Subtitle shall be subject to [changed, modified, added or omitted] change, modification, addition or omission as set out in Subdivision 2, and such change, amendment, addition or deletion shall be deemed to supersede the text of the Electrical Code in any case where the provisions of this Subtitle are interpreted.

Sec. 9-104.01. Same; Article 110 -- Requirements for Electrical Installations.

(a) The following amendments, additions, and/or deletions are made to Section 110.26 of the National Electrical Code:

(1) Section 110.26(D), "Illumination," is amended to read as follows: In addition to Article 110.26 (D) a wall mounted battery pack operated emergency illumination shall be provided for all working spaces about service equipment, switchboards, panelboards, load centers and motor control centers installed indoors. The battery shall be of suitable rating and capacity to supply and maintain the total load for a minimum period of 2 hours. In addition,

1 emergency illumination shall be provided about service equipment and switchboards in all
2 commercial occupancies.

3 * * * * *

4 **Sec. 9-106. Same; Article 250-Grounding.**

5 (a) The following amendments, additions, and/or deletions are made to Article 250 of the
6 National Electrical Code:

7 (1) Section 250.52(A)(3), "Concrete - Encased Electrode," is amended to read as
8 follows: All new structures, both residential and commercial, require a concrete encased
9 electrode to be used as the principal grounding electrode system. [element. A concrete encased
10 electrode is an electrode encased by at least 2 inches (50.8 mm) of concrete, located within and
11 near the bottom of a concrete foundation or footing that is in direct contact with the earth,
12 consisting of at least 20 feet (6.1 m) of one or more steel reinforcing bars or rods of not less than
13 1/2 inch (12.7 mm) diameter, or consisting of at least 20 feet of (6.1 m) bare solid copper
14 conductor not smaller than No. 4 AWG. Steel reinforcing rods and/or copper conductor shall be
15 supported in the trench to insure 2 inches (50.8 mm) separation from earth. If a rod with
16 galvanized finish is used, a bronze or brass clamp listed for the purpose may be used to attach the
17 grounding electrode conductor which requires a minimum of 2 foot (0.61 m) of accessible length
18 after installation. If a nongalvanized rod is used, an exothermic weld or irreversible clamp is
19 required to attach the grounding electrode conductor. Rods having a nonconductor coating shall
20 not be used for the required grounding electrode.]

21 [(2) Section 250.56, "Resistance of Rod, Pipe, and Plate Electrodes." Add the
22 following: Unless data is provided to the authority having jurisdiction showing that the actual
23 resistance to ground measurement is twenty-five (25) ohms or less when a metal underground
24 water pipe in direct contact with the earth for ten (10) feet or more is not available at the
25 premises, an additional ground rod shall be installed to serve as the supplementary ground.]

26 * * * * *

27 **Sec. 9-107.01. Wiring Methods and Materials; Article 310 -- Conductors for General**
28 **Wiring.**

29 (a) The following amendments, additions, and/or deletions are made to Article 310 of the
30 National Electrical Code:

1 (1) The following paragraph is added to Section [310.2, "Conductors:" (C)] 310.10
2 "Uses Permitted." Aluminum Conductors. Aluminum conductors shall be permitted only for
3 service and feeder use and shall not be smaller than #2 AWG.

4 (2) The following exception is added to Section [310.2, "Conductors:"] 310.10 "Uses
5 Permitted." Listed Cable assemblies #2 aluminum AWG and larger installed in single-family
6 and multifamily dwellings, having grounding conductors sized in accordance with Section
7 250.122, "Size of Equipment Grounding Conductors," shall be excluded from the requirements
8 set forth in (a)(1), above.

9 [(3) The following addition is made to 310.15(B)(2)(a)FPN, "Adjustment Factors:"
10 No diversity allowance is permitted when determining ampacity of three (3) or more conductors
11 in a raceway or cable.]

12 * * * * *

13 **Sec. 9-108.01. Same; Article 408-Switchboards and Panelboards.**

14 (a) The following amendments, additions, and/or deletions are made to Article 408 of the
15 National Electrical Code:

16 (1) Article [480.16] 408.36, "Overcurrent Protection," Exception No. [2 under
17 paragraph (A)] 3 is amended to read as follows:

18 * * * * *

19 (2) A new Section [408.22], Article 408, Part II. A switchboard, 408.23 titled
20 "Switchboards of One Thousand (1,000) Amperes or Larger," [titled "Switchboards of One
21 Thousand (1,000) Amperes or Larger,] is added to read as follows:

22 (A) Switchboards having a capacity of one thousand (1,000) amperes or larger,
23 using aluminum feeders and/or busbars, shall receive periodic cleaning and preventative
24 maintenance as recommended by the manufacturer of such equipment to minimize the possibility
25 of fire or catastrophic failure. Cleaning and maintenance require an electrical permit, including
26 coordination of shutdown with the utility, and shall include the following:

27 * * * * *

28 (viii) Testing and cleaning records shall be kept and made available upon
29 request and proper antioxidizing agents shall be used after each cleaning.

30 * * * * *

Sec. 9-108.02. Equipment for General Use; Article 410 -- Luminaires, Lampholders, and Lamps.

(a) The following amendments, additions, and/or deletions are made to Article 410 of the National Electrical Code:

(1) The following addition is made to paragraph [(C)] (B) of Section [410.16] 410.36: All "lay-in" luminaires will require independent suspension to insure that the luminaire will not drop more than nominally two (2) or three (3) inches when the framing members no longer provide the support. Number 12 [SWG] WG wire firmly secured to the building structure and the luminaire is required for this purpose. Two (2) restraining wires (one (1) at each opposite end of the luminaire) are required for luminaries smaller than 2x4 and four (4) restraining wires (one (1) at each corner) are required on all luminaries 2x4 and larger. Other types of lay-in [luminaires shall also have a secondary support] fixtures and surface mounted fixtures mounted on drop ceiling shall be support based on the fixture area to preclude the danger of falling when the framing members fail or are removed (e.g., hi-hat luminaire).

* * * * *

Sec. 9-109.01. Special Conditions; Article 700- Emergency Systems.

(a) The following amendments, additions, and/or deletions are made to Article 700 of the National Electrical Code:

(1) Section [700.6(A)] 700.5 (A) is amended by the addition of the following sentence:

(A) Emergency Systems and Transfer equipment shall be separated [by a minimum of two (2) hour fire rated wall(s) from normal power supply systems] by a wall or wall(s) with a minimum fire rating of two (2) hour(s).

* * * * *

Sec. 9-109.02. Same; Article 701- Legally Required Standby Systems- Source of Power.

(a) The following amendments, additions, and/or deletions are made to Article 701 of the National Electrical Code:

(1) Section [701.11] 701.12, titled["Legally Required Standby Systems,"] "General Requirements" is amended by the addition of the following sentence: Permission to use an emergency power source must be requested and authorized in writing from the authority having jurisdiction prior to the submittal of engineering plans for approval.

1 * * * * *

2 **Sec. 9-117. Right of Property Owner to Perform Work on Own Premises.**

3 (a) Except as restricted to the type of work as delineated below, [nothing contained in this
4 Subtitle shall be construed to prohibit any property owner from personally installing electrical
5 wiring] the property owner is permitted to perform electrical work on his or her own premises;
6 and the work is limited up to a combination of ten (10) devices or less which includes addition,
7 relocation and replacement of (lights, receptacles and switches), provided, that such premises are
8 used only for a single-family residential dwelling.

9 The owner shall meet the following requirements:

10 [(1) The owner shall satisfy the Department as to the ability to install electrical
11 wiring.]

12 [(2)] (1) The owner shall apply for, pay the required fee, and secure an electrical
13 permit required by this Subtitle.

14 [(3)] (2) The owner shall do such work in accordance with the provisions of this
15 Subtitle and plans submitted with the application.

16 [(4)] (3) The owner shall apply for all inspections required by this Subtitle.

17 [(5)] (4) The owner shall be living on the premises, or declare an intention to occupy
18 the premises for a minimum of one (1) year.

19 [(6)] (5) The owner shall receive a final certification of inspection.

20 [(b)] (c) Personal installation by an owner, other than by a licensed electrician, shall be by
21 the owner on his own premises and without compensation from or to any other person for such
22 labor or installation. The owner exercising this privilege shall conform to all requirements of
23 this Subtitle.

24 [(c)] (b) The following electrical work is not permitted to be performed under a
25 homeowners permit:

26 * * * * *

27 **Sec. 9-118. Permits; terms and conditions**

28 * * * * *

29 (b) Any permit issued with administrative errors which are the result of information
30 provided by the applicant, such as incomplete listing of work accomplished, wrong address, or
31 wrong owner, shall be revised prior to a final inspection. A fee of [Fifteen Dollars (\$15.00)]

1 Forty Five Dollars (\$45.00) is imposed for a permit revision in addition [and may be credited] to
2 the increased scope of work.

3 * * * * *

4 **Sec. 9-122. [Refunds for] Unused Permits and Inspections**

5 (a) Where no work has been done under a permit issued pursuant to this Subtitle, the
6 holder of the permit may return the permit to the Department for cancellation, [and refund.]
7 Requests for cancellation [and/or refunds] must be in writing by the electrical contractor or
8 property owner and should be submitted promptly. Upon cancellation of the permit, there shall
9 be refunded to the holder of the permit any amount in excess of Twenty Dollars (\$20.00) paid.
10 Requests for each refund must be made prior to the expiration date of the permit.

11 * * * * *

12 (d) Whenever any electrical work for which a permit is required has been started prior to
13 obtaining a permit, a special investigation shall be made before an application may be filed to
14 request the required permit. In addition to the filing fee and regular permit fee, an investigation
15 fee of One Hundred Fifty Dollars [(\$100.00)] (\$150.00) for residential work and Two Hundred
16 Fifty Dollars [(\$200.00)] (\$250.00) for commercial work shall be paid at the time of filing the
17 application for the required permit. Whenever work under a permit has been placed, partially
18 completed, or concealed without first obtaining the required inspection approval, the Chief
19 Electrical Inspector shall cause a special investigation to be made. The fee for the special
20 investigation shall be One Hundred Fifty Dollars [(\$100.00)] (\$150.00) for residential and Two
21 Hundred Fifty Dollars [(\$200.00)] (\$250.00) for commercial and shall be payable before further
22 inspections will be provided.

23 (e) Whenever an inspection is requested which cannot be rendered because the work has
24 not been [competed] completed, a reinspection fee of [Twenty-five Dollars (\$25.00)] Fifty-Five
25 Dollars (\$55.00) will be assessed against the contractor.

26 **Sec. 9-123. Inspections**

27 A rough-wiring inspection is required before concealment. Upon completion of an electrical
28 installation, a request for final inspection shall be made to the Department within seventy-two
29 (72) hours of completion. The Department shall complete any commercial electrical inspection
30 within three (3) working days of such request.

Sec. 9-124. Notice of [violations] Violations.

(a) The Chief Electrical Inspector or authorized representative shall serve written notice of violations within three (3) working days of the inspection to persons responsible for work which is found in violation of the Electrical Code or which is not in compliance with the approved plans. Such notices shall order the discontinuance of the illegal action or condition and order the correction of the violation and the code section or sections shall be included in the notice of violation.

SECTION 2. BE IT ENACTED by the County Council of Prince George's County, Maryland, that Sections 9-101.01, 9-105, 9-108.00.01, and 9-109 of the Prince George's County Code be and the same are hereby repealed:

SUBTITLE 9. ELECTRICITY.

DIVISION 1. ELECTRICAL CODE.

SUBDIVISION 1. ADOPTION BY REFERENCE

Sec. 9-101.01. [Code Arrangement.] Reserved.

[(a) The following amendments, additions, and/or deletions are made to Article 90 of the National Electrical Code:

(1) The second paragraph of Section 90.3, "Code Arrangement," is amended to read as follows: Installations of communications systems shall be subject to the requirements of Chapters 1 through 8 of the NEC.]

* * * * *

Sec. 9-105 [Writing and Protection; Article 210-Branch Circuits.] Reserved.

[(a) The following amendments, additions, and/or deletions are made to Article 210 of the National Electrical Code:

(1) The following is added to the text of Section 210.4, "Multiwire Branch Circuits:"

(E) Ungrounded Conductors. Ungrounded conductors of different voltages shall be of different colors or identified by other means. Conductors of multiwire branch circuits and two-wire branch circuits connected to the same system shall conform to the following color code: 240 volt "single phase" ungrounded conductors shall be identified by the use of one black, one red; 208 volt "three phase" connected systems shall be identified by the use of one black, one red, one blue; 480 volt "three phase" connected systems shall be identified by the use of one yellow, one brown, one orange; "grounded" conductors shall comply with Section 200.6(B) of

1 the National Electrical Code; the ungrounded conductors of the additional circuit may be of
2 colors other than those specified. All circuit conductors of the same color shall be connected to
3 the same ungrounded feeder conductor throughout the installation. In addition to the
4 requirements of Section 408.13 of the National Electrical Code, identification shall be
5 permanently posted at each panelboard. Note: For four-wire delta systems, see National
6 Electrical Code 408.3(E).]

7 * * * * *

8 **Sec. 9-108.00.01 [Same; Article 338- Service -Entrance Cable: Types SE and USE]**
9 **Reserved.**

10 [(a) The following amendments, additions, and/or deletions are made to Article 338 of the
11 National Electrical Code:

12 (1) The following Exception is added to Section 338.10: Type SE service-entrance
13 cable and type SER cable where conductors are fully insulated shall be limited to construction
14 types III, IV and V, except under the provisions of Article 527.]

15 **Sec. 9-109. [Special Equipment; Article 600 -- Electric Signs and Outline Lighting.]**
16 **Reserved.**

17 [(a) The following amendments, additions, and/or deletions are made to Article 600 of the
18 National Electrical Code:

19 (1) Section 600.6(A), "Location," is amended to read as follows: Signs and outline
20 lighting systems attached to or supported by the building structure shall require a disconnecting
21 means adjacent to and in sight of the sign or outline lighting system. The disconnecting means
22 shall disconnect the sign or outline lighting system from all ungrounded supply conductors. It
23 shall be designed so that no pole can be operated independently, and it shall be capable of being
24 locked in the open position.]

25 SECTION 3. BE IT ENACTED by the County Council of Prince George's County, Maryland,
26 that Sections 9-110, and 9-111 of the Prince George's County Code be and the same are hereby
27 added:

28 **SUBTITLE 9. ELECTRICITY.**
29 **DIVISION 1. ELECTRICAL CODE.**
30 **SUBDIVISION 1. ADOPTION BY REFERENCE**

1 **Sec. 9-110. Emergency and Power Source.**

2 (a) The following amendments and/or additions are made to Article 700 of National
3 Electrical Code.

4 (1) A connection ahead of service disconnecting means is not permitted as an
5 emergency circuit except as permitted by Section 9-109.01 of this Code.

6 **Sec. 9-111. Fire Pump.**

7 (a) The following amendments, and/or additions are made to Article 695 of the National
8 Electrical Code:

9 (1) A fire pump shall be supplied by a separate service from the utility
10 transformer.

11 (2) A fire pump shall be permitted to be supplied from a connection located
12 ahead of the service disconnecting means when a back-up on-site generator
13 is used as an alternate power source to feed the fire pump.

14 SECTION 4. BE IT FURTHER ENACTED that the provisions of this Act are hereby
15 declared to be severable; and, in the event that any section, subsection, paragraph, subparagraph,
16 sentence, clause, phrase, or word of this Act is declared invalid or unconstitutional by a court of
17 competent jurisdiction, such invalidity or unconstitutionality shall not affect the remaining
18 words, phrases, clauses, sentences, subparagraphs, paragraphs, subsections, or sections of this
19 Act, since the same would have been enacted without the incorporation in this Act of any such
20 invalid or unconstitutional word, phrase, clause, sentence, paragraph, subparagraph, subsection,
21 or section.

22 SECTION 5. BE IT FURTHER ENACTED that this Act shall take effect forty-five (45)
23 calendar days after it becomes law.

Adopted this 17th day of November, 2015.

COUNTY COUNCIL OF PRINCE
GEORGE'S COUNTY, MARYLAND

BY: _____
Mel Franklin
Chairman

ATTEST:

Redis C. Floyd
Clerk of the Council

APPROVED:

DATE: _____ BY: _____
Rushern L. Baker, III
County Executive

KEY:
Underscoring indicates language added to existing law.
[Brackets] indicate language deleted from existing law.
Asterisks *** indicate intervening existing Code provisions that remain unchanged.

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