



# PHILIPPINE ELECTRICAL CODE PART 1

2017 EDITION



INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS OF THE PHILIPPINES, INC.





Chapter 6 - Article 6.25 - Electric Vehicle Charging System has been expanded with new Parts and four new articles have been added: (1) Article 6.26 - Electrified Truck Parking Spaces, (2) Article 6.46 - Modular Data Centers, (3) Article 6.91 - Large-Scale Photovoltaic (PV) Electric Power Production Facility and (4) Article 6.94 - Wind Electric Systems.

Chapter 7 - Article 7.5 - Interconnected Electric Power Production Sources and Article 7.70 - Optical Fiber Cables have been expanded while five new articles have been added: (1) Article 7.6 - Energy Storage Systems, (2) Article 7.8 - Critical Operations Power Systems (COPS), (3) Article 7.10 - Stand-Alone Systems, (4) Article 7.12 - Direct Current Microgrids and Article 7.28 - Fire-Resistive Cable Systems.

Chapter 8 - Added a new Article 8.40 - Premises-Powered Broadband Communications Systems.

Chapter 10 - A new Table 10.1.1.10 has been added.

Aside from the chapters discussed, the rest of the Code has minimal changes. Harmonizing the PECI with IEC and other recognized standards is an ever-continuing effort.

The 2017 Philippine Electrical Code Part I has been crafted in order to clarify ambiguities and to facilitate easy use and understanding so that the electrical practitioners will be properly guided.

This Code has been patterned after the National Electrical Code 2017 version as it was found to be most appropriate and applicable to Philippine Setting.

NEC 2017 and relevant IEC and other standards were used in one way or another as reference materials which are and could have been included in PECI 2017, and for this reason, IIEE and the Committee wish to acknowledge their contributions in the preparation of PECI 2017.

After coordination meetings and discussions with the Board of Electrical Engineering's (BEE) Chairman, the Honorable Engr. Francis V. Mapile, the IIEE submitted the final draft of the PECI 2017 to the BEE for endorsement to the Professional Regulation Commission (PRC) for its review and approval, which has since been received on November 10, 2017. PECI 2017 supersedes all previous editions of the Code dated 1962, 1969, 1973, 1980, 1985, 1992, 2000 and 2009.

Comments on PECI 2017 regarding omissions and errors, as well as, conflicts with accepted international standards are most welcome and will be highly appreciated. All suggestions will be studied and considered for inclusion in the Code's next edition. Suggestions can be addressed to:

THE CHAIRMAN, PECI COMMITTEE

Institute of Integrated Electrical Engineers  
of the Philippines, Inc.

IIEE Bldg., #41 Monte de Piedad Street  
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ACKNOWLEDGEMENT

The Institute of Integrated Electrical Engineers of the Philippines, Inc. (IIEE) acknowledges the fine work of the members of the Philippine Electrical Code, Part I Committee in the preparation and expeditious completion of the Philippine Electrical Code, Part I (PECI 2017). The preparation of the 2017 edition of the Code is by no means an easy task, considering that the previous edition was done in 2009. It is, therefore, with great appreciation to acknowledge the efforts and sacrifices of each member of the PECI Committee:

Name	Position	Chapter
Engr. William W. Yang	Chairman	Chapters 5, 9, 10 & Appendices
Engr. Gregorio V. Guavara	Vice Chairman	Chapter 1
Engr. Lucio R. Alejo, Jr.	Member	Chapter 6
Engr. Aileen A. Alejo	Member	Chapter 6
Engr. Roy Reynaldo G. Gonzalez	Member	Chapter 6
Engr. Edwin V. Pangilinan	Member	Chapter 8
Engr. Marites R. Pangilinan	Member	Chapter 2 & Appendix D - Examples
Engr. Reynaldo R. Santiago	Member	Chapter 3
Engr. Eduardo H. Tan	Member	Chapter 7
Engr. Gem J. Tan	Member	Chapter 4
Mr. Ramon P. Ayaton	Adviser	Editorial and Publication
Engr. Kenneth A. Jorjue	Code Committee Secretariat	
Dr. Angel V. De Vera, Jr.	Overseer	

The success of the PECI Committee's work is made possible with the support of the 2016 IIEE Board of Governors under the leadership of National President, Engr. Larry C. Cruz and the 2017 IIEE Board of Governors, Engr. Joebe B. Panhason (National President), Engr. Noel T. Fernandez (VP - Internal Affairs), Engr. Flongco C. Varona (VP - External Affairs), Engr. Angel V. De Vera Jr. (VP - Technical Affairs), Engr. Cirilo C. Calibyo (National Secretary), Engr. Florencio D. Berenguel (National Treasurer), Engr. Eugenio F. Araulo (National Auditor), Regional Governors: Engr. Feliciano F. Padda III (Northern Luzon), Engr. Gerrilyn S. Santos (Central Luzon), Engr. Rodrigo T. Pecolera (Metro Manila), Engr. Allan Anthony P. Alvarez (Southern Luzon), Engr. Jigger F. Bugtong (Bisol), Engr. Al B. Bunda (Western Visayas), Engr. Teodoro E. Amaza (Eastern Central Visayas), Engr. Gino B. Macapagal (Northern Mindanao), Engr. Dick S. Artilano (Southern Mindanao), Engr. Samuel B. Julio (Western Mindanao) and Engr. Robert U. Mabilal (Middle East Gulf). The contributions of the VP-Technical (2017) - Engr. Angel V. De Vera, Jr. is greatly appreciated. Thanks also goes to the Chairman of the Board of Electrical Engineering of the Professional Regulation Commission, Engr. Francis V. Mapile, who provided guidance in the format and contents of the Code as well as helpful statutory and technical inputs. Last but not the least, acknowledgement is given to the IIEE staff, particularly Engr. Kenneth A. Jorjue, Ms. Mara Kharmis D. Magno and Ms. Gelyn O. Lee, for their untiring assistance in providing the needed administrative and logistical support.

The IIEE, together with the PECI Committee, acknowledges the adoption of the National Electrical Code 2017 edition (NEC 2017) of the National Fire Protection Association (NFPA) as the basis for the PECI 2017. Similarly acknowledgement is given to the International Electrotechnical Commission (IEC) and its standards.



Republic of the Philippines  
Professional Regulation Commission  
Manila



PROFESSIONAL REGULATORY BOARD OF ELECTRICAL ENGINEERING  
RESOLUTION NO. 18  
Series of 2017

ADOPTION OF THE 9<sup>TH</sup> EDITION OF THE 2017 REVISED PHILIPPINE ELECTRICAL CODE (PECI PART I) AS PART OF THE RULES AND REGULATIONS GOVERNING THE PRACTICE OF ELECTRICAL ENGINEERING AND AS A REFERRAL CODE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE

WHEREAS, Republic Act (RA) No. 7920 otherwise known as the New Electrical Engineering Law vests upon the Professional Regulatory Board of Electrical Engineering (Board) the mandate to look into the concerns affecting the practice of the electrical engineering profession, adopt measures for the enhancement of the profession, and the maintenance of high professional, technical and ethical standards;

WHEREAS, Section 211 of PD No. 1096, also known as the National Building Code, provides, to wit: "In the implementation of the provisions of this Code, the Secretary of the Department of Public Works and Highways (DPWH) shall formulate necessary rules and regulations and adopt design and construction standards and criteria for building and other structures";

WHEREAS, Engr. Joebe B. Panhason, National President, and Engr. William W. Yang, Chairman of the Code Committee for the Review and Revision of the Philippine Electrical Code (PEC) Part I of the Institute of Integrated Electrical Engineers of the Philippines, Inc. (IIEE), submitted a copy of the draft revised PEC Part I for the adoption by the Board and the Professional Regulation Commission (Commission);

WHEREAS, the draft of the revised PEC Part I was likewise submitted to the DPWH Secretary for adoption as a referral code to the National Building Code;

WHEREAS, in the "Preface" embodied in the draft document, the Chairman of the Code Committee, pointed out, among others, the significant and salient changes in the proposed 9<sup>th</sup> Edition of the 2017 Revised PEC Part I, as follows:

- Chapter 1: New definitions have been included, notably Office of the Building Official (OBO/EE), National Electrical Engineering Law and Service Protective Device. The OBO/EE refers to the licensed electrical practitioner employed with the Office of the Building Official. He/she replaced the Authority Having Jurisdiction (AHJ) in the Code's various provisions. The second new definition expounds references to Republic Act 7920 (RA 7920) which is the current national electrical engineering law. This way, the national electrical engineering law remains relevant should Republic Act 7920 be superseded. Service Protective Device defines the new equipment addition to Code provisions related to service equipment.

ADOPTION OF THE 9<sup>TH</sup> EDITION OF THE 2017 REVISED PHILIPPINE ELECTRICAL CODE (PECI PART I) AS PART OF THE RULES AND REGULATIONS GOVERNING THE PRACTICE OF ELECTRICAL ENGINEERING AND AS A REFERRAL CODE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE

- Also, three important new sections have been added: (1) Section 1.0.1.10 Apprenticeship, (2) Section 1.10.1.24 Available Fault Current (which require markings of such on the service equipment and would necessarily need short circuit calculations complementing Section 1.3.2.1(F)(4), and (3) Section 1.10.1.25 Lockable Disconnecting Means. Arc-Flash Hazard Analysis has been added to the requirements under Section 1.3.2.1 (F) Design Analysis as 1.3.2.1(F)(3).
- Chapter 2: Important revisions include: (1) Deletion of requirements for arc-fault circuit-interrupter due to non-availability for Philippine specifications, (2) In addition to Code requirements on multi-occupancy buildings their application to site developments where group(s) of single detached buildings are constructed - have been included, (3) Clarified and expanded provisions on Service Protective Device when installed ahead of Service Equipment and (4) Clarified the provisions on grouping of Disconnecting Means.
- Chapter 3: Rationalized ampacity tables of conductors (i.e. slight modifications in amperes) - copper and aluminum - for three conductors in raceway and in free air up to 2000 volts, Tables 3.10.2.6(B)(16) and 3.10.2.6(B)(17), respectively. Ampacities are based on current densities of the cross-sectional areas of the conductors. Article 3.10 has been expanded with two new Parts. Four new articles have also been added: (1) Article 3.55 - Reinforced Thermosetting Resin Conduit Type RTRC, (2) Article 3.70 - Cablebus, (3) Article 3.93 - Low-Voltage Suspended Ceiling Power Distribution Systems and (4) Article 3.99 - Outdoor Overhead Conductors over 1000 Volts.
- Chapter 4: Previous editions of PECI, at one time or another permitted a specific number (i.e. 42 or 48) of over current protective devices in a panel board enclosure (48) if the panel board is protected on its supply side by two sets of circuit breakers or two sets of fuses (Section 4.8.3.7 Exception No.2). Article 4.24 - Fixed Electric Space-Heating Equipment has been expanded while a new Article 4.25 - Fixed Resistance and Electro Industrial Process Heating Equipment has also been added.
- Chapter 5: Article 5.18 - Spray Application, Dipping, Coating and Printing Processes Using Flammable or Combustible Materials has been expanded while adding a new Article 5.22 - Control Systems for Permanent Amusement Attractions.
- Chapter 6: Article 6.25 - Electric Vehicle Charging System has been expanded with new Parts and four new articles have been added: (1) Article 6.26 - Electrified Truck Parking Spaces, (2) Article 6.46 - Modular Data Centers, (3) Article 6.91 - Large-Scale Photovoltaic (PV) Electric Power Production Facility and (4) Article 6.94 - Wind Electric Systems.
- Chapter 7: Article 7.5 - Interconnected Electric Power Production Sources and Article 7.70 - Optical Fiber Cables have been expanded while five new articles have been added: (1) Article 7.6 - Energy Storage Systems, (2) Article 7.8 - Critical Operations Power Systems (COPS), (3) Article 7.10 - Stand-Alone Systems, (4) Article 7.12 - Direct Current Microgrids and Article 7.28 - Fire-Resistive Cable Systems.

NOTICE TO THE PUBLIC: THE BOARD HAS ADOPTED THE 2017 REVISIONS TO THE PHILIPPINE ELECTRICAL CODE (PEC) PART 1 AS PART OF THE RULES AND REGULATIONS GOVERNING THE PRACTICE OF ELECTRICAL ENGINEERING. A COPY OF WHICH IS HERETO APPENDED AS ANNEX A OF THIS RESOLUTION.

- Chapter 8 Added a new Article 8.40 - Premises-Powered Broadband Communications Systems.
- Chapter 10. A new Table 10.1.1.10 has been added.

WHEREAS, the Board and the IIEE conducted a consultative meeting last September 14, 2017 at the Philippine International Convention Center (PICC), Philippines to present and discuss the draft 9<sup>th</sup> Edition of the 2017 Revised PEC Part 1.

WHEREAS, the Board, after a review of the changes introduced by the Code Committee, finds that the same are not only well-taken but also innovative as they would, among others, enhance the safety of electrical installations.

NOW, THEREFORE, the Board RESOLVES, as it is hereby RESOLVED, to adopt the endorsed 9<sup>th</sup> EDITION OF THE 2017 REVISED PHILIPPINE ELECTRICAL CODE (PEC) PART 1 as part of the rules and regulations governing the practice of electrical engineering. A copy of which is hereto appended as Annex A of this Resolution.

RESOLVED FURTHER, that the 9<sup>th</sup> EDITION OF THE 2017 REVISED PHILIPPINE ELECTRICAL CODE (PEC) PART 1 be officially endorsed by the Board and the Commission to the DPWH Secretary for adoption as a referral code to the National Building Code.

This Resolution and Annex shall take effect after fifteen (15) days following their full and complete publication in the Official Gazette. Let copies hereof be furnished the U. P. Law Center, the DPWH and the IIEE.

Done in the City of Manila, this 10th day of November 2017.

FRANCIS V. MAPLE  
Chairman

JAME V. MENDOZA  
Member

VACANT  
Member

ATTENDED:

LOVELKA T. BAUTISTA  
Office-in-Charge  
Secretarial to the Professional Regulatory Boards

APPROVED:

TEOFILO S. PILARDO, JR.  
Chairman

YOLANDA D. REYES  
Commissioner

JOSE G. CUETO, JR.  
Commissioner

DO NOT WRITE IN THESE SPACES

DATE OF REGISTRATION IN THE OFFICIAL GAZETTE: 11/15/17  
DATE OF EFFECTIVITY: 11/15/17

PHILIPPINE ELECTRICAL CODE COMMITTEE  
INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS OF THE PHILS., INC. (IIEE)  
41 Monte de Piedad St., Cubao, Quezon City  
FORM FOR PEC REVISION PROPOSALS

Date: \_\_\_\_\_  
Name: \_\_\_\_\_ Tel No: \_\_\_\_\_  
Address: \_\_\_\_\_  
Representing (Please indicate organization, company or self) \_\_\_\_\_

I. Reference:

- PEC Part No. \_\_\_\_\_, Year \_\_\_\_\_
- Article/Part/Section \_\_\_\_\_

II. Proposal Recommends (Check One)

- new text
- revised text
- deleted text

III. Proposal (Include proposed new or revised wording, or identification of wording to be deleted):

[Use separate pages if space is inadequate]

IV. Statement of Problem and Substantiation for Proposal:

V.

- This Proposal is original material.
- This proposal is not original material; its sources (if known) is as follows \_\_\_\_\_

I agree to give IIEE all and full rights, including rights of copyright, in this Proposal and I understand that I acquire no rights in any publication of IIEE in which in this Proposal in this or another similar or analogous form is used.

Signature \_\_\_\_\_

PLEASE USE SEPARATE FORM FOR EACH PROPOSAL

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ARTICLE 1.0 — INTRODUCTION

1.0.1.5 **Mandatory Rules, Permissive Rules, Explanatory Material, and Appendices.**

(A) **Mandatory Rules.** Mandatory rules of this Code are those that identify actions that are specifically required or prohibited and are characterized by the use of the terms shall or shall not.

(B) **Permissive Rules.** Permissive rules of this Code are those that identify actions that are allowed but not required, are normally used to describe options or alternative methods, and are characterized by the use of the terms shall be permitted or shall not be required.

(C) **Explanatory Material.** Explanatory material, such as references to other standards, references related to a Code section of this Code, or information related to a Code section of this Code in the form of fine print notes (FPN). Fine print notes are informational only and are not enforceable as requirements of this Code.

Brackets containing section references in another NFP document are for informational purposes only and do not constitute a requirement of this Code. Distribution centers located in readily accessible, locations provide convenience and safety of operation.

(B) **Number of Circuits in Enclosures.** It is elsewhere provided in this Code that the number of wires and circuits confined in a single enclosure be varying restricted. Limiting the number of circuits in a single enclosure will minimize the effects from a short circuit or ground fault.

1.0.1.9 **Units of Measurement.**

(A) **Measurement Systems of Preference.** For the purpose of this Code, metric units of measurement are in accordance with the modernized metric system known as the International System of Units (SI).

(B) **Trade Sizes.** Where the actual measured size of a product is not the same as the nominal size, trade size designators shall be used rather than dimensions. Trade practices shall be followed in all cases.

(C) **Extracted Material.** Where material is extracted from another standard, the context of the original material shall not be compromised or violated. Any editing of the extracted text shall be confined to making the style consistent with that of the PEC 1.

FPN: SI conversions are based on IEEE/ASTM SI 16-1997, Standard for the Use of the International System of Units (SI), The Modern Metric System.

1.0.1.10 **Apprenticeship.**

(A) Republic Act 7920 or the national electrical engineering law requires apprenticeship as one of

ARTICLE 1.0 — INTRODUCTION

Chapter 1. General

ARTICLE 1.0 — INTRODUCTION

1.0.1.1 **Purpose.**

(A) **Practical Safeguarding.** The purpose of this Code is the practical safeguarding of persons and property from hazards arising from the use of electricity.

(B) **Adequacy.** This Code contains provisions that are considered minimum requirements necessary for safety. Compliance therewith and proper maintenance will result in an installation that is essentially free from hazard but not necessarily efficient, convenient, or adequate for good service or future expansion of electrical use.

FPN: Hazards often occur because of overloading of wiring systems by methods or usage not in conformity with this Code. This occurs because initial wiring did not provide for increases in the use of electricity. An initial adequate installation and reasonable provisions for system change provide for future increases in the use of electricity.

(C) **Intention.** This Code is intended as a design specification or an instruction manual to qualified persons.

(D) **Relation to Other International Standards.** The requirements in this Code address the fundamental principles of protection for safety contained in Section 131 of International Electrotechnical Commission Standard 60364-1, *Electrical Installations of Buildings*.

FPN: IEC 60364-1, Section 131 Contains fundamental principles of protection for safety that encompasses protection against thermal effects, protection against overcurrent, protection against fault currents, and protection against overvoltage. All of these potential hazards are addressed by the requirements in this Code.

1.0.1.2 **Scope.**

(A) **Covered.** This Code covers the installation of electrical conductors, equipment, and raceways; monitoring, signaling, and communications conductors, equipment, and raceways; and optical fiber cables and raceways installed within or on, to or from:

- (1) Public and private buildings, including but not limited to residential, commercial, industrial, institutional, cultural, agricultural, agro-industrial, planned unit development and all other buildings/premises that may require practical safeguarding of persons and property from the hazards arising from the use of electricity.
- (2) Electric generating plants
- (3) Industrial plants
- (4) Transformer stations
- (5) Permanent and temporary substations, etc.

ARTICLE 1.1 — DEFINITIONS

1.1.1 **Scope.** This article contains only those definitions essential to the application of this Code. It is not intended to include commonly defined general terms or commonly defined technical terms from related codes and standards. In general, only those terms that are used in two or more articles are defined in Article 1.1. Other definitions are included in the article in which they are used but may be referenced in Article 1.1.

Part 1.1.1 of this article contains definitions intended to apply wherever the terms are used throughout this Code. Part 1.1.2 contains definitions applicable to the installations and equipment operating at over 1000 volts, nominal.

1.1.1 **General.**

**Accessible (as applied to equipment).** Admitting close approach, not guarded by locked doors, elevation, or other effective means.

**Accessible (as applied to wiring methods).** Capable of being removed or exposed without damaging the building structure or finish or not permanently closed in by the structure or finish of the building.

**Accessible, Readily (Readily Accessible).** Capable of being reached quickly for operation, renewal, or inspection without requiring those to whom ready access is requisite to take actions such as to use tools (other than keys), to climb over or under, to remove obstacles or to resort to portable ladders, and so forth.

FPN: Use of keys is a common practice under controlled or supervised conditions and a common alternative to the ready access requirements under such supervised conditions as provided elsewhere in the NEC.

**Adjustable Speed Drive.** Power conversion equipment that provides a means of adjusting the speed of an electric motor.

FPN: A variable frequency drive is one type of electronic adjustable speed drive that controls the rotational speed of an ac electric motor by controlling the frequency and voltage of the electrical power supplied to the motor.

**Ampacity.** The current, in amperes, that a conductor can carry continuously under the conditions of use without exceeding its temperature rating.

**Appliance.** Utilization equipment, generally other than industrial, that is normally built in standardized sizes or types and is installed or connected as a unit to perform one or more functions such as clothes washing, air conditioning, food mixing, deep frying, and so forth.

**Approved.** Equipment and materials, and installation, testing and commissioning methods, recognized as acceptable by local and international standards-setting organizations — properly equipped and qualified for testing, inspections of the run of goods at factories, and service-value determination through field inspections — and/or as permitted by relevant and applicable government regulatory codes.

FPN: An example of government regulatory codes are the Philippine Electrical Code, Part 1 and Part 2.

**Asksared.** A generic term for a group of nonflammable synthetic chlorinated hydrocarbons used as electrical insulating media.

FPN: Askareds of various compositions types are used. Under firing conditions, the gases produced, while consisting predominantly of noncombustible hydrogen chloride, can include varying amounts of combustible gases, depending on the askared type.

**Associated Apparatus (as applied to Hazardous (Classified) Locations).** Apparatus in which the circuits are not necessarily intrinsically safe themselves but that affects the energy in the intrinsically safe circuits and is relied on to maintain intrinsic safety. Such apparatus is one of the following:

- (1) Electrical apparatus that has an alternative type of protection for use in the appropriate hazardous (classified) location
- (2) Electrical apparatus not so protected that shall not be used within a hazardous (classified) location

FPN: No. 1. Associated apparatus has identified intrinsically safe connections for intrinsically safe apparatus and also may have connections for nonintrinsically safe apparatus.

FPN: No. 2. An example of associated apparatus is an intrinsic safety barrier, which is a network designed to limit the energy (voltage and current) available to the protected circuit in the hazardous (classified) location, under specified fault conditions.

ARTICLE 11 - DEFINITIONS

**Associated Nonincendive Field Wiring Apparatus (as applied to Hazardous (Classified) Locations).** Apparatus in which the circuits are not necessarily nonincendive themselves but that affect the energy in nonincendive field wiring circuits and are relied upon to maintain nonincendive energy levels. Such apparatus are one of the following:

- (1) Electrical apparatus that has an alternative type of protection for use in the appropriate hazardous (classified) location
- (2) Electrical apparatus not so protected that shall not be used in a hazardous (classified) location

**FPN.** Associated nonincendive field wiring apparatus has designated associated nonincendive field wiring apparatus connections for nonincendive field wiring apparatus and may also have connections for other electrical equipment.

**Attachment Plug (Plug Cap) (Plug).** A device that, by insertion in a receptacle, establishes a connection between the conductors of the attached flexible cord and the conductors connected permanently to the receptacle.

**Automatic.** Performing a function without the necessity of human intervention.

**Bathroom.** An area including a basin with one or more of the following: a toilet, a tub, or a shower.

**Battery System.** Interconnected battery subsystems consisting of one or more storage batteries and battery chargers, and can include inverters, converters, and associated electrical equipment.

**Bonded (Bonding).** Connected to establish electrical continuity and conductivity.

**Bonding Conductor or Jumper.** A reliable conductor to ensure the required electrical conductivity between metal parts required to be electrically connected.

**Bonding Jumper, Equipment.** The connection between two or more portions of the equipment grounding conductor.

**Bonding Jumper, Main.** The connection between the grounded circuit conductor and the equipment grounding conductor at the service.

**Bonding Jumper, System.** The connection between the grounded circuit conductor and the equipment grounding conductor at a separately derived system.

**Branch Circuit.** The circuit conductors between the outlet(s).

**Branch Circuit, Appliance.** A branch circuit that supplies energy to one or more outlets to which appliances are to be connected and that has no permanently connected luminaires that are not a part of an appliance.

ARTICLE 11 - DEFINITIONS

**Branch Circuit, General-Purpose.** A branch circuit that supplies two or more receptacles or outlets for lighting and appliances.

**Branch Circuit, Individual.** A branch circuit that supplies only one utilization equipment.

**Branch Circuit, Multiwire.** A branch circuit that consists of two or more ungrounded conductors that have a voltage between them, and a grounded conductor that has equal voltage between it and each ungrounded conductor of the circuit and that is

**Building.** A structure that stands alone or that is separated from adjoining structures by fire walls.

**Building Official.** The government official appointed by the Secretary of the Department of Public Works and who is responsible for enforcing the provisions of the National Building Code of the Philippines (NBC) created under Presidential Decree 1096 (PD 1096) and its Implementing Rules and Regulations, and charged with the duties of issuing building permits, notices and certificates.

**Building Official, Office of the.** The place of business of the Building Official where processing of permits, notices, certificates and other related documents are undertaken. Also referred to as **OBO** in this Code.

**Building Official/EE, Office of the.** A licensed electrical practitioner employed in the Office of the Building Official responsible for compliance to provisions of the Philippine Electrical Code, Part 1 (PELC), and for the approval of electrical permits and certificates. Also referred to as **OBO/EE** in this Code.

**FPN.** A licensed electrical practitioner is a Registered Master Electrician (RME), Registered Electrical Engineer (REE) or Professional Electrical Engineer (PEE) under Republic Act 7920 or national electrical engineering law with their respective duties and responsibilities. See definition of Licensed Electrical Practitioner.

**Cabinet.** An enclosure that is designed for either surface mounting or flush mounting and is provided with a frame, mat, or trim in which a swinging door or doors are or can be hung.

**Cable Routing Assembly.** A single channel or connected multiple channels, as well as associated fittings, forming a structural system that is used to support and route communications wires and cables, optical fiber cables, data cables associated with information technology and communications equipment, Class 2, Class 3, and Type PLTC cables, and power-limited fire alarm cables in plenum, riser, and general-purpose applications.

ARTICLE 11 - DEFINITIONS

**Charge Controller.** Equipment that controls dc voltage or dc current, or both, and that is used to charge a battery or other energy storage device.

**Circuit Breaker.** A device designed to open and close a circuit by nonautomatic means and to open the circuit automatically on a predetermined overcurrent without damage to itself when properly applied within its rating.

**FPN.** The automatic opening means can be integral, direct acting with the circuit breaker, or consist from the circuit breaker when properly applied within its rating.

**Adjustable (as applied to circuit breakers).** A qualifying term indicating that the circuit breaker can be set to trip at various values of current, time, or both, within a predetermined range.

**Instantaneous Trip (as applied to circuit breakers).** A qualifying term indicating that no delay is purposely introduced in the tripping action of the circuit breaker.

**Inverse Time (as applied to circuit breakers).** A qualifying term indicating that there is purposely introduced a delay in the tripping action of the circuit breaker, which delay decreases as the magnitude of the current increases.

**Nonadjustable (as applied to circuit breakers).** A qualifying term indicating that the circuit breaker does not have any adjustment to alter the value of current at which it will trip or the time required for its operation.

**Setting (of circuit breakers).** The value of current, time, or both, at which an adjustable circuit breaker is set to trip.

**Clothes Closet.** A nonhabitable room or space intended primarily for storage of garments and apparel.

**Coaxial Cable.** A cylindrical assembly composed of a conductor centered inside a metallic tube or shield, separated by a dielectric material, and usually covered by an insulating jacket.

**Combustible Dust (as applied to Hazardous (Classified) Locations).** Dust particles that are 500 microns or smaller (i.e., material passing a U.S. No. 35 Standard Sieve as defined in ASTM E11-2015, Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves) and present a fire or explosion hazard when dispersed and ignited in air.

**FPN.** See ASTM E1226-2012a, Standard Test Method for Explosibility of Dust Clouds, or ISO 6184-1, Explosion protection systems - Part 1: Determination of explosion indices of combustible dusts in air, for procedures for determining the explosibility of dusts.

ARTICLE 11 - DEFINITIONS

**Combustible Gas Detection System (as applied to Hazardous (Classified) Locations).** A protection technique utilizing stationary gas detectors in industrial establishments.

**Communication Equipment.** The electronic equipment that performs the telecommunications operations for the transmission of audio, video, and data, and includes power equipment (e.g., dc converters, inverters, and batteries), technical support equipment (e.g., computers), and conductors dedicated solely to the operation of the equipment.

**FPN.** As the telecommunications network transitions to a more data-centric, network, computers, servers, and their power equipment, are becoming essential to the transmission of audio, video, and data and are finding increasing application in communication equipment installations.

**Composite Optical Fiber Cable.** A cable containing optical fibers and current-carrying electrical conductors.

**Concealed.** Rendered inaccessible by the structure or finish of the building. Wires in concealed raceways are considered concealed, even though they may become accessible by withdrawing them.

**Conductive Optical Fiber Cable.** A factory assembly of one or more optical fibers having an overall covering and containing non-current-carrying conductive member(s) such as metallic strength members, metallic vapor barrier(s), metallic armor or metallic sheath.

**Conductor, Bare.** A conductor having no covering or electrical insulation whatsoever.

**Conductor, Covered.** A conductor encased within material of composition or thickness that is not recognized by this Code as electrical insulation.

**Conductor, Insulated.** A conductor encased within material of composition and thickness that is recognized by this Code as electrical insulation.

**Conduit Body.** A separate portion of a conduit or tubing system that provides access through a removable cover(s) to the interior of the system at a junction of two or more sections of the system or at a terminal point of the system.

Boxes such as FS and FD or larger cast or sheet metal boxes are not classified as conduit bodies.

**Connector, Pressure (Sealless).** A device that establishes a connection between two or more conductors and/or between one or more conductors and a terminal by means of mechanical pressure and without the use of solder.

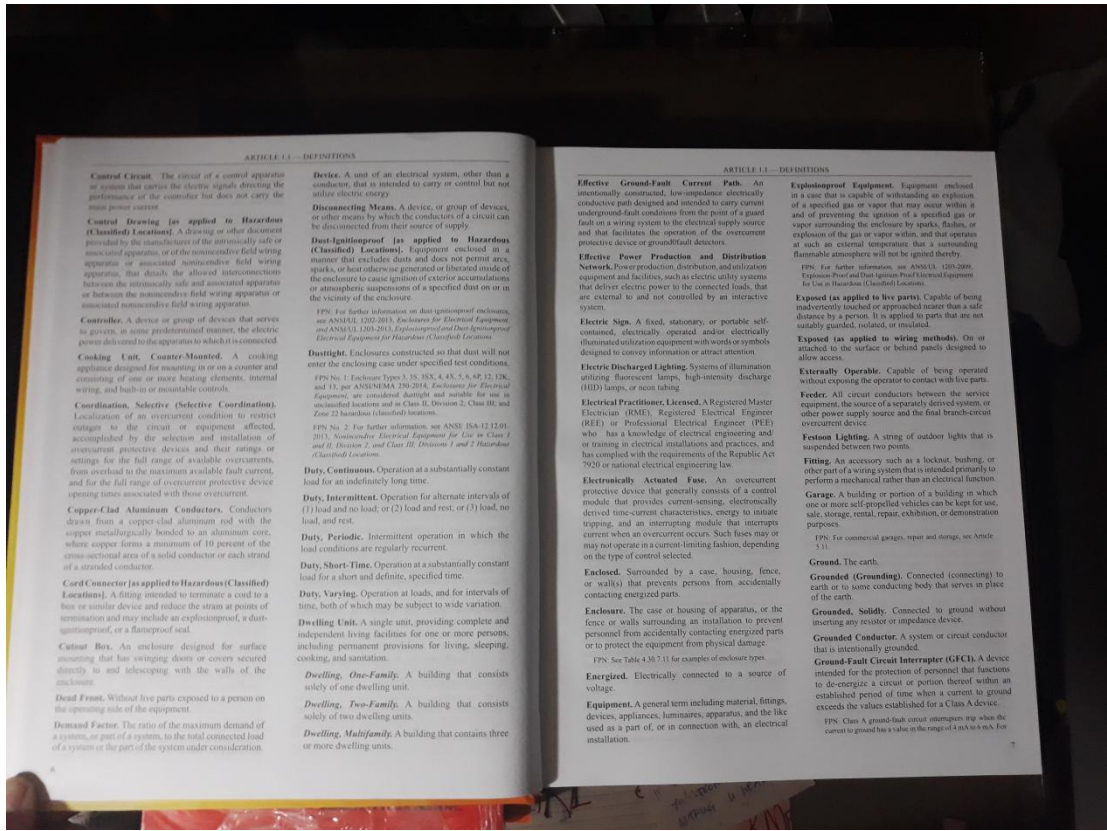
**Continuous Load.** A load where the maximum current is expected to continue for 3 hours or more.

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**Control Circuit.** The circuit of a control apparatus or other device that carries the electric signals directing the performance of the controller but does not carry the main power current.

**Control Drawing (as applied to Hazardous (Classified) Locations).** A drawing or other document provided by the manufacturer of the intrinsically safe or associated apparatus, or of the nonintrinsically safe field wiring apparatus, that details the allowed interconnections between the intrinsically safe and associated apparatus or between the nonintrinsically safe field wiring apparatus or associated nonintrinsically safe field wiring apparatus.

**Controller.** A device or group of devices that serves to govern, in some predetermined manner, the electric power delivered to the apparatus to which it is connected.

**Cooking Unit, Counter-Mounted.** A cooking appliance designed for mounting in or on a counter and consisting of one or more heating elements, internal wiring, and built-in or mountable controls.

**Coordination, Selective (Selective Coordination).** Location of an overcurrent condition to restrict damage to the circuit or equipment affected, accomplished by the selection and installation of overcurrent protective devices and their ratings or settings for the full range of available overcurrents, from overload to the maximum available fault current, and for the full range of overcurrent protective device opening times associated with those overcurrents.

**Copper-Clad Aluminum Conductors.** Conductors drawn from a copper-clad aluminum rod with the copper metallurgically bonded to an aluminum core, where copper forms a minimum of 10 percent of the cross-sectional area of a solid conductor or each strand of a stranded conductor.

**Cord Connector (as applied to Hazardous (Classified) Locations).** A fitting intended to terminate a cord to a box or similar device and reduce the strain at points of termination and may include an explosionproof, a dust-ignitionproof, or a flameproof seal.

**Cutoff Box.** An enclosure designed for a device mounting that has swinging doors or covers secured directly to and telescoping with the walls of the enclosure.

**Dead Front.** Without live parts exposed to a person on the operating side of the equipment.

**Demand Factor.** The ratio of the maximum demand of a system, or part of a system, to the total connected load of a system or the part of the system under consideration.

**Device.** A unit of an electrical system, other than a conductor, that is intended to carry or control but not utilize electric energy.

**Disconnecting Means.** A device, or group of devices, or other means by which the conductor of a circuit can be disconnected from their source of supply.

**Dust-Ignition-Proof (as applied to Hazardous (Classified) Locations).** Equipment enclosed in a manner that excludes dusts and does not permit arcs, sparks, or heat otherwise generated or liberated inside of the enclosure to cause ignition of exterior accumulations or atmospheric suspensions of a specified dust or in the vicinity of the enclosure.

*FPN: For further information on dust-ignition-proof enclosures, see ANSI/ISA-120.201, Enclosures for Electrical Equipment, and ANSI/ISA-120.201, Enclosures and Dust-Ignition-Proof Electrical Equipment for Hazardous (Classified) Locations.*

**Dusttight.** Enclosures constructed so that dust will not enter the enclosure under specified test conditions.

*FPN: See Table 1.1.1, Enclosure Types 1, 3, 3X, 4, 4X, 5, 6, 6F, 12, 13K, and 13, per ANSI/ISA-120.201, Enclosures for Electrical Equipment, are considered dusttight and suitable for use in unclassified locations and in Class II, Division 2, Class III, and Zone 22 hazardous (classified) locations.*

*FPN: No. 2. For further information, see ANSI/ISA-121.01, 201, Nonintrinsically Safe Electrical Equipment for Use in Class I and II, Division 2, and Class III, Division 1 and 2 Hazardous (Classified) Locations.*

**Duty, Continuous.** Operation at a substantially constant load for an indefinitely long time.

**Duty, Intermittent.** Operation for alternate intervals of (1) load and no load; or (2) load and rest; or (3) load, no load, and rest.

**Duty, Periodic.** Intermittent operation in which the load conditions are regularly recurrent.

**Duty, Short-Time.** Operation at a substantially constant load for a short and definite, specified time.

**Duty, Varying.** Operation at loads, and for intervals of time, both of which may be subject to wide variation.

**Dwelling Unit.** A single unit, providing complete and independent living facilities for one or more persons, including permanent provisions for living, sleeping, cooking, and sanitation.

**Dwelling, One-Family.** A building that consists solely of one dwelling unit.

**Dwelling, Two-Family.** A building that consists solely of two dwelling units.

**Dwelling, Multifamily.** A building that contains three or more dwelling units.

ARTICLE 1.1 - DEFINITIONS

**Effective Ground-Fault Current Path.** An intentionally constructed, low-impedance electrically conductive path designed and intended to carry current under ground-fault conditions from the point of a ground fault on a wiring system to the electrical supply source and that facilitates the operation of the overcurrent protective device or ground-fault detector.

**Effective Power Production and Distribution Network.** Power production, distribution, and utilization equipment and facilities, such as electric utility systems that deliver electric power to the connected loads, that are external to and not controlled by an interactive system.

**Electric Sign.** A fixed, stationary, or portable self-contained, electrically operated and/or electrically illuminated utilization equipment with visible symbols consisting of coding information or attract attention.

**Electric Discharge Lighting.** Systems of illumination utilizing fluorescent lamps, high-intensity discharge (HID) lamps, or neon tubing.

**Electrical Practitioner, Licensed.** A Registered Master Electrician (RME), Registered Electrical Engineer (REE), or Professional Electrical Engineer (PEE) who has a knowledge of electrical engineering and/or training in electrical installations and practices, and has complied with the requirements of the Republic Act 920 or national electrical engineering law.

**Electrically Activated Fuse.** An overcurrent protective device that generally consists of a control module that provides current-sensing, electromechanically derived time-current characteristics, energy to initiate tripping, and an interrupting module that interrupts current when an overcurrent occurs. Such fuses may or may not operate in a current-limiting fashion, depending on the type of control selected.

**Enclosed.** Surrounded by a case, housing, fence, or walls that prevents persons from accidentally contacting energized parts.

**Enclosure.** The case or housing of apparatus, or the fence or walls surrounding an installation to prevent personnel from accidentally contacting energized parts or to protect the equipment from physical damage.

*FPN: See Table 4.5.7.1 for examples of enclosure types.*

**Energized.** Electrically connected to a source of voltage.

**Equipment.** A general term including material, fittings, devices, appliances, luminaires, apparatus, and the like used as a part of, or in connection with, an electrical installation.

**Explosion-Proof Equipment.** Equipment enclosed in a case that is capable of withstanding an explosion of a specified gas or vapor that may occur within it and of preventing the ignition of a specified gas or vapor surrounding the enclosure by sparks, flames, or explosion of the gas or vapor within, and that operates at such an external temperature that a surrounding flammable atmosphere will not be ignited thereby.

*FPN: For further information, see ANSI/ISA-120.209, Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations.*

**Exposed (as applied to live parts).** Capable of being inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts that are not suitably guarded, isolated, or insulated.

**Exposed (as applied to wiring methods).** On or attached to the surface or surface devices designed to allow access.

**Externally Operable.** Capable of being operated without exposing the operator to contact with live parts.

**Feeder.** All circuit conductors between the service equipment, the source of a separately derived system, or other power supply source and the final branch-circuit overcurrent device.

**Festoon Lighting.** A string of outdoor lights that is suspended between two points.

**Fitting.** An accessory such as a lockout, hubbing, or other part of a wiring system that is intended primarily to perform a mechanical function rather than an electrical function.

**Garage.** A building or portion of a building in which one or more self-propelled vehicles can be kept for use, sale, storage, rental, repair, exhibition, or demonstration purposes.

*FPN: For commercial garages, repair and storage, see Article 5.11.*

**Ground.** The earth.

**Grounded (Grounding).** Connected (connecting) to earth or to some conducting body that serves in place of the earth.

**Grounded, Solidly.** Connected to ground without inserting any resistor or impedance device.

**Grounded Conductor.** A system or circuit conductor that is intentionally grounded.

**Ground-Fault Circuit Interrupter (GFCI).** A device intended for the protection of personnel that functions to de-energize a circuit or portion thereof within an established period of time when a current in ground exceeds the values established for a Class A device.

*FPN: Class A ground-fault circuit interrupters trip when the current to ground has a value in the range of 5 mA to 30 mA.*

ARTICLE 1.1 - DEFINITIONS

**Handle Enclosure.** An enclosure identified for use in underground systems, provided with an open or closed handle, and sized to allow personnel to reach into, but not into, for the purpose of installing, operating, or maintaining equipment or wiring or both.

**Hermatic Refrigerant Motor-Compressor.** A combination consisting of a compressor and motor, both of which are enclosed in the same housing, with no external shaft or shaft seals, with the motor operating in the refrigerant.

**Hermetically Sealed (as applied to Hazardous (Classified) Locations).** Equipment sealed against the entrance of an external atmosphere where the seal is made by fusion, for example, soldering, brazing, welding, or the fusion of glass to metal.

*FPN: For further information, see ANSI/ISA-121.01, 201, Nonintrinsically Safe Electrical Equipment for Use in Class I and II, Division 2, and Class III, Division 1 and 2 Hazardous (Classified) Locations.*

**Halfway.** Any subway, half-way, well hole, or other vertical opening or space in which an elevator or dumbwaiter is designed to operate.

**Hybrid System.** A system comprised of multiple power sources. These power sources could include photovoltaic, wind, micro-hydro, generators, engine-driven generators, and others, but do not include electric power production and distribution network systems. Energy storage systems such as batteries, flywheels, or superconducting magnetic storage equipment do not constitute a power source for the purpose of this definition. The energy regenerated by an overhauling (descending) elevator does not constitute a power source for the purpose of this definition.

**Identified (as applied to equipment).** Recognizable as suitable for the specific purpose, function, use, environment, application, and so forth, where described in a particular Code requirement.

*FPN: Some examples of ways to determine suitability of equipment for a specific purpose, environment, or application include investigations by a qualified testing laboratory (listing and labeling), an inspection agency, or other organization concerned with product evaluation.*

**In Sight From (Within Sight From, Within Sight).** Where this Code specifies that one equipment shall be "in sight from," "within sight from," or "within sight," and so forth, of another equipment, the specified equipment is to be visible and not more than 15 m distant from the other.

**Industrial Control Panel.** An assembly of two or more components consisting of one of the following: (1) power circuit components only, such as motor controllers, overload relays, fused disconnect switches,

and circuit breakers; (2) control circuit components only, such as push buttons, pilot lights, selector switches, timers, switches, and control relays; (3) a combination of power and control circuit components. These are mounted on, or contained within, an enclosure or mounted on a subpanel.

The industrial control panel does not include the controlled equipment.

**Information Technology Equipment (ITE).** Equipment and systems rated 1000 volts or less, normally found in offices or other business establishments and similar environments classified as ordinary locations, that are used for creation and manipulation of data, voice, video, and similar signals that are not communications equipment as defined in Part 1.0.1 and do not process communications circuits as defined in 5.0.1.2.

*FPN: For information on listing requirements for both information technology equipment and communications equipment, see UL 2089-1-2014, Information Technology Equipment - Safety - Part 1 - General Requirements or UL 62383-1-2014, Audio/Video Information and Communication Technology Equipment Part 1 - Safety Requirements.*

**Inherent.** A nonmetallic raceway placed within a larger raceway.

**Interactive Inverter.** An inverter intended for use in parallel with an electric utility to supply common loads that may deliver power to the utility.

**Interactive System.** An electric power production system that is operating in parallel with and capable of delivering energy to an electric primary source supply system.

**Interrupting Rating.** The highest current at rated voltage that a device is intended to interrupt under standard test conditions.

*FPN: Equipment intended to interrupt current at other than full levels may have an interrupting rating applied in other ratings, such as horsepower or locked rotor current.*

**Intersystem Bonding Termination.** A device that provides a means for connecting intersystem bonding conductors for communications systems to the grounding electrode system.

**Intrinsically Safe Apparatus.** Apparatus in which all the circuits are intrinsically safe.

**Intrinsically Safe System (as applied to Hazardous (Classified) Locations).** An assembly of interconnected intrinsically safe apparatus, associated apparatus, and interconnecting cables, in that those parts of the system that may be used in hazardous (classified) locations are intrinsically safe circuits.

ARTICLE 1.1 - DEFINITIONS

**Intrinsically Safe System (as applied to non-hazardous locations).** An assembly of interconnected intrinsically safe system may include more than one intrinsically safe circuit.

**Isolated (as applied to location).** Not readily accessible to persons unless special means for access are used.

**Kitchen.** An area with a sink and permanent provisions for food preparation and cooking.

**Labeled.** Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards of performance in a specified manner.

**Lighting Outlet.** An outlet intended for the direct connection of a lampholder, a luminaire (lighting fixture), or a product cord terminating in a lampholder.

**Lighting Track (Track Lighting).** A manufactured assembly designed to support and energize luminaires that are capable of being readily repositioned on the track. Its length can be altered by the addition or subtraction of sections of track.

**Listed.** Equipment, materials, or services included in a list published by an organization that is concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose materials or products of production of listed equipment or listing states that the equipment, material, or service either meets appropriate designated standards or has been tested and found suitable for a specified purpose.

*FPN: The means for identifying listed equipment may vary for each organization concerned with product evaluation, some of which do not recognize equipment as listed unless it is also labeled. Use of the system employed by the listing organization allows the Office of the Building Official to identify a listed product.*

**Live Parts.** Energized conductive components.

*FPN: Examples of such locations include partially protected locations under eaves, porches, roofed open porches, and like locations, and interior locations subject to moderate degree of moisture, such as some basements, some barns, and some cold storage warehouses.*

**Location, Damp.** Locations protected from weather and not subject to saturation with water or other liquids but subject to moderate degrees of moisture.

*FPN: Examples of such locations include partially protected locations under eaves, porches, roofed open porches, and like locations, and interior locations subject to moderate degree of moisture, such as some basements, some barns, and some cold storage warehouses.*

**Location, Dry.** A location not normally subject to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a location under construction.



ARTICLE 1.1 - DEFINITIONS

Locations, when installations underground or in confined spaces or enclosures in direct contact with the earth, or locations subject to saturation with water or other liquids, such as vehicle washing areas, and in unprotected locations exposed to weather.

Luminaires. A complete lighting unit consisting of a lamp or lamps together with the parts designed to distribute the light, to position and protect the lamps and ballast (where applicable), and to connect the lamps to the power supply.

Mobile Equipment. Equipment with electrical components suitable to be moved only with mechanical aids or is provided with wheels for movement by persons or powered devices.

Motor Control Center. An assembly of one or more enclosed sections having a common power bus and principally containing motor control units.

Multiplier Assembly. A type of surface, flush, or freestanding receptacle designed to hold conductors and receptacles, assembled in the field or at the factory.

National Electrical Engineering Law. A law enacted by Congress providing for a more responsive and comprehensive regulation for the practice, licensing and registration of electrical engineers and electricians otherwise referred to as Republic Act 7920 (RA 7920) or a future law that supersedes it.

Neutral Conductor. The conductor connected to the neutral point of a system that is intended to carry current under normal conditions.

Neutral Point. The common point on a wye-connection in a polyphase system or midpoint on a single-phase, 3-wire system, or midpoint of a single-phase portion of a 3-phase delta system, or a midpoint of a 3-wire, direct-current system.

Nonautomatic. Requiring human intervention to perform a function.

Nonconductive Optical Fiber Cable. A factory assembly of one or more optical fibers having an overall covering and containing no electrically conductive materials.

Nonincendive Circuit [as applied to Hazardous (Classified) Locations]. A circuit, other than field wiring, in which any arc or thermal effect produced under intended operating conditions of the equipment, is not capable, under specified test conditions, of igniting

the flammable gas-air, vapor-air, or dust-air mixture. FPN: Conditions are described in ANSI ISA-12.12.01-2013, Nonincendive Electrical Equipment for Use in Class I and II, Division 1, and Class III, Divisions 1 and 2 Hazardous (Classified) Locations.

Nonincendive Component [as applied to Hazardous (Classified) Locations]. A component having contacts for making or breaking an incendive circuit and the contacting mechanism is constructed so that the component is incapable of igniting the specified flammable gas-air or vapor-air mixture. The housing of a nonincendive component is not intended to exclude the flammable atmosphere or contain an explosion.

FPN: For further information, see ANSI ISA-12.12.01-2013, Nonincendive Electrical Equipment for Use in Class I and II, Division 2, and Class III, Divisions 1 and 2 Hazardous (Classified) Locations.

Nonincendive Equipment [as applied to Hazardous (Classified) Locations]. Equipment having electrical electronic circuitry that is incapable, under normal operating conditions, of causing ignition of a specified flammable gas-air, vapor-air, or dust-air mixture due to arcing or thermal means.

FPN: For further information, see ANSI ISA-12.12.01-2013, Nonincendive Electrical Equipment for Use in Class I and II, Division 2, and Class III, Divisions 1 and 2 Hazardous (Classified) Locations.

Nonincendive Field Wiring [as applied to Hazardous (Classified) Locations]. Wiring that enters or leaves an equipment enclosure and, under normal operating conditions of the equipment, is not capable, due to arcing or thermal effects, of igniting the flammable gas-air, vapor-air, or dust-air mixture. Normal operation includes opening, shorting, or grounding the field wiring.

Nonincendive Field Wiring Apparatus [as applied to Hazardous (Classified) Locations]. Apparatus intended to be connected to nonincendive field wiring.

FPN: For further information, see ANSI ISA-12.12.01-2013, Nonincendive Electrical Equipment for Use in Class I and II, Division 2, and Class III, Divisions 1 and 2 Hazardous (Classified) Locations.

Nonlinear Load. A load where the wave shape of the applied voltage.

FPN: Electronic equipment, electronic-electric discharge lighting, adjustable speed drive systems, and similar equipment may be nonlinear loads.

Oil Immersion [as applied to Hazardous (Classified) Locations]. Electrical equipment immersed in a protective liquid in such a way that an explosive atmosphere that may be above the liquid or outside the enclosure cannot be ignited.

ARTICLE 1.1 - DEFINITIONS

Optical Fiber Cable. A factory assembly or field assembly of one or more optical fibers having an overall covering.

FPN: A field-assembled optical fiber cable is an assembly of one or more optical fibers within a jacket. The jacket, without optical fibers, is intended to be mounted similar to conduit or raceway. Once the jacket is installed, the optical fibers are inserted into the jacket, completing the cable assembly.

Outlet. A point on the wiring system at which current is taken to supply utilization equipment.

Outline Lighting. An arrangement of incandescent lamps, electric discharge lighting, or other electrically powered light sources to outline or call attention to certain features such as the shape of a building or the decoration of a window.

Overcurrent. Any current in excess of the rated current of equipment or the ampacity of a conductor. It may result from overload, short circuit, or ground fault.

FPN: A current in excess of rating may be accompanied by certain equipment and conductors for a given set of conditions. Therefore, the rules for overcurrent protection are specific for particular situations.

Overcurrent Protective Device, Branch-Circuit. A device capable of providing protection for service, feeder, and branch circuits and equipment over the full range of overcurrents between its rated current and its interrupting rating. Such devices are provided with interrupting ratings appropriate for the intended use but no less than 5000 amperes.

Overcurrent Protective Device, Supplementary. A device intended to provide limited overcurrent protection for specific applications and utilization equipment such as luminaires and appliances. This limited protection is in addition to the protection provided in the required branch circuit by the branch-circuit overcurrent protective device.

Overload. Operation of equipment in excess of normal, full-load rating, or of a conductor in excess of rated ampacity that, when it persists for a sufficient length of time, would cause damage or dangerous overheating. A fault, such as a short circuit or ground fault, is not an overload.

Panelboard. A single panel or group of panel units designed for assembly in the form of a single panel including buses and automatic overcurrent devices, and equipped with or without switches for the control of light, heat, or power circuits, designed to be placed in a cabinet or cutout box placed on or against a wall, partition, or other support, and accessible only from the front.

Photovoltaic (PV) System. The total components and subsystem that, in combination, convert solar energy into electric energy suitable for connection to a utilization load.

Pneum. A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system.

Portable Equipment. Equipment with electrical components suitable to be moved by a single person without mechanical aids.

Power Outlet. An enclosed assembly that may include receptacles, circuit breakers, fuses, switches, fuses, and watt-hour meter mounting means, intended to supply and control power to mobile homes, recreational vehicles, park trailers, or boats or to serve as a means for distributing power required to operate mobile or temporarily installed equipment.

Premises Wiring System. That interior and exterior wiring, including power, lighting, control, and signal circuit wiring together with all their associated hardware, fittings, and wiring devices, both permanently and temporarily installed, that extends from the service point or source of power, such as a battery, a solar photovoltaic system, or a generator, transformer, or converter winding, to the outlets.

Such wiring does not include wiring internal to appliances, luminaires (fixtures), motors, controllers, motor control centers, and similar equipment.

FPN: Power sources include, but are not limited to, interconnected or stand-alone batteries, solar photovoltaic systems, other distributed generation systems, or generators.

Pressurized [as applied to Hazardous (Classified) Locations]. The process of supplying an enclosure with a protective gas with or without continuous flow, at sufficient pressure to prevent the entrance of combustible dust or ignitable fibers (IFIBs).

Process Seal [as applied to Hazardous (Classified) Locations]. A seal between electrical systems and flammable or combustible process fluids where a failure could allow the migration of process fluids into the premises wiring system.

Purged and Pressurized [as applied to Hazardous (Classified) Locations]. The process of (1) purging, applying an enclosure with a protective gas at sufficient flow and positive pressure to reduce the concentration of any flammable gas or vapor initially present to an acceptable level, and (2) pressurization, supplying an enclosure with a protective gas with or without continuous flow at sufficient pressure to prevent the entrance of a flammable gas or vapor, a combustible dust, or an ignitable fiber.

ARTICLE 1.1 - DEFINITIONS

Qualified Person. One who has qualifications, skills and knowledge related to the construction and operation of the electrical apparatus and installations and has received safety training to recognize and avoid the hazards involved.

FPN: Qualifications can include those included in the Republic Act 7920 or national electrical engineering law.

Raceway. An enclosed channel of metallic or nonmetallic material designed expressly for holding wires, cables, or busbars, with additional functions as permitted in this Code.

FPN: A raceway is identified within specific article definitions.

Rainproof. Constructed, protected, or treated so as to prevent rain from interfering with the successful operation of the apparatus under specified test conditions.

Rainlight. Constructed or protected so that exposure to a heating rain will not result in the entrance of water under specified test conditions.

Receptacle. A contact device installed at the outlet for the connection of an attachment plug, or for the direct connection of electrical utilization equipment designed to mate with the corresponding contact device. A single receptacle is a single contact device with no other contact devices on the same yoke. A multiple receptacle is two or more contact devices on the same yoke.

Receptacle Outlet. An outlet where one or more receptacles are installed.

Remote-Control Circuit. Any electric circuit that controls any other circuit through a relay or an equivalent device.

Retired Kit. A general term for a complete subassembly of parts and devices for field conversion of utilization equipment.

Sealable Equipment. Equipment enclosed in a case or cabinet that is provided with a means of sealing or locking so that live parts cannot be made accessible without opening the enclosure. The equipment may or may not be operable without opening the enclosure.

FPN: The equipment may or may not be operable without opening the enclosure.

Separately Derived System. An electrical source, other than a service, having no direct connection(s) to circuit conductors of any other electrical source other than those established by grounding and bonding connections.

Service. The conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premises served.

Service Cable. Service conductors made up in the form of a cable.

Service Conductors. The conductors from the service point to the service disconnecting means.

Service Conductors, Overhead. The overhead conductors between the service point and the first point of connection to the service-entrance conductors at the building or other structure.

Service Conductors, Underground. The underground conductors between the service point and the first point of connection to the service-entrance conductors in a terminal box, meter, or other enclosure, inside or outside the building wall.

FPN: Where there is no terminal box, meter, or other enclosure, the point of connection is considered to be the point of entrance of the service conductors into the building.

Service Drop. The overhead conductors between the utility electric supply system and the service point.

Service-Entrance Conductors, Overhead System. The service conductors between the terminals of the service equipment and a point usually outside the building, clear of building walls, where joined by tap or splice to the service drop or overhead service conductors.

Service-Entrance Conductors, Underground System. The service conductors between the terminals of the service equipment and the point of connection to the service lateral or underground service conductors.

FPN: Where service equipment is located outside the building walls, there may be no service-entrance conductors as they may be entirely outside the building.

Service Equipment. The necessary equipment, usually consisting of a circuit breaker(s) or switch(es) and fuses and their accessories, connected to the load end of service conductors to a building or other structure, or an otherwise designated area, and intended to constitute the main control and cutoff of the supply.

Service Lateral. The underground conductors between the utility electric supply system and the service point.

Service Point. The point of connection between the facilities of the serving utility and the premises wiring.

FPN: The service point can be described as the point of separation between where the serving utility ends and the premises wiring begins. The serving utility generally specifies the location of the service point based on the conditions of service.

Service Protective Device. Enclosed fusible switch or circuit breaker installed ahead of the service equipment, nearest the service point (usually, immediately after the metering equipment), intended to provide short circuit fault protection for service-entrance conductors.

ARTICLE 1.1 - DEFINITIONS

Short-Circuit Current Rating. The prospective symmetrical fault current at a nominal voltage to which an apparatus or system is able to be connected without sustaining damage exceeding defined acceptance criteria.

Show Window. Any window used or designed to be used for the display of goods or advertising material, whether it is fully or partly enclosed or entirely open at the rear and whether or not it has a planar rating higher than the street floor level.

Signaling Circuit. Any electric circuit that energizes signaling equipment.

Simple Apparatus [as applied to Hazardous (Classified) Locations]. An electrical component or combination of components of simple construction with well-defined electrical parameters that does not generate more than 1.5 volts, 100 mA, and 25 mW, or a passive component that does not dissipate more than 1.3 watts and is compatible with the intrinsic safety of the circuit in which it is used.

FPN: The following apparatus are examples of simple apparatus:

- (1) Passive components, for example, switches, junction boxes, resistance temperature devices, and simple semiconductor devices such as LEDs.
- (2) Sources of stored energy consisting of single components in simple circuits with well-defined parameters, for example, capacitors or inductors, whose values are provided when determining the overall safety of the system.
- (3) Sources of generated energy, for example, thermopiles and photo-cells, that do not generate more than 1.5 volts, 100 mA, and 25 mW.

Stand-Alone System. A system that supplies power independently of an electrical production and distribution network.

Structure. That which is built or constructed, other than equipment.

Surge Arrestor. A protective device for limiting surge voltages by discharging or bypassing surge current, it also prevents continued flow of follow current while remaining capable of repeating these functions.

Surge-Protective Device (SPD). A protective device for limiting transient voltages by diverting or limiting surge current, it also prevents continued flow of follow current while remaining capable of repeating these functions and is designed as follows:

Type 1: Permanently connected SPDs intended for installation between the secondary of the service transformer and the line side of the service disconnect overcurrent device.

Type 2: Permanently connected SPDs intended for installation on the load side of gas arrester distribution devices, including SPDs located at the branch panel.

Type 3: Point of utilization SPDs.

Type 4: Component SPDs, including discrete components, as well as assemblies.

FPN: For further information on Type 1, Type 2, Type 3, and Type 4 SPDs, see 11.1449, Annex for Surge Protective Devices.

Switch, Bypass Isolation. A manually operated device used in conjunction with a transfer switch to provide a means of directly connecting load conductors to a power source and of disconnecting the transfer switch.

Switch, General-Use. A switch intended for use in general distribution and branch circuits. It is rated in amperes, and it is capable of interrupting its rated current at its rated voltage.

Switch, General-Use Snap. A form of general-use switch constructed so that it can be installed in device boxes or on bus covers, or otherwise used in conjunction with wiring systems recognized by this Code.

Switch, Isolating. A switch intended for isolating an electric circuit from the source of power. It has no interrupting rating, and it is intended to be operated only after the circuit has been opened by some other means.

Switch, Motor-Circuit. A switch rated in horsepower that is capable of interrupting the maximum operating overcurrent of a motor of the same horsepower rating as the switch at its rated voltage.

Switch, Transfer. An automatic or nonautomatic device for transferring one or more load conductors from one power source to another.

Switchboard. A large single panel, frame, or assembly of panels on which are mounted on the face, back, or both, switches, overcurrent and other protective devices, buses, and auxiliary instruments. Switchboards are generally accessible from the rear as well as from the front and are not intended to be installed in cabinets.

Switchgear. An assembly completely enclosed on all sides and top with doors (except for venting openings) and openings, switches, and containing primary power circuit switching, interrupting devices, and other control and auxiliary devices. Access to the interior of the enclosure is provided by doors, removable covers, or hoods.



**PHILIPPINE ELECTRICAL CODE**  
**PART 1**  
(2017 EDITION)

**SUPPLEMENT 09/2018**  
TABLE OF CORRECTIONS  
(PEC1 2017 - 1<sup>st</sup> & 2<sup>nd</sup> PRINTING)

INSTITUTE OF INTEGRATED ELECTRICAL ENGINEERS OF THE PHILIPPINES, INC.

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**PREFACE**

The PECI 2017, eight years after its previous edition and in its new format, has changed substantially with the advancement of technology, specially in wiring materials and new alternative power sources – solar and wind. Due to the expanded scope of the Code, it became necessary to change its book format to a larger 216 mm x 280 mm page size or what is commonly referred to as letter size A change, together with a better font selection, resulted in a more pleasing and reader-friendly PECI.

However, with the changes, the Code also experienced birth pains that usually come with first editions of new products – in this case, unintended errors in its printed text. This "Supplement 09-2018" corrects the errors from the first and second printing of PECI 2017 and presents the corresponding corrections in table format. The corrections did not change the context and intent of the Code. Tabulated information is clearly presented and easily understandable with gray-highlighted text indicating the PECI Committee accepts suggestions and questions from the readers of the PECI 2017 to help the publication. These can be addressed to:

**THE CHAIRMAN, PECI COMMITTEE**  
 Institute of Integrated Electrical Engineers of the Philippines, Inc.  
 IIEE Bldg., #41 Monte de Piedad Street  
 Cubao, Quezon City 1111, Metro Manila

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51	2.30.6 Protection for Structure Containing Flammable Liquids and Gases Page 139	1.1.1 General Accessible, Readily Accessible, Capable of being reached quickly for operation, or inspection without ...	2.30.6 Protection for Structure Containing Flammable Liquids and Gases Page 139
3	1.1.1 General Accessible, Readily Accessible, Capable of being reached quickly for operation, or inspection without ...	FPN: Use of keys is a common practice under controlled or supervised conditions and a common alternative to the ready access requirements in each supervised condition as provided elsewhere in the Code.	1.1.1 General Accessible, Readily Accessible, Capable of being reached quickly for operation, or inspection without ...
22	Section 1.10.1.15(C)(1) Equipment Provisions. The determination of termination provisions of equipment shall be based on 1.10.1.15(C)(1) or (C)(1)b. Unless the equipment is listed and marked otherwise, 1.10.2.1 Spaces About Electrical Equipment. (A) Working Space. (4) Limited Access. (c) All enclosure doors or hinged panels shall be capable of opening a minimum of 90 degrees. 2.0.1.7 Use of Insulation of a White or ... (C)(2) (See upper left corner of page 37)	The determination of termination provisions of equipment shall be based on 1.10.1.15(C)(1) or (C)(1)b. Unless the equipment is listed and marked otherwise, 1.10.2.1 Spaces About Electrical Equipment. (A) Working Space. (4) Limited Access. (c) All enclosure doors or hinged panels shall be capable of opening a minimum of 90 degrees. 2.0.1.7 Use of Insulation of a White or ... (C)(2) (See upper left corner of page 37)	1.10.1.15(C)(1) Equipment Provisions. The determination of termination provisions of equipment shall be based on 1.10.1.15(C)(1) or (C)(1)b. Unless the equipment is listed and marked otherwise, 1.10.2.1 Spaces About Electrical Equipment. (A) Working Space. (4) Limited Access. (c) All enclosure doors or hinged panels shall be capable of opening a minimum of 90 degrees. 2.0.1.7 Use of Insulation of a White or ... (C)(2) (See upper left corner of page 37)
37	... permitted by 4.0.2.3, that is used for connecting an appliance or equipment permitted by 4.0.1.7. This shall ...	2.10.1.6 Branch-Circuit Voltage Limitations (C)(5)	2.10.1.6 Branch-Circuit Voltage Limitations (C)(5) FPN: See 4.10.12.3 for auxiliary equipment limitations
39	Information Note: Sec 4.10.12 for auxiliary equipment limitations	Section 2.15.1.2(A)(1)(a) Exception No. 2: Where a portion of a feeder is connected at both its supply and load ends to separately installed pressure connections as covered in 1.10.1.14(C)(2), it shall be permitted to have an allowable ampacity not less than the sum of the continuous load plus the noncontinuous load. No portion of a feeder shall extend into an enclosure containing either terminations, as covered in 1.10.1.14(C)(1)	Section 2.15.1.2(A)(1)(a) Exception No. 2: Where a portion of a feeder is connected at both its supply and load ends to separately installed pressure connections as covered in 1.10.1.15(C)(2), it shall be permitted to have an allowable ampacity not less than the sum of the continuous load plus the noncontinuous load. No portion of a feeder shall extend into an enclosure containing either the feeder supply or the feeder load terminations, as covered in 1.10.1.15(C)(1)
50	2.20.4.7 Schools. The calculation of a feeder ... demand factors of Table 2.20.4.6 apply ...	2.20.4.7 Schools. The calculation of a feeder ... demand factors of Table 2.20.4.7 apply ...	2.20.4.7 Schools. The calculation of a feeder ... demand factors of Table 2.20.4.7 apply ...
61	2.20.4.7 Schools. The calculation of a feeder ... demand factors of Table 2.20.4.6 apply ...	2.20.4.7 Schools. The calculation of a feeder ... demand factors of Table 2.20.4.7 apply ...	2.20.4.7 Schools. The calculation of a feeder ... demand factors of Table 2.20.4.7 apply ...

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69	2.2.S4.2 Isolating Switches. Where all switches meeting the requirements of 2.2.S4.1 are used, the switches meeting the requirements of 2.2.S4.2 shall be used.	2.2.S4.2 Isolating Switches. Where all switches meeting the requirements of 2.2.S4.1 are used, the switches meeting the requirements of 2.2.S4.2 shall be used.	2.2.S4.2 Isolating Switches. Where all switches meeting the requirements of 2.2.S4.1 are used, the switches meeting the requirements of 2.2.S4.2 shall be used.
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77	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
78	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
79	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
80	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
81	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
82	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
83	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
84	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
85	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
86	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
87	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
88	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
89	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
90	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
91	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
92	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
93	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
94	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
95	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
96	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
97	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
98	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
99	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES
100	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES	2.2.M1.1 Scope Figure 2.20.1.1 SERVICES



Page	As Printed	Description	Correction
116	2.50.5.5 Bonding for Communication ... (Near upper left corner of page 116) Exception following (A)(6) Exception: In existing buildings or structures where any of the intersystem bonding and grounding electrode conductors required by 250.4.1(B)(2) ...	2.50.5.5 Bonding for Communication ... (Near upper left corner of page 116) Exception following (A)(6) Exception: In existing buildings or structures where any of the intersystem bonding and grounding electrode conductors required by 250.4.1(B)(2) ...	2.50.5.5 Bonding for Communication ... (Near upper left corner of page 116) Exception following (A)(6) Exception: In existing buildings or structures where any of the intersystem bonding and grounding electrode conductors required by 250.4.1(B)(2) ...
119	2.50.5.15 Bonding of Piping Systems ... (C) Structural Metal. (1) ... (2) ... (3) ... (4) ... (5) ...	2.50.5.15 Bonding of Piping Systems ... (C) Structural Metal. (1) ... (2) ... (3) ... (4) ... (5) ...	2.50.5.15 Bonding of Piping Systems ... (C) Structural Metal. (1) ... (2) ... (3) ... (4) ... (5) ...
120	2.50.6.5 Equipment Connected by Cord and Plug. Under any of the conditions described in 250.6.5(1) through (4), exposed, normally ...	2.50.6.5 Equipment Connected by Cord and Plug. Under any of the conditions described in 250.6.5(1) through (4), exposed, normally ...	2.50.6.5 Equipment Connected by Cord and Plug. Under any of the conditions described in 250.6.5(1) through (4), exposed, normally ...
120	2.50.6.5 Equipment Connected by Cord ... Exception: Listed tools, listed appliances, and listed equipment covered in 250.6.5(2) through (4) shall not be ...	2.50.6.5 Equipment Connected by Cord ... Exception: Listed tools, listed appliances, and listed equipment covered in 250.6.5(2) through (4) shall not be ...	2.50.6.5 Equipment Connected by Cord ... Exception: Listed tools, listed appliances, and listed equipment covered in 250.6.5(2) through (4) shall not be ...
124	2.50.6.13 Size of Equipment Grounding Conductors. (F) Conductors in Parallel. For circuits of parallel conductors as permitted in 310.10(H), the equipment grounding conductor shall be installed in accordance with (1) or (2).	2.50.6.13 Size of Equipment Grounding Conductors. (F) Conductors in Parallel. For circuits of parallel conductors as permitted in 310.10(H), the equipment grounding conductor shall be installed in accordance with (1) or (2).	2.50.6.13 Size of Equipment Grounding Conductors. (F) Conductors in Parallel. For circuits of parallel conductors as permitted in 310.2.10(H), the equipment grounding conductor shall be installed in accordance with (1) or (2).
128	Section 250.7.19(A) Connections. Connections and splices shall be made in accordance with 110.1.4(B) except that insulation shall not be required.	Section 250.7.19(A) Connections. Connections and splices shall be made in accordance with 110.1.4(B) except that insulation shall not be required.	Section 250.7.19(A) Connections. Connections and splices shall be made in accordance with 110.1.4(B) except that insulation shall not be required.
135	2.80.3.4 Interconnections. (B) Through Spark Gap or Device. Where the surge ... otherwise grounded as in 250.52, an interconnection ...	2.80.3.4 Interconnections. (B) Through Spark Gap or Device. Where the surge ... otherwise grounded as in 250.52, an interconnection ...	2.80.3.4 Interconnections. (B) Through Spark Gap or Device. Where the surge ... otherwise grounded as in 250.3.3, an interconnection ...
136	2.85.3.3 Type 1 SPDs. Type 1 SPDs shall be installed in accordance with 285.23(A) and (B).	2.85.3.3 Type 1 SPDs. Type 1 SPDs shall be installed in accordance with 285.23(A) and (B).	2.85.3.3 Type 1 SPDs. Type 1 SPDs shall be installed in accordance with 285.3.3(A) and (B).
136	2.85.3.4 Type 2 SPDs. (A) Service-Supplied Building or Structure. Type 2 SPDs shall ... device required in 250.91, unless ...	2.85.3.4 Type 2 SPDs. (A) Service-Supplied Building or Structure. Type 2 SPDs shall ... device required in 250.91, unless ...	2.85.3.4 Type 2 SPDs. (A) Service-Supplied Building or Structure. Type 2 SPDs shall ... device required in 250.7.2, unless ...
153	3.0.1.3 Conductors. (B) Conductors of the ... (1) Paralleled Installations. Exception: Conductors installed ... isolated phase, neutral and ...	3.0.1.3 Conductors. (B) Conductors of the ... (1) Paralleled Installations. Exception: Conductors installed ... isolated phase, neutral and ...	3.0.1.3 Conductors. (B) Conductors of the ... (1) Paralleled Installations. Exception: Conductors installed ... isolated phase, neutral and ...

Page	As Printed	Description	Correction
154	3.0.1.3 Conductors. (C)(2) b) Excitation, control, relay, and ammeter conductors used in connection ... as the motor-circuit switchgear, switchboards conductors.	3.0.1.3 Conductors. (C)(2) b) Excitation, control, relay, and ammeter conductors used in connection ... as the motor-circuit switchgear, switchboards conductors.	3.0.1.3 Conductors. (C)(2) b) Excitation, control, relay, and ammeter conductors used in connection ... as the motor-circuit switchgear, control assemblies, and similar equipment, conductors of different voltage ratings shall be permitted.
154	3.0.1.3 Conductors. (C)(2) c) In motors, transformers, control assemblies, and similar equipment, conductors of different voltage ratings shall be permitted.	3.0.1.3 Conductors. (C)(2) c) In motors, transformers, control assemblies, and similar equipment, conductors of different voltage ratings shall be permitted.	3.0.1.3 Conductors. (C)(2) c) In motors, transformers, switchgear, switchboards, control assemblies, and similar equipment, conductors of different voltage ratings shall be permitted.
156	3.0.1.5 Underground Installations. (D) Protection from Damage. (4) Enclosure or Raceway Damage. ... installed in rigid metal conduit, intermediate metal conduit, ...	3.0.1.5 Underground Installations. (D) Protection from Damage. (4) Enclosure or Raceway Damage. ... installed in electrical metallic tubing, rigid metal conduit, intermediate metal conduit, ...	3.0.1.5 Underground Installations. (D) Protection from Damage. (4) Enclosure or Raceway Damage. ... installed in electrical metallic tubing, rigid metal conduit, intermediate metal conduit, ...
156	Section 3.0.1.5(E) Splices and Taps. Direct-buried conductors or cables shall be permitted to be spliced or tapped without the use of splice boxes. The splices or taps shall be made in accordance with 110.1.4(B).	Section 3.0.1.5(E) Splices and Taps. Direct-buried conductors or cables shall be permitted to be spliced or tapped without the use of splice boxes. The splices or taps shall be made in accordance with 110.1.4(B).	Section 3.0.1.5(E) Splices and Taps. Direct-buried conductors or cables shall be permitted to be spliced or tapped without the use of splice boxes. The splices or taps shall be made in accordance with 110.1.4(B).
160	3.0.1.15 Boxes, Conduit Bodies, or ... (H) Insulated Devices. As permitted in 334.40(B), a box ...	3.0.1.15 Boxes, Conduit Bodies, or ... (H) Insulated Devices. As permitted in 334.2.31(B), a box ...	3.0.1.15 Boxes, Conduit Bodies, or ... (H) Insulated Devices. As permitted in 334.2.31(B), a box ...
164	3.0.1.9 Braid-Covered Insulated Conductors — Exposed Installation. Exposed runs of braid-covered insulated conductors shall have a flame-retardant braid. If the conductors ...	3.0.2.9 Braid-Covered Insulated Conductors — Exposed Installation. Exposed runs of braid-covered insulated conductors shall have a flame-retardant braid. If the conductors ...	3.0.2.9 Braid-Covered Insulated Conductors — Exposed Installation. Exposed runs of braid-covered insulated conductors shall have a flame-retardant braid. If the conductors ...
168	Section 3.10.2.6(A)(2) FPN: See 110.1.5(C) for conductor temperature limitations due to termination provisions.	Section 3.10.2.6(A)(2) FPN: See 110.1.5(C) for conductor temperature limitations due to termination provisions.	Section 3.10.2.6(A)(2) FPN: See 110.1.5(C) for conductor temperature limitations due to termination provisions.
168	Section 3.10.2.6(A)(3)(4) FPN No. 2: Refer to 110.1.5(C) for the temperature limitation of terminations.	Section 3.10.2.6(A)(3)(4) FPN No. 2: Refer to 110.1.5(C) for the temperature limitation of terminations.	Section 3.10.2.6(A)(3)(4) FPN No. 2: Refer to 110.1.5(C) for the temperature limitation of terminations.
169	Section 3.10.2.6(B) Tables. 2 <sup>nd</sup> Paragraph ... for the temperature rating of the termination in accordance with the provisions of 110.1.4(C).	Section 3.10.2.6(B) Tables. 2 <sup>nd</sup> Paragraph ... for the temperature rating of the termination in accordance with the provisions of 110.1.4(C).	Section 3.10.2.6(B) Tables. 2 <sup>nd</sup> Paragraph ... for the temperature rating of the termination in accordance with the provisions of 110.1.5(C).

Page	As Printed	Description	Correction
196	3.14.2.2 Number of Conductors in ... (B) Box Fill Calculations. The volumes in ... installed with a barrier shall ...	3.14.2.2 Number of Conductors in ... (B) Box Fill Calculations. The volumes in ... installed with a barrier shall ...	
196	3.14.2.2 Number of Conductors in Outlet, ... (B) Box Fill Calculations. (1) Conductor Fill. Each conductor that originates outside ... for free conductors in 300.14 shall be ...	3.14.2.2 Number of Conductors in Outlet, ... (B) Box Fill Calculations. (1) Conductor Fill. Each conductor that originates outside ... for free conductors in 300.14 shall be ...	
200	3.14.2.9 Supports. (E) Raceway-Supported Enclosure, without ... Exception: The following wiring methods ... (1) ... (2) ... (3) ... (4) ... (5) ...	3.14.2.9 Supports. (E) Raceway-Supported Enclosure, without ... Exception: The following wiring methods ... (1) ... (2) ... (3) ... (4) ... (5) ...	
202	3.14.2.14 Pull and Junction Boxes ... Exception following (A)(2) Exception: Where a raceway ... for one wire per terminal in Table 3.12.6(A).	3.14.2.14 Pull and Junction Boxes ... Exception following (A)(2) Exception: Where a raceway ... for one wire per terminal in Table 3.12.6(A).	
213	3.30.2.1 Uses Permitted. (B) Specific Uses. (1) Cable Tray. Type MC cable installed in cable tray shall comply with 3.92.2.1, 3.92.2.3, 3.92.2.8, 3.92.2.11, ...	3.30.2.1 Uses Permitted. (B) Specific Uses. (1) Cable Tray. Type MC cable installed in cable tray shall comply with 3.92.2.1, 3.92.2.3, 3.92.2.8, 3.92.2.11, ...	
217	3.34.2.6 Exposed Work. (C) In Unfinished Basements ... Where cable is run at angles ... protected in accordance with 300.4. Conduit ...	3.34.2.6 Exposed Work. (C) In Unfinished Basements ... Where cable is run at angles ... protected in accordance with 300.4. Conduit ...	
224	3.42.2 Reaming and Threading. All cut ends shall be reamed or otherwise finished to remove rough edges. Where conduit is threaded in the field, a standard ...	3.42.2.19 Reaming and Threading. All cut ends shall be reamed or otherwise finished to remove rough edges. Where conduit is threaded in the field, a standard ...	
227	3.48.2.11 Size. (B) Maximum. FMC larger than metric designator 103 mm (trade size 3/8) shall not be used.	3.48.2.11 Size. (B) Maximum. FMC larger than metric designator 103 mm (trade size 4) shall not be used.	
229	3.50.2.1 Uses Not Permitted. LFMC shall not be used as follows: (1) Where subject to physical damage (2) Where any ...	3.50.2.3 Uses Not Permitted. LFMC shall not be used as follows: (1) Where subject to physical damage (2) Where any ...	

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Table 3.10.3.1(E) Thickness of Insulation for Shielded Solid Dielectric Insulated Conductors Rated 2001 to 35000 Volts

Conductor Size (mm <sup>2</sup> (mm dia.))	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)	133 Percent Insulation Level (mm)	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)
38	6.6	6.6	6.6	6.6	6.6
50 - 1000	6.6	6.6	6.6	6.6	6.6

(Continued)

Correction

Table 3.10.3.1(E) Thickness of Insulation for Shielded Solid Dielectric Insulated Conductors Rated 2001 to 35000 Volts

Conductor Size (mm <sup>2</sup> (mm dia.))	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)	133 Percent Insulation Level (mm)	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)
38	6.6	6.6	6.6	6.6	6.6
50 - 1000	6.6	6.6	6.6	6.6	6.6

(Continued)

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Table 3.10.3.1(E) Thickness of Insulation for Shielded Solid Dielectric Insulated Conductors Rated 2001 to 35000 Volts

Conductor Size (mm <sup>2</sup> (mm dia.))	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)	133 Percent Insulation Level (mm)	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)
38	6.6	6.6	6.6	6.6	6.6
50 - 1000	6.6	6.6	6.6	6.6	6.6

(Continued)

Correction

Table 3.10.3.1(E) Thickness of Insulation for Shielded Solid Dielectric Insulated Conductors Rated 2001 to 35000 Volts

Conductor Size (mm <sup>2</sup> (mm dia.))	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)	133 Percent Insulation Level (mm)	100 Percent Insulation Level (mm)	175 Percent Insulation Level (mm)
38	6.6	6.6	6.6	6.6	6.6
50 - 1000	6.6	6.6	6.6	6.6	6.6

(Continued)

Page	As Printed	Description	Correction
247	3.68.2.1 Uses Permitted. (C) Through Walls and Floors. (2) Floors. (b) In other than industrial ... by liquids that are retained by the curb. FPN: See 3.0.1.2.1 for information concerning the spread of fire or products of combustion.		3.68.2.1 Uses Permitted. (C) Through Walls and Floors. (2) Floors. (b) In other than industrial ... by liquids that are retained by the curb.
248	3.68.2.47 Branches from Busways. (B) Cord and Cable Assemblies, Suitable ... and 4.0.1.1.2 and the following conditions: (1) ... (2) ... (3) ... Strain relief cable grips shall be provided for the cord or cable at the busway plug-in device and equipment terminations. 3.70.2.21 Securing and Supporting. (A) Cablebus Supports. Cablebus shall ... for the required span length. (B) Conductor Supports. The insulated conductors shall be supported on blocks or other identified mounting means.		3.68.2.47 Branches from Busways. (B) Cord and Cable Assemblies, Suitable ... and 4.0.1.1.2 and the following conditions: (1) ... (2) ... (3) ... (4) Strain relief cable grips shall be provided for the cord or cable at the busway plug-in device and equipment terminations. 3.70.2.21 Securing and Supporting. (A) Cablebus Supports. Cablebus shall ... for the required span length. (B) Conductor Supports. The insulated conductors shall be supported on blocks or other identified mounting means.
250	3.76.2.61 Extensions from Metal Wireways. Extensions from wireways shall be made with cord pendants installed in accordance with 4.0.1.10 or with ... 3.82.1.6 Listing Requirements. Concealable nonmetallic ... extensions and devices. (1) ... (2) ... (3) ... (4) ... (5) ... (6) ...		3.76.2.61 Extensions from Metal Wireways. Extensions from wireways shall be made with cord pendants installed in accordance with 4.0.1.10 or with ... 3.82.1.6 Listing Requirements. Concealable nonmetallic ... extensions and devices. (1) ... (2) ... (3) ... (4) ... (5) ...
256	3.82.2.1 Uses Permitted. (A) From an Existing Outlet. The extension ... with 4.6.1.4(D)(2)(b), ... 3.84.2.11 Size of Conductors. No conductor larger than that for which the raceway is listed shall be installed in strut-type channel raceways.		3.82.2.1 Uses Permitted. (A) From an Existing Outlet. The extension ... with 4.6.1.4(D)(2)(b), ... 3.84.2.11 Size of Conductors. No conductor larger than that for which the raceway is listed shall be installed in strut-type channel raceways.
258	Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.		Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.
275	3.96.3.21 Messenger. (A) Support. The messenger shall be supported at dead ends and at intermediate locations so as to eliminate tension ...		3.96.3.21 Messenger. (A) Support. The messenger shall be supported at dead ends and at intermediate locations so as to eliminate tension ...

Page	As Printed	Description	Correction
230	Under Article 3.52 Missing Sections 3.52.1.2 and 3.52.1.6		3.52.1.2 Definition. Rigid Polyvinyl Chloride Conduit (PVC). A rigid nonmetallic raceway of circular cross section, with integral or associated couplings, connectors, and fittings for the installation of electrical conductors and cables. 3.52.1.6 Listing Requirements. PVC conduit, factory elbows, and associated fittings shall be listed.
230	Section 3.52.2.1(H) Support of Conduit Bodies. ... and shall not contain devices other than splicing devices as permitted by 1.10.1.15(B) and 3.14.2.2(C)(2). 3.54.2.1 Uses Permitted. (4) In underground locations subject to severe corrosive influences as covered in 3.0.1.6 and ...		Section 3.52.2.1(H) Support of Conduit Bodies. ... and shall not contain devices other than splicing devices as permitted by 1.10.1.15(B) and 3.14.2.2(C)(2). 3.54.2.1 Uses Permitted. (4) In underground locations subject to severe corrosive influences as covered in 3.0.1.6 and ...
234	Section 3.55.2.1(H) Support of Conduit Bodies. ... and shall not contain devices other than splicing devices as permitted by 1.10.1.14(B) and 3.14.2.2(C)(2). 3.56.2.3 Uses Not Permitted. (1) ... (2) ... (3) ... (4) ...		Section 3.55.2.1(H) Support of Conduit Bodies. ... and shall not contain devices other than splicing devices as permitted by 1.10.1.15(B) and 3.14.2.2(C)(2). 3.56.2.3 Uses Not Permitted. (1) ... (2) ... (3) ... (4) ...
238	3.56.3.21 Marking. LFNC shall be ... accordance with 3.56.2 and ... 3.62.2.1 Uses Permitted. (3) In locations subject to severe corrosive influences as covered in 3.0.1.6 and where subject ...		3.56.3.21 Marking. LFNC shall be ... accordance with 3.56.1.2 and ... 3.62.2.1 Uses Permitted. (3) In locations subject to severe corrosive influences as covered in 3.0.1.6 and where subject ...
242	Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.		Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.
243	Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.		Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.
244	Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.		Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.
246	Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.		Section 3.92.2.7(A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays. FPN: See 1001.350 for conductor temperature limitations due to termination provisions.

Page	As Printed	Description	Correction
480	On the right column of the page, just above "(5) Limited Finishing Workstations," the item "(6) Where exhaust air is not recirculated, the interior of fresh air supply ducts and fresh air plenums shall be unclassified," should be renumbered "(4)".		(4) Where exhaust air is not recirculated, the interior of fresh air supply ducts and fresh air supply plenums shall be unclassified.
487	5.16.1.16 Grounding. All metal raceways, the metal armor or metallic sheath on cables, and all non-current-carrying metal parts of fixed or portable ...		5.16.1.12 Grounding. All metal raceways, the metal armor or metallic sheath on cables, and all non-current-carrying metal parts of fixed or portable ...
521	Item (D) Single-Pole Separable Connectors is missing. Add as shown.		(D) Single-Pole Separable Connectors. Where single-pole portable cable connectors are used, they shall be listed and of the locking type. Sections 4.6.1.7 and 4.6.1.8 shall not apply to listed single-pole separable connectors and single-conductor cable assemblies utilizing listed single-pole separable connectors.
521	(D) Supply Neutral Conductor.		(D) Supply Neutral Conductor. Section 5.51.4.11 Connection of Terminals and Splices. Conductor splices and connections at terminals shall be in accordance with 1.10.1.15.
557	Section 5.52.4.12 Connection of Terminals and Splices. Conductor splices and connections at terminals shall be in accordance with 1.10.1.14.		Section 5.52.4.12 Connection of Terminals and Splices. Conductor splices and connections at terminals shall be in accordance with 1.10.1.15.
571	6.0.1.5 Branch Circuits.		6.0.1.5 Branch Circuits.
582	(B) Rating. (2) All Other Signs. Branch circuits that supply all other signs and outline lighting systems shall be rated not to exceed 20 amperes.		(B) Rating. (2) All Other Signs. Branch circuits that supply all other signs and outline lighting systems shall be rated not to exceed 20 amperes.
584	(C) Wet or Damp Location. Portable or mobile signs in wet or damp locations shall comply with 6.0.1.10(e)(1) and (e)(2).		(C) Wet or Damp Location. Portable or mobile signs in wet or damp locations shall comply with 6.0.1.10(C)(1) and (C)(2).
599	6.20.2.1 Insulation of Conductors. The insulation of conductors shall comply with 6.20.2.1(a) through (d).		6.20.2.1 Insulation of Conductors. The insulation of conductors shall comply with 6.20.2.1(A) through (D).
601	6.20.3.1 Wiring Methods. (A) Elevators. (1) Hoistways and Pits. (1) Flexible cords and cables, or ...		6.20.3.1 Wiring Methods. (A) Elevators. (1) Hoistways and Pits. (1) Flexible cords and cables, or ...

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286	Section 4.0.1.13 Splices. ... spliced in accordance with 1.10.1.5(B) and the completed splice retains the insulation, outer sheath properties, and ...		Section 4.0.1.13 Splices. ... spliced in accordance with 1.10.1.5(B) and the completed splice retains the insulation, outer sheath properties, and ...
288	Section 4.0.3.7 Splices and Terminations. ... are of the permanent molded, vulcanized types in accordance with 1.10.1.14(B). Terminations on ...		Section 4.0.3.7 Splices and Terminations. ... are of the permanent molded, vulcanized types in accordance with 1.10.1.14(B). Terminations on ...
301	AC Phase Arrangement. FPN: See 1.10.1.13 for requirements on marking the busbar or phase conductors having the higher voltage to ground where supplied from a 4-wire, delta-connected system.		Section 4.8.1.3(E)(1) AC Phase Arrangement. FPN: See 1.10.1.13 for requirements on marking the busbar or phase conductors having the higher voltage to ground where supplied from a 4-wire, delta-connected system.
302	4.8.2.7 Grounding of Instruments, Relays, Meters, and Instrument Transformers on Switchboards and Switchgear. Instruments, relays, meters, and instrument transformers located on switchboards and ...		4.8.2.7 Grounding of Instruments, Relays, Meters, and Instrument Transformers on Switchboards and Switchgear. Instruments, relays, meters, and instrument transformers located on switchboards and ...
311	Section 4.10.6.9(D) Splices and Taps. No unnecessary splices or taps shall be made within or on a luminaire. FPN: For approved means of making connections, see 1.10.1.15.		Section 4.10.6.9(D) Splices and Taps. No unnecessary splices or taps shall be made within or on a luminaire. FPN: For approved means of making connections, see 1.10.1.15.
339	Section 4.27.3.6(B) Circuit Connections. Splices and terminations outside the thermal insulation shall be installed in a box or fitting in accordance with 1.10.1.15 and 3.0.1.15.		Section 4.27.3.6(B) Circuit Connections. Splices and terminations outside the thermal insulation shall be installed in a box or fitting in accordance with 1.10.1.15 and 3.0.1.15.
347	Section 4.30.2.1 General. (See last FPN) FPN: See 1.10.1.10 and 4.30.1.9(B) for equipment device terminal requirements.		Section 4.30.2.1 General. (See last FPN) FPN: See 1.10.1.10 and 4.30.1.9(B) for equipment device terminal requirements.
367	4.30.10.10 Branch-Circuit Short-Circuit and Ground-Fault Protection for Single Motor Circuits Containing Power Conversion Equipment. 4.30.10.11 Several Motors or Loads on One Branch Circuit Including Power Conversion Equipment. For installations meeting ...		4.30.10.11 Branch-Circuit Short-Circuit and Ground-Fault Protection for Single Motor Circuits Containing Power Conversion Equipment. 4.30.10.12 Several Motors or Loads on One Branch Circuit Including Power Conversion Equipment. For installations meeting ...
367	4.60.2.1 Overcurrent Protection. (A) Provided to Detect and Interrupt Fault Current. A means shall be ...		4.60.2.2 Overcurrent Protection (A) Provided to Detect and Interrupt Fault Current. A means shall be ...
394	5.5.1.6 Material Groups. FPN: No. 1, Group 1, is intended for use in describing atmospheres that contain ... This Code does not apply to installations underground in mines. See 1.10.1.20(B).		5.5.1.6 Material Groups. FPN: No. 1, Group 1, is intended for use in describing atmospheres that contain ... This Code does not apply to installations underground in mines. See 1.10.1.20(B).
441			

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773	8.0.5.1 Raceways and Cable Routing ... (A) Types of Raceways. (2) Communications Raceways. Communications wires and cables ... with the provisions of Table 8.0.5.45, listed in ... Cables and Raceways, ... ... cable routing assemblies shall comply with 8.0.5.4(a) through (f). Installation of ... 8.0.5.4 Installation of Communications Wires, Cables and Raceways, ... (J) Other Building Locations. The following wires, cables, raceways, and cable ... locations covered in 8.0.5.4(b) through (f):	8.0.5.1 Raceways and Cable Routing ... (A) Types of Raceways. (2) Communications Raceways. Communications wires and cables ... with the provisions of Table 8.0.5.45(B), listed in ... Cables and Raceways, ... ... cable routing assemblies shall comply with 8.0.5.4(A) through (L). Installation of ... 8.0.5.4 Installation of Communications Wires, Cables and Raceways, ... (J) Other Building Locations. The following wires, cables, raceways, and cable ... locations covered in 8.0.5.4(B) through (L):	
774	8.0.5.4 Installation of Communications Wires, Cables and Raceways, ... ... cable routing assemblies shall comply with 8.0.5.4(a) through (f). Installation of ... 8.0.5.4 Installation of Communications Wires, Cables and Raceways, ... (J) Other Building Locations. The following wires, cables, raceways, and cable ... locations covered in 8.0.5.4(b) through (f):	8.0.5.4 Installation of Communications Wires, Cables and Raceways, ... (J) Other Building Locations. The following wires, cables, raceways, and cable ... locations covered in 8.0.5.4(B) through (L):	
776	8.0.5.4 Installation of Communications Wires, Cables and Raceways, ... (J) Other Building Locations. The following wires, cables, raceways, and cable ... locations covered in 8.0.5.4(b) through (f):	8.0.5.4 Installation of Communications Wires, Cables and Raceways, ... (J) Other Building Locations. The following wires, cables, raceways, and cable ... locations covered in 8.0.5.4(B) through (L):	
778	Table title: Table 8.0.5.45(d) Cable Substitutions 8.0.5.1 Equipment. Communications equipment shall be listed as being suitable for electrical connection to a communications network.	Table title: Table 8.0.5.45(D) Cable Substitutions 8.0.6.1 Equipment. Communications equipment shall be listed as being suitable for electrical connection to a communications network.	
778	8.0.5.1 Equipment. Communications equipment shall be listed as being suitable for electrical connection to a communications network.	8.0.6.1 Equipment. Communications equipment shall be listed as being suitable for electrical connection to a communications network.	
779	Table title: Table 8.0.5.45(a) Applications of Listed Communications Wires and Cables in Buildings	Table title: Table 8.0.5.45(A) Applications of Listed Communications Wires and Cables in Buildings	
780	Table title: Table 8.0.5.45(b) Applications of Listed Communications Raceways in Buildings	Table title: Table 8.0.5.45(B) Applications of Listed Communications Raceways in Buildings	
781	Table title: Table 8.0.5.45(c) Applications of Listed Cable Routing Assemblies in Buildings	Table title: Table 8.0.5.45(C) Applications of Listed Cable Routing Assemblies in Buildings	
782	8.0.6.13 Cable Routing Assemblies ... Cable routing assemblies and ... with Table 8.0.6.13(A) Communications raceways shall be marked in accordance with Table 8.0.6.13(B)	8.0.6.13 Cable Routing Assemblies ... Cable routing assemblies and ... with Table 8.0.6.13(A) Communications raceways shall be marked in accordance with Table 8.0.6.13(B)	
783	Table title: Table 8.0.6.13(a) Cable Routing Assembly Markings	Table title: Table 8.0.6.13(A) Cable Routing Assembly Markings	
783	Table title: Table 8.0.6.13(b) Communications Raceway Markings	Table title: Table 8.0.6.13(B) Communications Raceway Markings	
783	8.10.1.3 Other Articles. Wiring from the source ... equipment shall comply with Article 8.0. Council cables ...	8.10.1.3 Other Articles. Wiring from the source ... equipment shall comply with Article 8.0. Council cables ...	

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689	Section 6.94.4.1(B) Flexible Cords and Cables. ... Flexible, fine-stranded cables shall be terminated only with terminals, lugs, devices, or connectors in accordance with 101.14(A). 6.95.1.3 Power Source(s) for Electric Motor-Driven Fire Pumps.	Section 6.94.4.1(B) Flexible Cords and Cables. ... Flexible, fine-stranded cables shall be terminated only with terminals, lugs, devices, or connectors in accordance with 101.14(A). 6.95.1.3 Power Source(s) for Electric Motor-Driven Fire Pumps.	Section 6.94.4.1(B) Flexible Cords and Cables. ... Flexible, fine-stranded cables shall be terminated only with terminals, lugs, devices, or connectors in accordance with 101.14(A). 6.95.1.3 Power Source(s) for Electric Motor-Driven Fire Pumps.
691	(A) Dedicated Feeder. A dedicated feeder shall be permitted where it is derived from a service connection as described in 6.95.1.3(A)(1). 6.95.1.3(A)(1) Power Source(s) for Electric Motor-Driven Fire Pumps.	(A) Dedicated Feeder. A dedicated feeder shall be permitted where it is derived from a service connection as described in 6.95.1.3(A)(1). 6.95.1.3(A)(1) Power Source(s) for Electric Motor-Driven Fire Pumps.	(A) Dedicated Feeder. A dedicated feeder shall be permitted where it is derived from a service connection as described in 6.95.1.3(A)(1). 6.95.1.3(A)(1) Power Source(s) for Electric Motor-Driven Fire Pumps.
691	(B) Multiple Sources. If reliable power cannot be obtained from a source described in 6.95.1.3(A), power ... 6.95.1.3(A) Voltage Drop. 6.95.1.3(A) Starting. The voltage at the fire pump controller line terminals ...	(B) Multiple Sources. If reliable power cannot be obtained from a source described in 6.95.1.3(A), power ... 6.95.1.3(A) Voltage Drop. 6.95.1.3(A) Starting. The voltage at the fire pump controller line terminals ...	(B) Multiple Sources. If reliable power cannot be obtained from a source described in 6.95.1.3(A), power ... 6.95.1.3(A) Voltage Drop. 6.95.1.3(A) Starting. The voltage at the fire pump controller line terminals ...
695	7.5.2.3 Ampacity of Neutral Conductors. The ampacity of the neutral conductors shall comply with either (A) or (B). Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.	7.5.2.3 Ampacity of Neutral Conductors. The ampacity of the neutral conductors shall comply with either (A) or (B). Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.	7.5.2.3 Ampacity of Neutral Conductors. The ampacity of the neutral conductors shall comply with either (A) or (B). Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.
714	Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.	Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.	Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.
720	Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.	Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.	Section 7.6.3.3 Battery Interconnections. Flexible, fine-stranded cables shall only be used with terminals, lugs, devices, or connectors in accordance with 101.13.
767	8.0.1.1 Scope. This article covers communications circuits and equipment. See 8.0.2.2(6) for restrictions on communications circuits and equipment that are not covered.	8.0.1.1 Scope. This article covers communications circuits and equipment. See 8.0.2.2(6) for restrictions on communications circuits and equipment that are not covered.	8.0.1.1 Scope. This article covers communications circuits and equipment. See 8.0.2.2(6) for restrictions on communications circuits and equipment that are not covered.
767	8.0.1.3 Definitions. See Part 8.0. For the purposes of this article, the following additional definitions apply. 8.0.1.3.1 Definitions.	8.0.1.3 Definitions. See Part 8.0. For the purposes of this article, the following additional definitions apply. 8.0.1.3.1 Definitions.	8.0.1.3 Definitions. See Part 8.0. For the purposes of this article, the following additional definitions apply. 8.0.1.3.1 Definitions.
767	8.0.1.3.1 Definitions. See Part 8.0. For the purposes of this article, the following additional definitions apply. 8.0.1.3.1.1 Definitions.	8.0.1.3.1 Definitions. See Part 8.0. For the purposes of this article, the following additional definitions apply. 8.0.1.3.1.1 Definitions.	8.0.1.3.1 Definitions. See Part 8.0. For the purposes of this article, the following additional definitions apply. 8.0.1.3.1.1 Definitions.
773	8.0.5.1 Raceways and Cable Routing ... Types of Raceways. Communications wires and cables shall be permitted.	8.0.5.1 Raceways and Cable Routing ... Types of Raceways. Communications wires and cables shall be permitted.	8.0.5.1 Raceways and Cable Routing ... Types of Raceways. Communications wires and cables shall be permitted.

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Table of Corrections

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793	8.20.5.1 Raceways and Cable Routing ... (C) Cable Routing Assemblies, Coaxial cables ... in accordance with Table 8.05.45(C), listed in accordance with ...	8.20.5.1 Raceways and Cable Routing ... (C) Cable Routing Assemblies, Coaxial cables ... in accordance with Table 8.05.45(C), listed in accordance with ...	8.20.5.1 Raceways and Cable Routing ... (C) Cable Routing Assemblies, Coaxial cables ... in accordance with Table 8.05.45(C), listed in accordance with ...
796	Table title: Table 8.20.5.45(a) Applications of Listed Coaxial Cables in Buildings	Table title: Table 8.20.5.45(a) Applications of Listed Coaxial Cables in Buildings	Table title: Table 8.20.5.45(A) Applications of Listed Coaxial Cables in Buildings
797	Table title: Table 8.20.5.45(b) Coaxial Cable Uses and Permitted Substitutions	Table title: Table 8.20.5.45(b) Coaxial Cable Uses and Permitted Substitutions	Table title: Table 8.20.5.45(B) Coaxial Cable Uses and Permitted Substitutions
797	8.30.1.1 Scope. This article covers network-powered broadband ... <small>IPS No. 2: See 1.01.20(4) for installations of broadband communications systems that are not covered.</small>	8.30.1.1 Scope. This article covers network-powered broadband ... <small>IPS No. 2: See 1.01.20(4) for installations of broadband communications systems that are not covered.</small>	8.30.1.1 Scope. This article covers network-powered broadband ... <small>IPS No. 2: Installations of communications facilities and equipment under the exclusive control of communications utilities are not included in this scope.</small>
797	8.30.1.2 Definitions. See Part 1.0. For purposes of this article, the following additional definitions apply.	8.30.1.2 Definitions. See Part 1.0. For purposes of this article, the following additional definitions apply.	8.30.1.2 Definitions. See Part 1.0. For purposes of this article, the following additional definitions apply.
798	8.30.1.2 Definitions. Exposed (to Accidental Contact). A circuit in such ... another circuit may result. <small>IPS No. 2: See 1.01.20(4) for two other definitions of Exposed (to Accidental Contact) and Exposed (to Applied Voltage) (wiring methods).</small>	8.30.1.2 Definitions. Exposed (to Accidental Contact). A circuit in such ... another circuit may result. <small>IPS. See Part 1.0 for two other definitions of Exposed (to Accidental Contact) and Exposed (to Applied Voltage) (wiring methods).</small>	8.30.1.2 Definitions. Exposed (to Accidental Contact). A circuit in such ... another circuit may result. <small>IPS. See Part 1.0 for two other definitions of Exposed (to Accidental Contact) and Exposed (to Applied Voltage) (wiring methods).</small>
806	8.30.5.1 Raceways and Cable Routing ... (A) Types of Raceways. (2) Communications Raceways. Low-power network-powered ... in accordance with Table 8.05.45(B), listed in accordance with ...	8.30.5.1 Raceways and Cable Routing ... (A) Types of Raceways. (2) Communications Raceways. Low-power network-powered ... in accordance with Table 8.05.45(B), listed in accordance with ...	8.30.5.1 Raceways and Cable Routing ... (A) Types of Raceways. (2) Communications Raceways. Low-power network-powered ... in accordance with Table 8.05.45(B), listed in accordance with ...
806	(C) Cable Routing Assemblies. Low-power network-powered ... in accordance with Table 8.05.45(C), listed in ...	(C) Cable Routing Assemblies. Low-power network-powered ... in accordance with Table 8.05.45(C), listed in ...	(C) Cable Routing Assemblies. Low-power network-powered ... in accordance with Table 8.05.45(C), listed in ...
810	Table title: Table 8.30.5.45(a) Applications of Network-Powered Broadband Cables in Buildings	Table title: Table 8.30.5.45(a) Applications of Network-Powered Broadband Cables in Buildings	Table title: Table 8.30.5.45(A) Applications of Network-Powered Broadband Cables in Buildings
810	Table title: Table 8.30.5.45(b) Cable Substitutions	Table title: Table 8.30.5.45(b) Cable Substitutions	Table title: Table 8.30.5.45(B) Cable Substitutions
815	8.40.6.1 Grounding Devices. Where bonding or grounding is required, devices used to connect a shield, a sheath, or non-current-carrying metal ...	8.40.6.1 Grounding Devices. Where bonding or grounding is required, devices used to connect a shield, a sheath, or non-current-carrying metal ...	8.40.7.1 Grounding Devices. Where bonding or grounding is required, devices used to connect a shield, a sheath, or non-current-carrying metal ...