

2011 NEC Table of Contents

ARTICLE 90 - Introduction

- 90.1 Purpose
 - (A) Practical Safeguarding
 - (B) Adequacy
 - (C) Intention
 - (D) Relation to Other International Standards
- 90.2 Scope
 - (A) Covered
 - (B) Not Covered
 - (C) Special Permission
- 90.3 Code Arrangement
- 90.4 Enforcement
- 90.5 Mandatory Rules, Permissive Rules, and Explanatory Material
 - (A) Mandatory Rules
 - (B) Permissive Rules
 - (C) Explanatory Material
 - (D) Informative Annexes
- 90.6 Formal Interpretations
- 90.7 Examination of Equipment for Safety
- 90.8 Wiring Planning
 - (A) Future Expansion and Convenience
 - (B) Number of Circuits in Enclosures
- 90.9 Units of Measurement
 - (A) Measurement System of Preference
 - (B) Dual System of Units
 - (C) Permitted Uses of Soft Conversion
 - (D) Compliance

ARTICLE 100 - Definitions

- I. General
- II. Over 600 Volts, Nominal

ARTICLE 110 - Requirements for Electrical Installations

- I. General
- 110.1 Scope
- 110.2 Approval
- 110.3 Examination, Identification, Installation, and Use of Equipment
 - (A) Examination
 - (B) Installation and Use
- 110.4 Voltages
- 110.5 Conductors
- 110.6 Conductor Sizes
- 110.7 Wiring Integrity
- 110.8 Wiring Methods
- 110.9 Interrupting Rating
- 110.10 Circuit Impedance, Short-Circuit Current Ratings, and Other Characteristics
- 110.11 Deteriorating Agents
- 110.12 Mechanical Execution of Work
 - (A) Unused Openings
 - (B) Integrity of Electrical Equipment and Connections
- 110.13 Mounting and Cooling of Equipment
 - (A) Mounting

- (B) Cooling
- 110.14 Electrical Connections
 - (A) Terminals
 - (B) Splices
 - (C) Temperature Limitations
- 110.15 High-Leg Marking
- 110.16 Arc-Flash Hazard Warning
- 110.18 Arcing Parts
- 110.19 Light and Power from Railway Conductors
- 110.21 Marking
- 110.22 Identification of Disconnecting Means
 - (A) General
 - (B) Engineered Series Combination Systems
 - (C) Tested Series Combination Systems
- 110.23 Current Transformers
- 110.24 Available Fault Current
 - (A) Field Marking
 - (B) Modifications
- II. 600 Volts, Nominal, or Less
- 110.26 Spaces About Electrical Equipment
 - (A) Working Space
 - (B) Clear Spaces
 - (C) Entrance to and Egress from Working Space
 - (D) Illumination
 - (E) Dedicated Equipment Space
 - (F) Locked Electrical Equipment Rooms or Enclosures
- 110.27 Guarding of Live Parts
 - (A) Live Parts Guarded Against Accidental Contact
 - (B) Prevent Physical Damage
 - (C) Warning Signs
- 110.28 Enclosure Types
- III. Over 600 Volts, Nominal
- 110.30 General
- 110.31 Enclosure for Electrical Installations
 - (A) Electrical Vaults
 - (B) Indoor Installations
 - (C) Outdoor Installations
 - (D) Enclosed Equipment Accessible to Unqualified Persons
- 110.32 Work Space About Equipment
- 110.33 Entrance to Enclosures and Access to Working Space
 - (A) Entrance
 - (B) Access
- 110.34 Work Space and Guarding
 - (A) Working Space
 - (B) Separation from Low-Voltage Equipment
 - (C) Locked Rooms or Enclosures
 - (D) Illumination
 - (E) Elevation of Unguarded Live Parts
 - (F) Protection of Service Equipment, Metal-Enclosed Power Switchgear, and Industrial Control Assemblies
- 110.36 Circuit Conductors
- 110.40 Temperature Limitations at Terminations
- IV. Tunnel Installations over 600 Volts, Nominal
- 110.51 General
 - (A) Covered
 - (B) Other Articles
 - (C) Protection Against Physical Damage
- 110.52 Overcurrent Protection
- 110.53 Conductors
- 110.54 Bonding and Equipment Grounding Conductors
 - (A) Grounded and Bonded

- (B) Equipment Grounding Conductors
- 110.55 Transformers, Switches, and Electrical Equipment
- 110.56 Energized Parts
- 110.57 Ventilation System Controls
- 110.58 Disconnecting Means
- 110.59 Enclosures
- V. Manholes and Other Electrical Enclosures Intended for Personnel Entry, All Voltages
- 110.70 General
- 110.71 Strength
- 110.72 Cabling Work Space
- 110.73 Equipment Work Space
- 110.74 Conductor Installation
- (A) 600 Volts, Nominal, or Less
- (B) Over 600 Volts, Nominal
- 110.75 Access to Manholes
- (A) Dimensions
- (B) Obstructions
- (C) Location
- (D) Covers
- (E) Marking
- 110.76 Access to Vaults and Tunnels
- (A) Location
- (B) Locks
- 110.77 Ventilation
- 110.78 Guarding
- 110.79 Fixed Ladders

ARTICLE 200 - Use and Identification of Grounded Conductors

- 200.1 Scope
- 200.2 General
- (A) Insulation
- (B) Continuity
- 200.3 Connection to Grounded System
- 200.4 Neutral Conductors
- 200.6 Means of Identifying Grounded Conductors
- (A) Sizes 6 AWG or Smaller
- (B) Sizes 4 AWG or Larger
- (C) Flexible Cords
- (D) Grounded Conductors of Different Systems
- (E) Grounded Conductors of Multiconductor Cables
- 200.7 Use of Insulation of a White or Gray Color or with Three Continuous White Stripes
- (A) General
- (B) Circuits of Less Than 50 Volts
- (C) Circuits of 50 Volts or More
- 200.9 Means of Identification of Terminals
- 200.10 Identification of Terminals
- (A) Device Terminals
- (B) Receptacles, Plugs, and Connectors
- (C) Screw Shells
- (D) Screw Shell Devices with Leads
- (E) Appliances
- 200.11 Polarity of Connections

ARTICLE 210 - Branch Circuits

- I. General Provisions
- 210.1 Scope
- 210.2 Other Articles for Specific-Purpose Branch Circuits
- 210.3 Rating

- 210.4 Multiwire Branch Circuits
- (A) General
- (B) Disconnecting Means
- (C) Line-to-Neutral Loads
- (D) Grouping
- 210.5 Identification for Branch Circuits
- (A) Grounded Conductor
- (B) Equipment Grounding Conductor
- (C) Identification of Ungrounded Conductors
- 210.6 Branch-Circuit Voltage Limitations
- (A) Occupancy Limitation
- (B) 120 Volts Between Conductors
- (C) 277 Volts to Ground
- (D) 600 Volts Between Conductors
- (E) Over 600 Volts Between Conductors
- 210.7 Multiple Branch Circuits
- 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel
- (A) Dwelling Units
- (B) Other Than Dwelling Units
- (C) Boat Hoists
- 210.9 Circuits Derived from Autotransformers
- 210.10 Ungrounded Conductors Tapped from Grounded Systems
- 210.11 Branch Circuits Required
- (A) Number of Branch Circuits
- (B) Load Evenly Proportioned Among Branch Circuits
- (C) Dwelling Units
- 210.12 Arc-Fault Circuit-Interrupter Protection
- (A) Dwelling Units
- (B) Branch Circuit Extensions or Modifications — Dwelling Units
- 210.18 Guest Rooms and Guest Suites

II. Branch-Circuit Ratings

- 210.19 Conductors — Minimum Ampacity and Size
- (A) Branch Circuits Not More Than 600 Volts
- (B) Branch Circuits Over 600 Volts
- 210.20 Overcurrent Protection
- (A) Continuous and Noncontinuous Loads
- (B) Conductor Protection
- (C) Equipment
- (D) Outlet Devices
- 210.21 Outlet Devices
- (A) Lampholders
- (B) Receptacles
- 210.23 Permissible Loads
- (A) 15- and 20-Ampere Branch Circuits
- (B) 30-Ampere Branch Circuits
- (C) 40- and 50-Ampere Branch Circuits
- (D) Branch Circuits Larger Than 50 Amperes
- 210.24 Branch-Circuit Requirements — Summary
- 210.25 Branch Circuits in Buildings with More Than One Occupancy
- (A) Dwelling Unit Branch Circuits
- (B) Common Area Branch Circuits

III. Required Outlets

- 210.50 General
- (A) Cord Pendants
- (B) Cord Connections
- (C) Appliance Receptacle Outlets
- 210.52 Dwelling Unit Receptacle Outlets

- (A) General Provisions
- (B) Small Appliances
- (C) Countertops
- (D) Bathrooms
- (E) Outdoor Outlets
- (F) Laundry Areas
- (G) Basements, Garages, and Accessory Buildings
- (H) Hallways
- (I) Foyers
- 210.60 Guest Rooms, Guest Suites, Dormitories, and Similar Occupancies
 - (A) General
 - (B) Receptacle Placement
- 210.62 Show Windows
- 210.63 Heating, Air-Conditioning, and Refrigeration Equipment Outlet
- 210.70 Lighting Outlets Required
 - (A) Dwelling Units
 - (B) Guest Rooms or Guest Suites
 - (C) Other Than Dwelling Units

ARTICLE 215 - Feeders

- 215.1 Scope
- 215.2 Minimum Rating and Size
 - (A) Feeders Not More Than 600 Volts
 - (B) Feeders Over 600 Volts
- 215.3 Overcurrent Protection
- 215.4 Feeders with Common Neutral Conductor
 - (A) Feeders with Common Neutral
 - (B) In Metal Raceway or Enclosure
- 215.5 Diagrams of Feeders
- 215.6 Feeder Equipment Grounding Conductor
- 215.7 Ungrounded Conductors Tapped from Grounded Systems
- 215.9 Ground-Fault Circuit-Interrupter Protection for Personnel
- 215.10 Ground-Fault Protection of Equipment
- 215.11 Circuits Derived from Autotransformers
- 215.12 Identification for Feeders
 - (A) Grounded Conductor
 - (B) Equipment Grounding Conductor
 - (C) Ungrounded Conductors

ARTICLE 220 - Branch-Circuit, Feeder, and Service Calculations

- I. General
 - 220.1 Scope
 - 220.3 Application of Other Articles
 - 220.5 Calculations
 - (A) Voltages
 - (B) Fractions of an Ampere
- II. Branch-Circuit Load Calculations
 - 220.10 General
 - 220.12 Lighting Load for Specified Occupancies
 - 220.14 Other Loads — All Occupancies
 - (A) Specific Appliances or Loads
 - (B) Electric Dryers and Electric Cooking Appliances in Dwelling Units
 - (C) Motor Loads
 - (D) Luminaires
 - (E) Heavy-Duty Lampholders

- (F) Sign and Outline Lighting
- (G) Show Windows
- (H) Fixed Multioutlet Assemblies
- (I) Receptacle Outlets
- (J) Dwelling Occupancies
- (K) Banks and Office Buildings
- (L) Other Outlets

220.16 Loads for Additions to Existing Installations

- (A) Dwelling Units
- (B) Other Than Dwelling Units
- 220.18 Maximum Loads
 - (A) Motor-Operated and Combination Loads
 - (B) Inductive and LED Lighting Loads
 - (C) Range Loads
- III. Feeder and Service Load Calculations
 - 220.40 General
 - 220.42 General Lighting
 - 220.43 Show-Window and Track Lighting
 - (A) Show Windows
 - (B) Track Lighting
 - 220.44 Receptacle Loads — Other Than Dwelling Units
 - 220.50 Motors
 - 220.51 Fixed Electric Space Heating
 - 220.52 Small Appliance and Laundry Loads — Dwelling Unit
 - (A) Small Appliance Circuit Load
 - (B) Laundry Circuit Load
 - 220.53 Appliance Load — Dwelling Unit(s)
 - 220.54 Electric Clothes Dryers — Dwelling Unit(s)
 - 220.55 Electric Ranges and Other Cooking Appliances — Dwelling Unit(s)
 - 220.56 Kitchen Equipment — Other Than Dwelling Unit(s)
 - 220.60 Noncoincident Loads
 - 220.61 Feeder or Service Neutral Load
 - (A) Basic Calculation
 - (B) Permitted Reductions
 - (C) Prohibited Reductions
- IV. Optional Feeder and Service Load Calculations
 - 220.80 General
 - 220.82 Dwelling Unit
 - (A) Feeder and Service Load
 - (B) General Loads
 - (C) Heating and Air-Conditioning Load
 - 220.83 Existing Dwelling Unit
 - (A) Where Additional Air-Conditioning Equipment or Electric Space-Heating Equipment Is Not to Be Installed
 - (B) Where Additional Air-Conditioning Equipment or Electric Space-Heating Equipment Is to Be Installed
 - 220.84 Multifamily Dwelling
 - (A) Feeder or Service Load
 - (B) House Loads
 - (C) Calculated Loads
 - 220.85 Two Dwelling Units
 - 220.86 Schools
 - 220.87 Determining Existing Loads
 - 220.88 New Restaurants
- V. Farm Load Calculations
 - 220.100 General
 - 220.102 Farm Loads — Buildings and Other Loads
 - (A) Dwelling Unit
 - (B) Other Than Dwelling Unit

220.103 Farm Loads — Total

ARTICLE 225 - Outside Branch Circuits and Feeders

225.1 Scope

225.2 Definition

225.3 Other Articles

I. General

225.4 Conductor Covering

225.5 Size of Conductors 600 Volts, Nominal, or Less

225.6 Conductor Size and Support

(A) Overhead Spans

(B) Festoon Lighting

225.7 Lighting Equipment Installed Outdoors

(A) General

(B) Common Neutral

(C) 277 Volts to Ground

(D) 600 Volts Between Conductors

225.8 Calculation of Loads 600 Volts, Nominal, or Less

(A) Branch Circuits

(B) Feeders

225.10 Wiring on Buildings

225.11 Circuit Exits and Entrances

225.12 Open-Conductor Supports

225.14 Open-Conductor Spacings

(A) 600 Volts, Nominal, or Less

(B) Over 600 Volts, Nominal

(C) Separation from Other Circuits

(D) Conductors on Poles

225.15 Supports over Buildings

225.16 Attachment to Buildings

(A) Point of Attachment

(B) Means of Attachment

225.17 Masts as Supports

225.18 Clearance for Overhead Conductors and Cables

225.19 Clearances from Buildings for Conductors of Not Over 600 Volts, Nominal

(A) Above Roofs

(B) From Nonbuilding or Nonbridge Structures

(C) Horizontal Clearances

(D) Final Spans

(E) Zone for Fire Ladders

225.20 Mechanical Protection of Conductors

225.21 Multiconductor Cables on Exterior Surfaces of Buildings

225.22 Raceways on Exterior Surfaces of Buildings or Other Structures

225.24 Outdoor Lampholders

225.25 Location of Outdoor Lamps

225.26 Vegetation as Support

225.27 Raceway Seal

II. Buildings or Other Structures Supplied by a Feeder(s) or Branch Circuit(s)

225.30 Number of Supplies

(A) Special Conditions

(B) Special Occupancies

(C) Capacity Requirements

(D) Different Characteristics

(E) Documented Switching Procedures

225.31 Disconnecting Means

225.32 Location

225.33 Maximum Number of Disconnects

(A) General

(B) Single-Pole Units

225.34 Grouping of Disconnects

(A) General

(B) Additional Disconnecting Means

225.35 Access to Occupants

225.36 Suitable for Service Equipment

225.37 Identification

225.38 Disconnect Construction

(A) Manually or Power Operable

(B) Simultaneous Opening of Poles

(C) Disconnection of Grounded Conductor

(D) Indicating

225.39 Rating of Disconnect

(A) One-Circuit Installation

(B) Two-Circuit Installations

(C) One-Family Dwelling

(D) All Others

225.40 Access to Overcurrent Protective Devices

III. Over 600 Volts

225.50 Sizing of Conductors

225.51 Isolating Switches

225.52 Disconnecting Means

(A) Location

(B) Type

(C) Locking

(D) Indicating

(E) Uniform Position

(F) Identification

225.56 Inspections and Tests

(A) Pre-Energization and Operating Tests

(B) Test Report

225.60 Clearances over Roadways, Walkways, Rail, Water, and Open Land

(A) 22 kV, Nominal, to Ground or Less

(B) Over 22 kV Nominal to Ground

(C) Special Cases

225.61 Clearances over Buildings and Other Structures

(A) 22 kV Nominal to Ground or Less

(B) Over 22 kV Nominal to Ground

225.70 Substations

(A) Warning Signs

ARTICLE 230 - Services

230.1 Scope

I. General

230.2 Number of Services

(A) Special Conditions

(B) Special Occupancies

(C) Capacity Requirements

(D) Different Characteristics

(E) Identification

230.3 One Building or Other Structure Not to Be Supplied Through Another

230.6 Conductors Considered Outside the Building

230.7 Other Conductors in Raceway or Cable

230.8 Raceway Seal

230.9 Clearances on Buildings

(A) Clearances

(B) Vertical Clearance
(C) Building Openings
230.10 Vegetation as Support
II. Overhead Service Conductors
230.22 Insulation or Covering
230.23 Size and Rating
(A) General
(B) Minimum Size
(C) Grounded Conductors
230.24 Clearances
(A) Above Roofs
(B) Vertical Clearance for Overhead Service Conductors
(C) Clearance from Building Openings
(D) Clearance from Swimming Pools
(E) Clearance from Communication Wires and Cables
230.26 Point of Attachment
230.27 Means of Attachment
230.28 Service Masts as Supports
230.29 Supports over Buildings
III. Underground Service Conductors
230.30 Installation
230.31 Size and Rating
(A) General
(B) Minimum Size
(C) Grounded Conductors
230.32 Protection Against Damage
230.33 Spliced Conductors
IV. Service-Entrance Conductors
230.40 Number of Service-Entrance Conductor Sets
230.41 Insulation of Service-Entrance Conductors

230.42 Minimum Size and Rating
(A) General
(B) Specific Installations
(C) Grounded Conductors
230.43 Wiring Methods for 600 Volts, Nominal, or Less
230.44 Cable Trays
230.46 Spliced Conductors
230.50 Protection Against Physical Damage
(A) Underground Service-Entrance Conductors
(B) All Other Service-Entrance Conductors
230.51 Mounting Supports
(A) Service-Entrance Cables
(B) Other Cables
(C) Individual Open Conductors
230.52 Individual Conductors Entering Buildings or Other Structures
230.53 Raceways to Drain
230.54 Overhead Service Locations
(A) Service Head
(B) Service-Entrance Cable Equipped with Service Head or Gooseneck
(C) Service Heads and Goosenecks Above Service-Drop or Overhead Service Attachment
(D) Secured
(E) Separately Bushed Openings
(F) Drip Loops
(G) Arranged That Water Will Not Enter Service Raceway or Equipment
230.56 Service Conductor with the Higher Voltage to Ground
V. Service Equipment — General
230.62 Service Equipment — Enclosed or Guarded

(A) Enclosed
(B) Guarded
230.66 Marking
VI. Service Equipment — Disconnecting Means
230.70 General
(A) Location
(B) Marking
(C) Suitable for Use
230.71 Maximum Number of Disconnects
(A) General
(B) Single-Pole Units
230.72 Grouping of Disconnects
(A) General
(B) Additional Service Disconnecting Means
(C) Access to Occupants
230.74 Simultaneous Opening of Poles
230.75 Disconnection of Grounded Conductor
230.76 Manually or Power Operable

230.77 Indicating
230.79 Rating of Service Disconnecting Means
(A) One-Circuit Installations
(B) Two-Circuit Installations
(C) One-Family Dwellings
(D) All Others
230.80 Combined Rating of Disconnects
230.81 Connection to Terminals
230.82 Equipment Connected to the Supply Side of Service Disconnect
VII. Service Equipment — Overcurrent Protection
230.90 Where Required
(A) Ungrounded Conductor
(B) Not in Grounded Conductor
230.91 Location
230.92 Locked Service Overcurrent Devices
230.93 Protection of Specific Circuits
230.94 Relative Location of Overcurrent Device and Other Service Equipment
230.95 Ground-Fault Protection of Equipment
(A) Setting
(B) Fuses
(C) Performance Testing
VIII. Services Exceeding 600 Volts, Nominal
230.200 General
230.202 Service-Entrance Conductors
(A) Conductor Size
(B) Wiring Methods
230.204 Isolating Switches
(A) Where Required
(B) Fuses as Isolating Switch
(C) Accessible to Qualified Persons Only
(D) Connection to Ground
230.205 Disconnecting Means
(A) Location
(B) Type
(C) Remote Control
230.206 Overcurrent Devices as Disconnecting Means
230.208 Protection Requirements
(A) Equipment Type
(B) Enclosed Overcurrent Devices
230.209 Surge Arresters (Lightning Arresters)
230.210 Service Equipment — General Provisions

230.211 Metal-Enclosed Switchgear
230.212 Over 35,000 Volts

ARTICLE 240 - Overcurrent Protection

I. General

240.1 Scope
240.2 Definitions
240.3 Other Articles
240.4 Protection of Conductors
(A) Power Loss Hazard
(B) Overcurrent Devices Rated 800 Amperes or Less
(C) Overcurrent Devices Rated over 800 Amperes
(D) Small Conductors
(E) Tap Conductors
(F) Transformer Secondary Conductors
(G) Overcurrent Protection for Specific Conductor Applications
240.5 Protection of Flexible Cords, Flexible Cables, and Fixture Wires
(A) Ampacities
(B) Branch-Circuit Overcurrent Device
240.6 Standard Ampere Ratings
(A) Fuses and Fixed-Trip Circuit Breakers
(B) Adjustable-Trip Circuit Breakers
(C) Restricted Access Adjustable-Trip Circuit Breakers
240.8 Fuses or Circuit Breakers in Parallel
240.9 Thermal Devices
240.10 Supplementary Overcurrent Protection
240.12 Electrical System Coordination
240.13 Ground-Fault Protection of Equipment
240.15 Ungrounded Conductors
(A) Overcurrent Device Required
(B) Circuit Breaker as Overcurrent Device
(C) Closed-Loop Power Distribution Systems

II. Location

240.21 Location in Circuit
(A) Branch-Circuit Conductors
(B) Feeder Taps
(C) Transformer Secondary Conductors
(D) Service Conductors
(E) Busway Taps
(F) Motor Circuit Taps
(G) Conductors from Generator Terminals
(H) Battery Conductors
240.22 Grounded Conductor
240.23 Change in Size of Grounded Conductor
240.24 Location in or on Premises
(A) Accessibility
(B) Occupancy
(C) Not Exposed to Physical Damage
(D) Not in Vicinity of Easily Ignitable Material
(E) Not Located in Bathrooms
(F) Not Located over Steps

III. Enclosures

240.30 General
(A) Protection from Physical Damage
(B) Operating Handle
240.32 Damp or Wet Locations
240.33 Vertical Position
IV. Disconnecting and Guarding

240.40 Disconnecting Means for Fuses

240.41 Arcing or Suddenly Moving Parts

(A) Location
(B) Suddenly Moving Parts
V. Plug Fuses, Fuseholders, and Adapters

240.50 General

(A) Maximum Voltage
(B) Marking
(C) Hexagonal Configuration
(D) No Energized Parts
(E) Screw Shell

240.51 Edison-Base Fuses

(A) Classification
(B) Replacement Only
240.52 Edison-Base Fuseholders

240.53 Type S Fuses

(A) Classification
(B) Noninterchangeable

240.54 Type S Fuses, Adapters, and Fuseholders

(A) To Fit Edison-Base Fuseholders
(B) To Fit Type S Fuses Only
(C) Nonremovable
(D) Nontamperable
(E) Interchangeability

VI. Cartridge Fuses and Fuseholders

240.60. General

(A) Maximum Voltage — 300-Volt Type
(B) Noninterchangeable — 0–6000-Ampere Cartridge Fuseholders

(C) Marking

(D) Renewable Fuses

240.61 Classification

VII. Circuit Breakers

240.80 Method of Operation

240.81 Indicating

240.82 Nontamperable

240.83 Marking

(A) Durable and Visible

(B) Location

(C) Interrupting Rating

(D) Used as Switches

(E) Voltage Marking

240.85 Applications

240.86 Series Ratings

(A) Selected Under Engineering Supervision in Existing Installations

(B) Tested Combinations

(C) Motor Contribution

240.87 Non-Instantaneous Trip

VIII. Supervised Industrial Installations

240.90 General

240.91 Protection of Conductors

(A) General

(B) Devices Rated Over 800 Amperes

240.92 Location in Circuit

(A) Feeder and Branch-Circuit Conductors

(B) Feeder Taps

(C) Transformer Secondary Conductors of Separately Derived Systems

(D) Outside Feeder Taps

- (E) Protection by Primary Overcurrent Device
- IX. Overcurrent Protection Over 600 Volts, Nominal
- 240.100 Feeders and Branch Circuits
 - (A) Location and Type of Protection
 - (B) Protective Devices
 - (C) Conductor Protection
- 240.101 Additional Requirements for Feeders
 - (A) Rating or Setting of Overcurrent Protective Devices
 - (B) Feeder Taps

ARTICLE 250 - Grounding and Bonding

I. General

- 250.1 Scope
- 250.2 Definitions
- 250.3 Application of Other Articles
- 250.4 General Requirements for Grounding and Bonding
 - (A) Grounded Systems
 - (B) Ungrounded Systems
- 250.6 Objectionable Current
 - (A) Arrangement to Prevent Objectionable Current
 - (B) Alterations to Stop Objectionable Current
 - (C) Temporary Currents Not Classified as Objectionable Currents
 - (D) Limitations to Permissible Alterations
 - (E) Isolation of Objectionable Direct-Current Ground Currents
- 250.8 Connection of Grounding and Bonding Equipment
 - (A) Permitted Methods
 - (B) Methods Not Permitted
- 250.10 Protection of Ground Clamps and Fittings
- 250.12 Clean Surfaces

II. System Grounding

- 250.20 Alternating-Current Systems to Be Grounded
 - (A) Alternating-Current Systems of Less Than 50 Volts
 - (B) Alternating-Current Systems of 50 Volts to 1000 Volts
 - (C) Alternating-Current Systems of 1 kV and Over
 - (D) Impedance Grounded Neutral Systems
- 250.21 Alternating-Current Systems of 50 Volts to Less Than 1000 Volts Not Required to Be Grounded
 - (A) General
 - (B) Ground Detectors
 - (C) Marking
- 250.22 Circuits Not to Be Grounded
- 250.24 Grounding Service-Supplied Alternating-Current Systems
 - (A) System Grounding Connections
 - (B) Main Bonding Jumper
 - (C) Grounded Conductor Brought to Service Equipment
 - (D) Grounding Electrode Conductor
 - (E) Ungrounded System Grounding Connections
- 250.26 Conductor to Be Grounded — Alternating-Current Systems
- 250.28 Main Bonding Jumper and System Bonding Jumper
 - (A) Material
 - (B) Construction
 - (C) Attachment
 - (D) Size
- 250.30 Grounding Separately Derived Alternating-Current Systems
 - (A) Grounded Systems
 - (B) Ungrounded Systems

- (C) Outdoor Source
- 250.32 Buildings or Structures Supplied by a Feeder(s) or Branch Circuit(s)
 - (A) Grounding Electrode
 - (B) Grounded Systems
 - (C) Ungrounded Systems
 - (D) Disconnecting Means Located in Separate Building or Structure on the Same Premises
 - (E) Grounding Electrode Conductor
- 250.34 Portable and Vehicle-Mounted Generators
 - (A) Portable Generators
 - (B) Vehicle-Mounted Generators
 - (C) Grounded Conductor Bonding
- 250.35 Permanently Installed Generators
 - (A) Separately Derived System
 - (B) Nonseparately Derived System
- 250.36 High-Impedance Grounded Neutral Systems
 - (A) Grounding Impedance Location
 - (B) Grounded System Conductor
 - (C) System Grounding Connection
 - (D) Neutral Point to Grounding Impedance Conductor Routing
 - (E) Equipment Bonding Jumper
 - (F) Grounding Electrode Conductor Location
 - (G) Equipment Bonding Jumper Size
- III. Grounding Electrode System and Grounding Electrode Conductor
- 250.50 Grounding Electrode System
- 250.52 Grounding Electrodes
 - (A) Electrodes Permitted for Grounding
 - (B) Not Permitted for Use as Grounding Electrodes
- 250.53 Grounding Electrode System Installation
 - (A) Rod, Pipe, and Plate Electrodes
 - (B) Electrode Spacing
 - (C) Bonding Jumper
 - (D) Metal Underground Water Pipe
 - (E) Supplemental Electrode Bonding Connection Size
 - (F) Ground Ring
 - (G) Rod and Pipe Electrodes
 - (H) Plate Electrode
- 250.54 Auxiliary Grounding Electrodes
- 250.58 Common Grounding Electrode
- 250.60 Use of Strike Termination Devices
- 250.62 Grounding Electrode Conductor Material
- 250.64 Grounding Electrode Conductor Installation
 - (A) Aluminum or Copper-Clad Aluminum Conductors
 - (B) Securing and Protection from Physical Damage
 - (C) Continuous
 - (D) Service with Multiple Disconnecting Means Enclosures
 - (E) Enclosures for Grounding Electrode Conductors
 - (F) Installation to Electrode(s)
- 250.66 Size of Alternating-Current Grounding Electrode Conductor
 - (A) Connections to Rod, Pipe, or Plate Electrodes
 - (B) Connections to Concrete-Encased Electrodes
 - (C) Connections to Ground Rings
- 250.68 Grounding Electrode Conductor and Bonding Jumper Connection to Grounding Electrodes
 - (A) Accessibility
 - (B) Effective Grounding Path
 - (C) Metallic Water Pipe and Structural Metal

250.70 Methods of Grounding and Bonding Conductor Connection to Electrodes

IV. Enclosure, Raceway, and Service Cable Connections

250.80 Service Raceways and Enclosures

250.84 Underground Service Cable or Raceway

(A) Underground Service Cable

(B) Underground Service Raceway Containing Cable

250.86 Other Conductor Enclosures and Raceways

V. Bonding

250.90 General

250.92 Services

(A) Bonding of Equipment for Services

(B) Method of Bonding at the Service

250.94 Bonding for Other Systems

250.96 Bonding Other Enclosures

(A) General

(B) Isolated Grounding Circuits

250.97 Bonding for Over 250 Volts

250.98 Bonding Loosely Jointed Metal Raceways

250.100 Bonding in Hazardous (Classified) Locations

250.102 Bonding Conductors and Jumpers

(A) Material

(B) Attachment

(C) Size — Supply-Side Bonding Jumper

(D) Size — Equipment Bonding Jumper on Load Side of an Overcurrent Device

(E) Installation

250.104 Bonding of Piping Systems and Exposed Structural Steel

(A) Metal Water Piping

(B) Other Metal Piping

(C) Structural Metal

(D) Separately Derived Systems

250.106 Lightning Protection Systems

VI. Equipment Grounding and Equipment Grounding Conductors

250.110 Equipment Fastened in Place (Fixed) or Connected by Permanent Wiring Methods

250.112 Specific Equipment Fastened in Place (Fixed) or Connected by Permanent Wiring Methods

(A) Switchboard Frames and Structures

(B) Pipe Organs

(C) Motor Frames

(D) Enclosures for Motor Controllers

(E) Elevators and Cranes

(F) Garages, Theaters, and Motion Picture Studios

(G) Electric Signs

(H) Motion Picture Projection Equipment

(I) Remote-Control, Signaling, and Fire Alarm Circuits

(J) Luminaires

(K) Skid-Mounted Equipment

(L) Motor-Operated Water Pumps

(M) Metal Well Casings

250.114 Equipment Connected by Cord and Plug

250.116 Nonelectrical Equipment

250.118 Types of Equipment Grounding Conductors

250.119 Identification of Equipment Grounding Conductors

(A) Conductors Larger Than 6 AWG

(B) Multiconductor Cable

(C) Flexible Cord

250.120 Equipment Grounding Conductor Installation

(A) Raceway, Cable Trays, Cable Armor, Cablebus, or Cable Sheaths

(B) Aluminum and Copper-Clad Aluminum Conductors

(C) Equipment Grounding Conductors Smaller Than 6 AWG

250.121 Use of Equipment Grounding Conductors

250.122 Size of Equipment Grounding Conductors

(A) General

(B) Increased in Size

(C) Multiple Circuits

(D) Motor Circuits

(E) Flexible Cord and Fixture Wire

(F) Conductors in Parallel

(G) Feeder Taps

250.124 Equipment Grounding Conductor Continuity

(A) Separable Connections

(B) Switches

250.126 Identification of Wiring Device Terminals

VII. Methods of Equipment Grounding

250.130 Equipment Grounding Conductor Connections

(A) For Grounded Systems

(B) For Ungrounded Systems

(C) Nongrounding Receptacle Replacement or Branch Circuit Extensions

250.132 Short Sections of Raceway

250.134 Equipment Fastened in Place or Connected by Permanent Wiring Methods (Fixed) — Grounding

(A) Equipment Grounding Conductor Types

(B) With Circuit Conductors

250.136 Equipment Considered Grounded

(A) Equipment Secured to Grounded Metal Supports

(B) Metal Car Frames

250.138 Cord-and-Plug-Connected Equipment

(A) By Means of an Equipment Grounding Conductor

(B) By Means of a Separate Flexible Wire or Strap

250.140 Frames of Ranges and Clothes Dryers

250.142 Use of Grounded Circuit Conductor for Grounding Equipment

(A) Supply-Side Equipment

(B) Load-Side Equipment

250.144 Multiple Circuit Connections

250.146 Connecting Receptacle Grounding Terminal to Box

(A) Surface-Mounted Box

(B) Contact Devices or Yokes

(C) Floor Boxes

(D) Isolated Receptacles

250.148 Continuity and Attachment of Equipment Grounding Conductors to Boxes

(A) Connections

(B) Grounding Continuity

(C) Metal Boxes

(D) Nonmetallic Boxes

(E) Solder

VIII. Direct-Current Systems

250.160 General

250.162 Direct-Current Circuits and Systems to Be Grounded

(A) Two-Wire, Direct-Current Systems

(B) Three-Wire, Direct-Current Systems

250.164 Point of Connection for Direct-Current Systems

(A) Off-Premises Source

(B) On-Premises Source

250.166 Size of Direct-Current Grounding Electrode Conductor

- (A) Not Smaller Than the Neutral Conductor
- (B) Not Smaller Than the Largest Conductor
- (C) Connected to Rod, Pipe, or Plate Electrodes
- (D) Connected to a Concrete-Encased Electrode
- (E) Connected to a Ground Ring

250.168 Direct-Current System Bonding Jumper

250.169 Ungrounded Direct-Current Separately Derived Systems Instruments, Meters, and Relays

250.170 Instrument Transformer Circuits

250.172 Instrument Transformer Cases

250.174 Cases of Instruments, Meters, and Relays Operating at Less Than 1000 Volts

- (A) Not on Switchboards
- (B) On Dead-Front Switchboards
- (C) On Live-Front Switchboards

250.176 Cases of Instruments, Meters, and Relays — Operating Voltage 1 kV and Over

250.178 Instrument Equipment Grounding Conductor

Grounding of Systems and Circuits of Over 1 kV

250.180 General

250.182 Derived Neutral Systems

250.184 Solidly Grounded Neutral Systems

- (A) Neutral Conductor
- (B) Single-Point Grounded Neutral System
- (C) Multigrounded Neutral Systems

250.186 Impedance Grounded Neutral Systems

- (A) Location
- (B) Identified and Insulated
- (C) System Neutral Conductor Connection
- (D) Equipment Grounding Conductors

250.188 Grounding of Systems Supplying Portable or Mobile Equipment

- (A) Portable or Mobile Equipment
- (B) Exposed Non-Current-Carrying Metal Parts
- (C) Ground-Fault Current
- (D) Ground-Fault Detection and Relaying
- (E) Isolation
- (F) Trailing Cable and Couplers

250.190 Grounding of Equipment

- (A) Equipment Grounding
- (B) Grounding Electrode Conductor
- (C) Equipment Grounding Conductor

250.191 Grounding System at Alternating-Current Substations

ARTICLE 280 - Surge Arresters, Over 1 kV

I. General

280.1 Scope

280.2 Uses Not Permitted

280.3 Number Required

280.4 Surge Arrester Selection

- (A) Rating
- (B) Silicon Carbide Types

II. Installation

280.11 Location

280.12 Routing of Surge Arrester Grounding Conductors

III. Connecting Surge Arresters

280.21 Connection

280.23 Surge-Arrester Conductors

280.24 Interconnections

- (A) Metallic Interconnections
- (B) Through Spark Gap or Device
- (C) By Special Permission

280.25 Grounding Electrode Conductor Connections and Enclosures

ARTICLE 285 - Surge-Protective Devices (SPDs), 1 kV or Less

I. General

285.1 Scope

285.3 Uses Not Permitted

285.4 Number Required

285.5 Listing

285.6 Short-Circuit Current Rating

II. Installation

285.11 Location

285.12 Routing of Connections

III. Connecting SPDs

285.21 Connection

285.23 Type 1 SPDs (Surge Arresters)

- (A) Installation
- (B) At the Service

285.24 Type 2 SPDs (TVSSs)

- (A) Service-Supplied Building or Structure
- (B) Feeder-Supplied Building or Structure
- (C) Separately Derived System

285.25 Type 3 SPDs

285.26 Conductor Size

285.27 Connection Between Conductors

285.28 Grounding Electrode Conductor Connections and Enclosures

ARTICLE 300 - Wiring Methods

I. General Requirements

300.1 Scope

- (A) All Wiring Installations
- (B) Integral Parts of Equipment
- (C) Metric Designators and Trade Sizes

300.2 Limitations

- (A) Voltage
- (B) Temperature

300.3 Conductors

- (A) Single Conductors
- (B) Conductors of the Same Circuit
- (C) Conductors of Different Systems

300.4 Protection Against Physical Damage

- (A) Cables and Raceways Through Wood Members
- (B) Nonmetallic-Sheathed Cables and Electrical Nonmetallic Tubing Through Metal Framing Members
- (C) Cables Through Spaces Behind Panels Designed to Allow Access
- (D) Cables and Raceways Parallel to Framing Members and Furring Strips
- (E) Cables, Raceways, or Boxes Installed in or Under Roof Decking
- (F) Cables and Raceways Installed in Shallow Grooves

- (G) Insulated Fittings
- (H) Structural Joints

300.5 Underground Installations

- (A) Minimum Cover Requirements
- (B) Wet Locations

- (C) Underground Cables Under Buildings
- (D) Protection from Damage
- (E) Splices and Taps
- (F) Backfill
- (G) Raceway Seals
- (H) Bushing

- (I) Conductors of the Same Circuit
- (J) Earth Movement
- (K) Directional Boring
- 300.6** Protection Against Corrosion and Deterioration
 - (A) Ferrous Metal Equipment
 - (B) Aluminum Metal Equipment
 - (C) Nonmetallic Equipment
 - (D) Indoor Wet Locations
- 300.7** Raceways Exposed to Different Temperatures
 - (A) Sealing
 - (B) Expansion Fittings
- 300.8** Installation of Conductors with Other Systems
- 300.9** Raceways in Wet Locations Abovegrade
- 300.10** Electrical Continuity of Metal Raceways and Enclosures
- 300.11** Securing and Supporting
 - (A) Secured in Place
 - (B) Raceways Used as Means of Support
 - (C) Cables Not Used as Means of Support
- 300.12** Mechanical Continuity — Raceways and Cables
- 300.13** Mechanical and Electrical Continuity — Conductors
 - (A) General
 - (B) Device Removal
- 300.14** Length of Free Conductors at Outlets, Junctions, and Switch Points
- 300.15** Boxes, Conduit Bodies, or Fittings — Where Required
 - (A) Wiring Methods with Interior Access
 - (B) Equipment
 - (C) Protection
 - (D) Type MI Cable
 - (E) Integral Enclosure
 - (F) Fitting
 - (G) Direct-Buried Conductors
 - (H) Insulated Devices
 - (I) Enclosures
 - (J) Luminaires
 - (K) Embedded
 - (L) Manholes and Handhole Enclosures
- 300.16** Raceway or Cable to Open or Concealed Wiring
 - (A) Box, Conduit Body, or Fitting
 - (B) Bushing
- 300.17** Number and Size of Conductors in Raceway
- 300.18** Raceway Installations
 - (A) Complete Runs
 - (B) Welding
- 300.19** Supporting Conductors in Vertical Raceways
 - (A) Spacing Intervals — Maximum
 - (B) Fire-Rated Cables and Conductors
 - (C) Support Methods
- 300.20** Induced Currents in Ferrous Metal Enclosures or Ferrous Metal Raceways
 - (A) Conductors Grouped Together
 - (B) Individual Conductors
- 300.21** Spread of Fire or Products of Combustion

- 300.22** Wiring in Ducts Not Used for Air Handling, Fabricated Ducts for Environmental Air, and Other Spaces for Environmental Air (Plenums)
 - (A) Ducts for Dust, Loose Stock, or Vapor Removal
 - (B) Ducts Specifically Fabricated for Environmental Air
 - (C) Other Spaces Used for Environmental Air (Plenums)
 - (D) Information Technology Equipment
- 300.23** Panels Designed to Allow Access
 - II. Requirements for Over 600 Volts, Nominal
- 300.31** Covers Required
- 300.32** Conductors of Different Systems
- 300.34** Conductor Bending Radius
- 300.35** Protection Against Induction Heating
- 300.37** Aboveground Wiring Methods
- 300.39** Braid-Covered Insulated Conductors — Exposed Installation
- 300.40** Insulation Shielding
- 300.42** Moisture or Mechanical Protection for Metal-Sheathed Cables
- 300.50** Underground Installations
 - (A) General
 - (B) Wet Locations
 - (C) Protection from Damage
 - (D) Splices
 - (E) Backfill
 - (F) Raceway Seal

ARTICLE 310 - Conductors for General Wiring

- I. General
 - 310.1** Scope
 - 310.2** Definitions
- II. Installation
 - 310.10** Uses Permitted
 - (A) Dry Locations
 - (B) Dry and Damp Locations
 - (C) Wet Locations
 - (D) Locations Exposed to Direct Sunlight
 - (E) Shielding
 - (F) Direct-Burial Conductors
 - (G) Corrosive Conditions
 - (H) Conductors in Parallel
 - 310.15** Ampacities for Conductors Rated 0–2000 Volts
 - (A) General
 - (B) Tables
 - (C) Engineering Supervision
 - 310.60** Conductors Rated 2001 to 35,000 Volts
 - (A) Definitions
 - (B) Ampacities of Conductors Rated 2001 to 35,000 Volts
 - (C) Tables
 - (D) Engineering Supervision
- III. Construction Specifications
 - 310.104** Conductor Constructions and Applications
 - 310.106** Conductors
 - (A) Minimum Size of Conductors
 - (B) Conductor Material
 - (C) Stranded Conductors
 - (D) Insulated
 - 310.110** Conductor Identification
 - (A) Grounded Conductors
 - (B) Equipment Grounding Conductors

- (C) Ungrounded Conductors
- 310.120 Marking
- (A) Required Information
- (B) Method of Marking
- (C) Suffixes to Designate Number of Conductors
- (D) Optional Markings

ARTICLE 312 - Cabinets, Cutout Boxes, and Meter Socket Enclosures

- 312.1 Scope
- I. Installation
- 312.2 Damp and Wet Locations
- 312.3 Position in Wall
- 312.4 Repairing Noncombustible Surfaces
- 312.5 Cabinets, Cutout Boxes, and Meter Socket Enclosures
 - (A) Openings to Be Closed
 - (B) Metal Cabinets, Cutout Boxes, and Meter Socket Enclosures
 - (C) Cables
- 312.6 Deflection of Conductors
 - (A) Width of Wiring Gutters
 - (B) Wire-Bending Space at Terminals
 - (C) Conductors 4 AWG or Larger
- 312.7 Space in Enclosures
- 312.8 Switch and Overcurrent Device Enclosures with Splices, Taps and Feed-Through Conductors
- 312.9 Side or Back Wiring Spaces or Gutters
- II. Construction Specifications
- 312.10 Material
 - (A) Metal Cabinets and Cutout Boxes
 - (B) Strength
 - (C) Nonmetallic Cabinets
- 312.11 Spacing
 - (A) General
 - (B) Switch Clearance
 - (C) Wiring Space
 - (D) Wiring Space — Enclosure

ARTICLE 314 - Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings; and Handhole Enclosures

- I. Scope and General
- 314.1 Scope
- 314.2 Round Boxes
- 314.3 Nonmetallic Boxes
- 314.4 Metal Boxes
- II. Installation
- 314.15 Damp or Wet Locations
- 314.16 Number of Conductors in Outlet, Device, and Junction Boxes, and Conduit Bodies
 - (A) Box Volume Calculations
 - (B) Box Fill Calculations
 - (C) Conduit Bodies
- 314.17 Conductors Entering Boxes, Conduit Bodies, or Fittings
 - (A) Openings to Be Closed
 - (B) Metal Boxes and Conduit Bodies
 - (C) Nonmetallic Boxes and Conduit Bodies
 - (D) Conductors 4 AWG or Larger
- 314.19 Boxes Enclosing Flush Devices

- 314.20 In Wall or Ceiling
- 314.21 Repairing Noncombustible Surfaces
- 314.22 Surface Extensions
- 314.23 Supports
 - (A) Surface Mounting
 - (B) Structural Mounting
 - (C) Mounting in Finished Surfaces
 - (D) Suspended Ceilings
 - (E) Raceway-Supported Enclosures, Without Devices, Luminaires, or Lampholders
 - (F) Raceway-Supported Enclosures, with Devices, Luminaires, or Lampholders
 - (G) Enclosures in Concrete or Masonry
 - (H) Pendant Boxes
- 314.24 Depth of Boxes
 - (A) Outlet Boxes Without Enclosed Devices or Utilization Equipment
 - (B) Outlet and Device Boxes with Enclosed Devices or Utilization Equipment
- 314.25 Covers and Canopies
 - (A) Nonmetallic or Metal Covers and Plates
 - (B) Exposed Combustible Wall or Ceiling Finish
 - (C) Flexible Cord Pendants
- 314.27 Outlet Boxes
 - (A) Boxes at Luminaire or Lampholder Outlets
 - (B) Floor Boxes
 - (C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets
 - (D) Utilization Equipment
- 314.28 Pull and Junction Boxes and Conduit Bodies
 - (A) Minimum Size
 - (B) Conductors in Pull or Junction Boxes
 - (C) Covers
 - (D) Permanent Barriers
 - (E) Power Distribution Block
- 314.29 Boxes, Conduit Bodies, and Handhole Enclosures to Be Accessible
- 314.30 Handhole Enclosures
 - (A) Size
 - (B) Wiring Entries
 - (C) Enclosed Wiring
 - (D) Covers
- III. Construction Specifications
- 314.40 Metal Boxes, Conduit Bodies, and Fittings
 - (A) Corrosion Resistant
 - (B) Thickness of Metal
 - (C) Metal Boxes Over 1650 cm³ (100 in.³)
 - (D) Grounding Provisions
- 314.41 Covers
- 314.42 Bushings
- 314.43 Nonmetallic Boxes
- 314.44 Marking
- IV. Pull and Junction Boxes, Conduit Bodies, and Handhole Enclosures for Use on Systems over 600 Volts, Nominal
- 314.70 General
 - (A) Pull and Junction Boxes
 - (B) Conduit Bodies
 - (C) Handhole Enclosures
- 314.71 Size of Pull and Junction Boxes, Conduit Bodies, and Handhole Enclosures
 - (A) For Straight Pulls
 - (B) For Angle or U Pulls
 - (C) Removable Sides

314.72 Construction and Installation Requirements

- (A) Corrosion Protection
- (B) Passing Through Partitions
- (C) Complete Enclosure
- (D) Wiring Is Accessible
- (E) Suitable Covers
- (F) Suitable for Expected Handling

ARTICLE 320 - Armored Cable: Type AC

I. General

320.1 Scope

320.2 Definition

II. Installation

320.10 Uses Permitted

320.12 Uses Not Permitted

320.15 Exposed Work

320.17 Through or Parallel to Framing Members

320.23 In Accessible Attics

(A) Cables Run Across the Top of Floor Joists

(B) Cable Installed Parallel to Framing Members

320.24 Bending Radius

320.30 Securing and Supporting

(A) General

(B) Securing

(C) Supporting

(D) Unsupported Cables

320.40 Boxes and Fittings

320.80 Ampacity

(A) Thermal Insulation

(B) Cable Tray

III. Construction Specifications

320.100 Construction

320.104 Conductors

320.108 Equipment Grounding Conductor

320.120 Marking

ARTICLE 322 - Flat Cable Assemblies: Type FC

I. General

322.1 Scope

322.2 Definition

II. Installation

322.10 Uses Permitted

322.12 Uses Not Permitted

322.30 Securing and Supporting

322.40 Boxes and Fittings

(A) Dead Ends

(B) Luminaire Hangers

(C) Fittings

(D) Extensions

322.56 Splices and Taps

(A) Splices

(B) Taps

III. Construction

322.100 Construction

322.104 Conductors

322.112 Insulation

322.120 Marking

(A) Temperature Rating

(B) Identification of Grounded Conductor

(C) Terminal Block Identification

ARTICLE 324 - Flat Conductor Cable: Type FCC

I. General

324.1 Scope

324.2 Definitions

324.6 Listing Requirements

II. Installation

324.10 Uses Permitted

(A) Branch Circuits

(B) Branch-Circuit Ratings

(C) Floors

(D) Walls

(E) Damp Locations

(F) Heated Floors

(G) System Height

324.12 Uses Not Permitted

324.18 Crossings

324.30 Securing and Supporting

324.40 Boxes and Fittings

(A) Cable Connections and Insulating Ends

(B) Polarization of Connections

(C) Shields

(D) Connection to Other Systems

(E) Metal-Shield Connectors

324.41 Floor Coverings

324.42 Devices

(A) Receptacles

(B) Receptacles and Housings

324.56 Splices and Taps

(A) FCC Systems Alterations

(B) Transition Assemblies

324.60 Grounding

III. Construction

324.100 Construction

(A) Type FCC Cable

(B) Shields

324.101 Corrosion Resistance

324.112 Insulation

324.120 Markings

(A) Cable Marking

(B) Conductor Identification

ARTICLE 326 - Integrated Gas Spacer Cable: Type IGS

I. General

326.1 Scope

326.2 Definition

II. Installation

326.10 Uses Permitted

326.12 Uses Not Permitted

326.24 Bending Radius

326.26 Bends

326.40 Fittings

326.80 Ampacity

III. Construction Specifications

326.104 Conductors

326.112 Insulation

326.116 Conduit

326.120 Marking

ARTICLE 328 - Medium Voltage

Cable: Type MV

I. General

328.1 Scope

328.2 Definition

II. Installation

328.10 Uses Permitted

328.12 Uses Not Permitted

328.14 Installation

328.80 Ampacity

III. Construction Specifications

328.100 Construction

ARTICLE 330 - Metal-Clad Cable: Type MC

I. General

330.1 Scope

330.2 Definition

II. Installation

330.10 Uses Permitted

(A) General Uses

(B) Specific Uses

330.12 Uses Not Permitted

330.17 Through or Parallel to Framing Members

330.23 In Accessible Attics

330.24 Bending Radius

(A) Smooth Sheath

(B) Interlocked-Type Armor or Corrugated Sheath

(C) Shielded Conductors

330.30 Securing and Supporting

(A) General

(B) Securing

(C) Supporting

(D) Unsupported Cables

330.31 Single Conductors

330.40 Boxes and Fittings

330.80 Ampacity

(A) Type MC Cable Installed in Cable Tray

(B) Single Type MC Conductors Grouped Together

III. Construction Specifications

330.104 Conductors

330.108 Equipment Grounding Conductor

330.112 Insulation

(A) 600 Volts

(B) Over 600 Volts

330.116 Sheath

ARTICLE 332 - Mineral-Insulated, Metal-Sheathed Cable: Type MI

I. General

332.1 Scope

332.2 Definition

II. Installation

332.10 Uses Permitted

332.12 Uses Not Permitted

332.17 Through or Parallel to Framing Members

332.24 Bending Radius

332.30 Securing and Supporting

(A) Horizontal Runs Through Holes and Notches

(B) Unsupported Cable

(C) Cable Trays

332.31 Single Conductors

332.40 Boxes and Fittings

(A) Fittings

(B) Terminal Seals

332.80 Ampacity

(A) Type MI Cable Installed in Cable Tray

(B) Single Type MI Conductors Grouped Together

III. Construction Specifications

332.104 Conductors

332.108 Equipment Grounding Conductor

332.112 Insulation

332.116 Sheath

ARTICLE 334 - Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS

I. General

334.1 Scope

334.2 Definitions

334.6 Listed

II. Installation

334.10 Uses Permitted

(A) Type NM

(B) Type NMC

(C) Type NMS

334.12 Uses Not Permitted

(A) Types NM, NMC, and NMS

(B) Types NM and NMS

334.15 Exposed Work

(A) To Follow Surface

(B) Protection from Physical Damage

(C) In Unfinished Basements and Crawl Spaces

334.17 Through or Parallel to Framing Members

334.23 In Accessible Attics

334.24 Bending Radius

334.30 Securing and Supporting

(A) Horizontal Runs Through Holes and Notches

(B) Unsupported Cables

(C) Wiring Device Without a Separate Outlet Box

334.40 Boxes and Fittings

(A) Boxes of Insulating Material

(B) Devices of Insulating Material

(C) Devices with Integral Enclosures

334.80 Ampacity

III. Construction Specifications

334.100 Construction

334.104 Conductors

334.108 Equipment Grounding Conductor

334.112 Insulation

334.116 Sheath

(A) Type NM

(B) Type NMC

(C) Type NMS

ARTICLE 336 - Power and Control Tray Cable: Type TC

I. General

336.1 Scope

336.2 Definition

II. Installation

336.10 Uses Permitted

336.12 Uses Not Permitted

336.24 Bending Radius

- 336.80 Ampacity
- III. Construction Specifications
- 336.100 Construction
- 336.104 Conductors
- (A) Fire Alarm Systems
- (B) Thermocouple Circuits
- (C) Class 1 Circuit Conductors
- 336.116 Jacket
- 336.120 Marking

ARTICLE 338 - Service-Entrance Cable: Types SE and USE

- I. General
- 338.1 Scope
- 338.2 Definitions
- II. Installation
- 338.10 Uses Permitted
- (A) Service-Entrance Conductors
- (B) Branch Circuits or Feeders
- 338.12 Uses Not Permitted
- (A) Service-Entrance Cable
- (B) Underground Service-Entrance Cable
- 338.24 Bending Radius
- III. Construction
- 338.100 Construction

ARTICLE 340 - Underground Feeder and Branch-Circuit Cable: Type UF

- I. General
- 340.1 Scope
- 340.2 Definition
- 340.6 Listing Requirements
- II. Installation
- 340.10 Uses Permitted
- 340.12 Uses Not Permitted
- 340.24 Bending Radius
- 340.80 Ampacity
- III. Construction Specifications
- 340.104 Conductors
- 340.108 Equipment Grounding Conductor
- 340.112 Insulation
- 340.116 Sheath

ARTICLE 342 - Intermediate Metal Conduit: Type IMC

- I. General
- 342.1 Scope
- 342.2 Definition
- 342.6 Listing Requirements
- II. Installation
- 342.10 Uses Permitted
- (A) All Atmospheric Conditions and Occupancies
- (B) Corrosion Environments
- (C) Cinder Fill
- (D) Wet Locations
- 342.14 Dissimilar Metals
- 342.20 Size
- (A) Minimum
- (B) Maximum
- 342.22 Number of Conductors
- 342.24 Bends — How Made
- 342.26 Bends — Number in One Run

- 342.28 Reaming and Threading
- 342.30 Securing and Supporting
- (A) Securely Fastened
- (B) Supports
- 342.42 Couplings and Connectors
- (A) Threadless
- (B) Running Threads
- 342.46 Bushings
- 342.56 Splices and Taps
- 342.60 Grounding
- III. Construction Specifications
- 342.120 Marking
- 342.130 Standard Lengths

ARTICLE 344 - Rigid Metal Conduit: Type RMC

- I. General
- 344.1 Scope
- 344.2 Definition
- 344.6 Listing Requirements
- II. Installation
- 344.10 Uses Permitted
- (A) All Atmospheric Conditions and Occupancies
- (B) Corrosive Environments
- (C) Cinder Fill
- (D) Wet Locations
- 344.14 Dissimilar Metals
- 344.20 Size
- (A) Minimum
- (B) Maximum
- 344.22 Number of Conductors
- 344.24 Bends — How Made
- 344.26 Bends — Number in One Run
- 344.28 Reaming and Threading
- 344.30 Securing and Supporting
- (A) Securely Fastened
- (B) Supports
- 344.42 Couplings and Connectors
- (A) Threadless
- (B) Running Threads
- 344.46 Bushings
- 344.56 Splices and Taps
- 344.60 Grounding
- III. Construction Specifications
- 344.120 Marking
- 344.130 Standard Lengths

ARTICLE 348 - Flexible Metal Conduit: Type FMC

- I. General
- 348.1 Scope
- 348.2 Definition
- 348.6 Listing Requirements
- II. Installation
- 348.10 Uses Permitted
- 348.12 Uses Not Permitted
- 348.20 Size
- (A) Minimum
- (B) Maximum
- 348.22 Number of Conductors
- 348.24 Bends — How Made
- 348.26 Bends — Number in One Run

- 348.28 Trimming
- 348.30 Securing and Supporting
 - (A) Securely Fastened
 - (B) Supports
- 348.42 Couplings and Connectors
- 348.56 Splices and Taps
- 348.60 Grounding and Bonding

ARTICLE 350 - Liquidtight Flexible Metal Conduit: Type LFMC

- I. General
 - 350.1 Scope
 - 350.2 Definition
 - 350.6 Listing Requirements
- II. Installation
 - 350.10 Uses Permitted
 - 350.12 Uses Not Permitted
 - 350.20 Size
 - (A) Minimum
 - (B) Maximum
 - 350.22 Number of Conductors or Cables
 - (A) Metric Designators 16 through 103 (Trade Sizes $\frac{1}{2}$ through 4)
 - (B) Metric Designator 12 (Trade Size $\frac{3}{8}$)
 - 350.24 Bends — How Made
 - 350.26 Bends — Number in One Run
 - 350.30 Securing and Supporting
 - (A) Securely Fastened
 - (B) Supports
 - 350.42 Couplings and Connectors
 - 350.56 Splices and Taps
 - 350.60 Grounding and Bonding
- III. Construction Specifications
 - 350.120 Marking

ARTICLE 352 - Rigid Polyvinyl Chloride Conduit: Type PVC

- I. General
 - 352.1 Scope
 - 352.2 Definition
 - 352.6 Listing Requirements
- II. Installation
 - 352.10 Uses Permitted
 - (A) Concealed
 - (B) Corrosive Influences
 - (C) Cinders
 - (D) Wet Locations
 - (E) Dry and Damp Locations
 - (F) Exposed
 - (G) Underground Installations
 - (H) Support of Conduit Bodies
 - (I) Insulation Temperature Limitations
 - 352.12 Uses Not Permitted
 - (A) Hazardous (Classified) Locations
 - (B) Support of Luminaires
 - (C) Physical Damage
 - (D) Ambient Temperatures
 - (E) Theaters and Similar Locations
 - 352.20 Size
 - (A) Minimum
 - (B) Maximum
 - 352.22 Number of Conductors

- 352.24 Bends — How Made
 - 352.26 Bends — Number in One Run
 - 352.28 Trimming
 - 352.30 Securing and Supporting
 - (A) Securely Fastened
 - (B) Supports
 - 352.44 Expansion Fittings
 - 352.46 Bushings
 - 352.48 Joints
 - 352.56 Splices and Taps
 - 352.60 Grounding
- III. Construction Specifications
 - 352.100 Construction
 - 352.120 Marking

ARTICLE 353 - High Density Polyethylene Conduit: Type HDPE Conduit

- I. General
 - 353.1 Scope
 - 353.2 Definition
 - 353.6 Listing Requirements
- II. Installation
 - 353.10 Uses Permitted
 - 353.12 Uses Not Permitted
 - 353.20 Size
 - (A) Minimum
 - (B) Maximum
 - 353.22 Number of Conductors
 - 353.24 Bends — How Made
 - 353.26 Bends — Number in One Run
 - 353.28 Trimming
 - 353.46 Bushings
 - 353.48 Joints
 - 353.56 Splices and Taps
 - 353.60 Grounding
- III. Construction Specifications
 - 353.100 Construction
 - 353.120 Marking

ARTICLE 354 - Nonmetallic Underground Conduit with Conductors: Type NUCC

- I. General
 - 354.1 Scope
 - 354.2 Definition
 - 354.6 Listing Requirements
- II. Installation
 - 354.10 Uses Permitted
 - 354.12 Uses Not Permitted
 - 354.20 Size
 - (A) Minimum
 - (B) Maximum
 - 354.22 Number of Conductors
 - 354.24 Bends — How Made
 - 354.26 Bends — Number in One Run
 - 354.28 Trimming
 - 354.46 Bushings
 - 354.48 Joints
 - 354.50 Conductor Terminations
 - 354.56 Splices and Taps

- 354.60 Grounding
- III. Construction Specifications
- 354.100 Construction
- (A) General
- (B) Nonmetallic Underground Conduit
- (C) Conductors and Cables
- (D) Conductor Fill
- 354.120 Marking

ARTICLE 355 - Reinforced Thermosetting Resin Conduit: Type RTRC

- I. General
- 355.1 Scope
- 355.2 Definition
- 355.6 Listing Requirements
- II. Installation
- 355.10 Uses Permitted
- (A) Concealed
- (B) Corrosive Influences
- (C) Cinders
- (D) Wet Locations
- (E) Dry and Damp Locations
- (F) Exposed
- (G) Underground Installations
- (H) Support of Conduit Bodies
- (I) Insulation Temperature Limitations
- 355.12 Uses Not Permitted
- (A) Hazardous (Classified) Locations
- (B) Support of Luminaires
- (C) Physical Damage
- (D) Ambient Temperatures
- (E) Theaters and Similar Locations
- 355.20 Size
- (A) Minimum
- (B) Maximum
- 355.22 Number of Conductors
- 355.24 Bends — How Made
- 355.26 Bends — Number in One Run
- 355.28 Trimming
- 355.30 Securing and Supporting
- (A) Securely Fastened
- (B) Supports
- 355.44 Expansion Fittings
- 355.46 Bushings
- 355.48 Joints
- 355.56 Splices and Taps
- 355.60 Grounding
- III. Construction Specifications
- 355.100 Construction
- 355.120 Marking

ARTICLE 356 - Liquidtight Flexible Nonmetallic Conduit: Type LFNC

- I. General
- 356.1 Scope
- 356.2 Definition
- 356.6 Listing Requirements
- II. Installation
- 356.10 Uses Permitted
- 356.12 Uses Not Permitted
- 356.20 Size

- (A) Minimum
- (B) Maximum
- 356.22 Number of Conductors
- 356.24 Bends — How Made
- 356.26 Bends — Number in One Run
- 356.28 Trimming
- 356.30 Securing and Supporting
- 356.42 Couplings and Connectors
- 356.56 Splices and Taps
- 356.60 Grounding and Bonding
- III. Construction Specifications
- 356.100 Construction
- 356.120 Marking

ARTICLE 358 - Electrical Metallic Tubing: Type EMT

- I. General
- 358.1 Scope
- 358.2 Definition
- 358.6 Listing Requirements
- II. Installation
- 358.10 Uses Permitted
- (A) Exposed and Concealed
- (B) Corrosion Protection
- (C) Wet Locations
- 358.12 Uses Not Permitted
- 358.20 Size
- (A) Minimum
- (B) Maximum
- 358.22 Number of Conductors
- 358.24 Bends — How Made
- 358.26 Bends — Number in One Run
- 358.28 Reaming and Threading
- (A) Reaming
- (B) Threading
- 358.30 Securing and Supporting
- (A) Securely Fastened
- (B) Supports
- 358.42 Couplings and Connectors
- 358.56 Splices and Taps
- 358.60 Grounding
- III. Construction Specifications
- 358.100 Construction
- 358.120 Marking

ARTICLE 360 - Flexible Metallic Tubing: Type FMT

- I. General
- 360.1 Scope
- 360.2 Definition
- 360.6 Listing Requirements
- II. Installation
- 360.10 Uses Permitted
- 360.12 Uses Not Permitted
- 360.20 Size
- (A) Minimum
- (B) Maximum
- 360.22 Number of Conductors
- (A) FMT — Metric Designators 16 and 21 (Trade Sizes $\frac{1}{2}$ and $\frac{3}{4}$)
- (B) FMT — Metric Designator 12 (Trade Size $\frac{3}{8}$)
- 360.24 Bends

- (A) Infrequent Flexing Use
- (B) Fixed Bends
- 360.56 Splices and Taps
- 360.60 Grounding
- III. Construction Specifications
- 360.120 Marking

ARTICLE 362 - Electrical Nonmetallic Tubing: Type ENT

- I. General
- 362.1 Scope
- 362.2 Definition
- 362.6 Listing Requirements
- II. Installation
- 362.10 Uses Permitted
- 362.12 Uses Not Permitted
- 362.20 Size
- (A) Minimum
- (B) Maximum
- 362.22 Number of Conductors
- 362.24 Bends — How Made
- 362.26 Bends — Number in One Run
- 362.28 Trimming
- 362.30 Securing and Supporting
- (A) Securely Fastened
- (B) Supports
- 362.46 Bushings
- 362.48 Joints
- 362.56 Splices and Taps
- 362.60 Grounding
- III. Construction Specifications
- 362.100 Construction
- 362.120 Marking

ARTICLE 366 - Auxiliary Gutters

- I. General
- 366.1 Scope
- 366.2 Definitions
- 366.6 Listing Requirements
- (A) Outdoors
- (B) Indoors
- II. Installation
- 366.10 Uses Permitted
- (A) Sheet Metal Auxiliary Gutters
- (B) Nonmetallic Auxiliary Gutters
- 366.12 Uses Not Permitted
- 366.22 Number of Conductors
- (A) Sheet Metal Auxiliary Gutters
- (B) Nonmetallic Auxiliary Gutters
- 366.23 Ampacity of Conductors
- (A) Sheet Metal Auxiliary Gutters
- (B) Nonmetallic Auxiliary Gutters
- 366.30 Securing and Supporting
- (A) Sheet Metal Auxiliary Gutters
- (B) Nonmetallic Auxiliary Gutters
- 366.44 Expansion Fittings
- 366.56 Splices and Taps
- (A) Within Gutters
- (B) Bare Conductors
- (C) Suitably Identified
- (D) Overcurrent Protection
- 366.58 Insulated Conductors
- (A) Deflected Insulated Conductors

- (B) Auxiliary Gutters Used as Pull Boxes
- 366.60 Grounding
- III. Construction Specifications
- 366.100 Construction
- (A) Electrical and Mechanical Continuity
- (B) Substantial Construction
- (C) Smooth Rounded Edges
- (D) Covers
- (E) Clearance of Bare Live Parts
- 366.120 Marking

- (A) Outdoors
- (B) Indoors

ARTICLE 368 - Busways

- I. General Requirements
- 368.1 Scope
- 368.2 Definition
- II. Installation
- 368.10 Uses Permitted
- (A) Exposed
- (B) Behind Access Panels
- (C) Through Walls and Floors
- 368.12 Uses Not Permitted
- (A) Physical Damage
- (B) Hoistways
- (C) Hazardous Locations
- (D) Wet Locations
- (E) Working Platform
- 368.17 Overcurrent Protection
- (A) Rating of Overcurrent Protection — Feeders
- (B) Reduction in Ampacity Size of Busway
- (C) Feeder or Branch Circuits
- (D) Rating of Overcurrent Protection — Branch Circuits
- 368.30 Support
- 368.56 Branches from Busways
- (A) General
- (B) Cord and Cable Assemblies
- (C) Branches from Trolley-Type Busways
- 368.58 Dead Ends
- 368.60 Grounding
- III. Construction
- 368.120 Marking
- IV. Requirements for Over 600 Volts, Nominal
- 368.214 Adjacent and Supporting Structures
- 368.234 Barriers and Seals
- (A) Vapor Seals
- (B) Fire Barriers
- 368.236 Drain Facilities
- 368.237 Ventilated Bus Enclosures
- 368.238 Terminations and Connections
- 368.239 Switches
- 368.240 Wiring 600 Volts or Less, Nominal
- 368.244 Expansion Fittings
- 368.258 Neutral Conductor
- 368.260 Grounding
- 368.320 Marking

ARTICLE 370 - Cablebus

- 370.1 Scope
- 370.2 Definition
- 370.3 Use
- 370.4 Conductors

- (A) Types of Conductors
- (B) Ampacity of Conductors
- (C) Size and Number of Conductors
- (D) Conductor Supports
- 370.5 Overcurrent Protection
- 370.6 Support and Extension Through Walls and Floors
- (A) Support
- (B) Transversely Routed
- (C) Through Dry Floors and Platforms
- (D) Through Floors and Platforms in Wet Locations
- 370.7 Fittings
- 370.8 Conductor Terminations
- 370.9 Grounding
- 370.10 Marking

ARTICLE 372 - Cellular Concrete Floor Raceways

- 372.1 Scope
- 372.2 Definitions
- 372.4 Uses Not Permitted
- 372.5 Header
- 372.6 Connection to Cabinets and Other Enclosures
- 372.7 Junction Boxes
- 372.8 Markers
- 372.9 Inserts
- 372.10 Size of Conductors
- 372.11 Maximum Number of Conductors
- 372.12 Splices and Taps
- 372.13 Discontinued Outlets
- 372.17 Ampacity of Conductors

ARTICLE 374 - Cellular Metal Floor Raceways

- 374.1 Scope
- 374.2 Definitions
- 374.3 Uses Not Permitted
- I. Installation
- 374.4 Size of Conductors
- 374.5 Maximum Number of Conductors in Raceway
- 374.6 Splices and Taps
- 374.7 Discontinued Outlets
- 374.8 Markers
- 374.9 Junction Boxes
- 374.10 Inserts
- 374.11 Connection to Cabinets and Extensions from Cells
- 374.17 Ampacity of Conductors
- II. Construction Specifications
- 374.100 General

ARTICLE 376 - Metal Wireways

- I. General
- 376.1 Scope
- 376.2 Definition
- II. Installation
- 376.10 Uses Permitted
- 376.12 Uses Not Permitted
- 376.21 Size of Conductors
- 376.22 Number of Conductors and Ampacity
- (A) Cross-Sectional Areas of Wireway
- (B) Adjustment Factors
- 376.23 Insulated Conductors
- (A) Deflected Insulated Conductors
- (B) Metallic Wireways Used as Pull Boxes

- 376.30 Securing and Supporting
- (A) Horizontal Support
- (B) Vertical Support
- 376.56 Splices, Taps, and Power Distribution Blocks
- (A) Splices and Taps
- (B) Power Distribution Blocks
- 376.58 Dead Ends
- 376.70 Extensions from Metal Wireways
- III. Construction Specifications
- 376.100 Construction
- (A) Electrical and Mechanical Continuity
- (B) Substantial Construction
- (C) Smooth Rounded Edges
- (D) Covers
- 376.120 Marking

ARTICLE 378 - Nonmetallic Wireways

- I. General
- 378.1 Scope
- 378.2 Definition
- 378.6 Listing Requirements
- II. Installation
- 378.10 Uses Permitted
- 378.12 Uses Not Permitted
- 378.21 Size of Conductors
- 378.22 Number of Conductors
- 378.23 Insulated Conductors
- (A) Deflected Insulated Conductors
- (B) Nonmetallic Wireways Used as Pull Boxes
- 378.30 Securing and Supporting
- (A) Horizontal Support
- (B) Vertical Support
- 378.44 Expansion Fittings
- 378.56 Splices and Taps
- 378.58 Dead Ends
- 378.60 Grounding
- 378.70 Extensions from Nonmetallic Wireways
- III. Construction Specifications
- 378.120 Marking

ARTICLE 380 - Multioutlet Assembly

- I. General
- 380.1 Scope
- II. Installation
- 380.10 Uses Permitted
- 380.12 Uses Not Permitted
- 380.23 Insulated Conductors
- (A) Deflected Insulated Conductors
- (B) Multioutlet Assemblies Used as Pull Boxes
- 380.76 Metal Multioutlet Assembly Through Dry Partitions

ARTICLE 382 - Nonmetallic Extensions

- I. General
- 382.1 Scope
- 382.2 Definitions
- 382.6 Listing Requirements
- II. Installation
- 382.10 Uses Permitted
- (A) From an Existing Outlet
- (B) Exposed and in a Dry Location
- (C) Residential or Offices

- 382.12 Uses Not Permitted
- 382.15 Exposed
 - (A) Nonmetallic Extensions
 - (B) Concealable Nonmetallic Extensions
- 382.26 Bends
 - (A) Nonmetallic Extensions
 - (B) Concealable Nonmetallic Extensions
- 382.30 Securing and Supporting
 - (A) Nonmetallic Extensions
 - (B) Concealable Nonmetallic Extensions
- 382.40 Boxes and Fittings
- 382.42 Devices
 - (A) Receptacles
 - (B) Receptacles and Housings
- 382.56 Splices and Taps
- III. Construction Specifications (Concealable Nonmetallic Extension only)
- 382.100 Construction
 - 382.104 Flat Conductors
 - (A) Ungrounded Conductor (Center Layer)
 - (B) Grounded Conductor (Inner Sectioned Layers)
 - (C) Grounding Conductor (Outer Sectioned Layers)
 - 382.112 Insulation
 - 382.120 Marking
 - (A) Cable
 - (B) Conductor Identification

ARTICLE 384 - Strut-Type Channel Raceway

- I. General
 - 384.1 Scope
 - 384.2 Definition
 - 384.6 Listing Requirements
- II. Installation
 - 384.10 Uses Permitted
 - 384.12 Uses Not Permitted
 - 384.21 Size of Conductors
 - 384.22 Number of Conductors
 - 384.30 Securing and Supporting
 - (A) Surface Mount
 - (B) Suspension Mount
 - 384.56 Splices and Taps
 - 384.60 Grounding
- III. Construction Specifications
 - 384.100 Construction
 - (A) Material
 - (B) Corrosion Protection
 - (C) Cover
 - 384.120 Marking

ARTICLE 386 - Surface Metal Raceways

- I. General
 - 386.1 Scope
 - 386.2 Definition
 - 386.6 Listing Requirements
- II. Installation
 - 386.10 Uses Permitted
 - 386.12 Uses Not Permitted
 - 386.21 Size of Conductors
 - 386.22 Number of Conductors or Cables
 - 386.30 Securing and Supporting

- 386.56 Splices and Taps
- 386.60 Grounding
- 386.70 Combination Raceways
- III. Construction Specifications
 - 386.100 Construction

ARTICLE 388 - Surface Nonmetallic Raceways

- I. General
 - 388.1 Scope
 - 388.2 Definition
 - 388.6 Listing Requirements
- II. Installation
 - 388.10 Uses Permitted
 - 388.12 Uses Not Permitted
 - 388.21 Size of Conductors
 - 388.22 Number of Conductors or Cables
 - 388.30 Securing and Supporting
 - 388.56 Splices and Taps
 - 388.60 Grounding
 - 388.70 Combination Raceways
- III. Construction Specifications
 - 388.100 Construction
 - 388.120 Marking

ARTICLE 390 - Underfloor Raceways

- 390.1 Scope
- 390.2 Definition
- 390.3 Use
 - (A) Permitted
 - (B) Not Permitted
- 390.4 Covering
 - (A) Raceways Not over 100 mm (4 in.) Wide
 - (B) Raceways over 100 mm (4 in.) Wide But Not over 200 mm (8 in.) Wide
 - (C) Trench-Type Raceways Flush with Concrete
 - (D) Other Raceways Flush with Concrete
- 390.5 Size of Conductors
- 390.6 Maximum Number of Conductors in Raceway
- 390.7 Splices and Taps
- 390.8 Discontinued Outlets
- 390.9 Laid in Straight Lines
- 390.10 Markers at Ends
- 390.11 Dead Ends
- 390.13 Junction Boxes
- 390.14 Inserts
- 390.15 Connections to Cabinets and Wall Outlets
- 390.17 Ampacity of Conductors

ARTICLE 392 - Cable Trays

- I. General
 - 392.1 Scope
 - 392.2 Definition
- II. Installation
 - 392.10 Uses Permitted
 - (A) Wiring Methods
 - (B) In Industrial Establishments
 - (C) Hazardous (Classified) Locations
 - (D) Nonmetallic Cable Tray
 - 392.12 Uses Not Permitted
 - 392.18 Cable Tray Installation
 - (A) Complete System
 - (B) Completed Before Installation

- (C) Covers
- (D) Through Partitions and Walls
- (E) Exposed and Accessible
- (F) Adequate Access
- (G) Raceways, Cables, Boxes, and Conduit Bodies Supported from Cable Tray Systems
- (H) Marking

392.20 Cable and Conductor Installation

- (A) Multiconductor Cables Rated 600 Volts or Less
 - (B) Cables Rated over 600 Volts
 - (C) Connected in Parallel
 - (D) Single Conductors
- #### 392.22 Number of Conductors or Cables
- (A) Number of Multiconductor Cables, Rated 2000 Volts or Less, in Cable Trays
 - (B) Number of Single-Conductor Cables, Rated 2000 Volts or Less, in Cable Trays
 - (C) Number of Type MV and Type MC Cables (2001 Volts or Over) in Cable Trays

392.30 Securing and Supporting

- (A) Cable Trays
 - (B) Cables and Conductors
- #### 392.46 Bushed Conduit and Tubing

392.56 Cable Splices

392.60 Grounding and Bonding

- (A) Metallic Cable Trays
- (B) Steel or Aluminum Cable Tray Systems
- (C) Transitions

392.80 Ampacity of Conductors

- (A) Ampacity of Cables, Rated 2000 Volts or Less, in Cable Trays
- (B) Ampacity of Type MV and Type MC Cables (2001 Volts or Over) in Cable Trays

III. Construction Specifications

392.100 Construction

- (A) Strength and Rigidity
- (B) Smooth Edges
- (C) Corrosion Protection
- (D) Side Rails
- (E) Fittings
- (F) Nonmetallic Cable Tray

ARTICLE 394 - Concealed Knob-and-Tube Wiring

I. General

394.1 Scope

394.2 Definition

II. Installation

394.10 Uses Permitted

394.12 Uses Not Permitted

394.17 Through or Parallel to Framing Members

394.19 Clearances

- (A) General
- (B) Limited Conductor Space
- (C) Clearance from Piping, Exposed Conductors, and So Forth

394.23 In Accessible Attics

- (A) Accessible by Stairway or Permanent Ladder
- (B) Not Accessible by Stairway or Permanent Ladder

394.30 Securing and Supporting

- (A) Supporting
- (B) Securing

394.42 Devices

394.56 Splices and Taps

III. Construction Specifications

394.104 Conductors

ARTICLE 396 - Messenger-Supported Wiring

I. General

396.1 Scope

396.2 Definition

I. General

396.1 Scope

396.2 Definition

II. Installation

396.10 Uses Permitted

- (A) Cable Types
- (B) In Industrial Establishments
- (C) Hazardous (Classified) Locations

396.12 Uses Not Permitted

396.30 Messenger

- (A) Support
- (B) Neutral Conductor
- (C) Equipment Grounding Conductor

396.56 Conductor Splices and Taps

396.60 Grounding

ARTICLE 398 - Open Wiring on Insulators

I. General

398.1 Scope

398.2 Definition

II. Installation

398.10 Uses Permitted

398.12 Uses Not Permitted

398.15 Exposed Work

- (A) Dry Locations
- (B) Entering Spaces Subject to Dampness, Wetness, or Corrosive Vapors
- (C) Exposed to Physical Damage

398.17 Through or Parallel to Framing Members

398.19 Clearances

398.23 In Accessible Attics

- (A) Accessible by Stairway or Permanent Ladder
- (B) Not Accessible by Stairway or Permanent Ladder

398.30 Securing and Supporting

- (A) Conductor Sizes Smaller Than 8 AWG
- (B) Conductor Sizes 8 AWG and Larger
- (C) Industrial Establishments
- (D) Mounting of Conductor Supports
- (E) Tie Wires

398.42 Devices

III. Construction Specifications

398.104 Conductors

ARTICLE 399 - Outdoor Overhead Conductors over 600 Volts

399.1 Scope

399.2 Definition

399.10 Uses Permitted

399.12 Uses Not Permitted

399.30 Support

- (A) Conductors
- (B) Structures
- (C) Insulators

ARTICLE 400 - Flexible Cords and Cables

I. General

- 400.1 Scope
- 400.2 Other Articles
- 400.3 Suitability
- 400.4 Types
- 400.5 Ampacities for Flexible Cords and Cables
 - (A) Ampacity Tables
 - (B) Ultimate Insulation Temperature
- 400.6 Markings
 - (A) Standard Markings
 - (B) Optional Markings
- 400.7 Uses Permitted
 - (A) Uses
 - (B) Attachment Plugs
 - (C) Engineering Supervision
- 400.8 Uses Not Permitted
- 400.9 Splices
- 400.10 Pull at Joints and Terminals
- 400.11 In Show Windows and Showcases
- 400.13 Overcurrent Protection
- 400.14 Protection from Damage

II. Construction Specifications

- 400.20 Labels
- 400.21 Construction
 - (A) Conductors
 - (B) Nominal Insulation Thickness
- 400.22 Grounded-Conductor Identification
 - (A) Colored Braid
 - (B) Tracer in Braid
 - (C) Colored Insulation
 - (D) Colored Separator
 - (E) Tinned Conductors
 - (F) Surface Marking
- 400.23 Equipment Grounding Conductor Identification
 - (A) Colored Braid
 - (B) Colored Insulation or Covering
- 400.24 Attachment Plugs

III. Portable Cables Over 600 Volts, Nominal

- 400.30 Scope
- 400.31 Construction
 - (A) Conductors
 - (B) Equipment Grounding Conductor(s)
- 400.32 Shielding
- 400.33 Equipment Grounding Conductors
- 400.34 Minimum Bending Radii
- 400.35 Fittings
- 400.36 Splices and Terminations

ARTICLE 402 - Fixture Wires

- 402.1 Scope
- 402.2 Other Articles
- 402.3 Types
- 402.5 Allowable Ampacities for Fixture Wires
- 402.6 Minimum Size
- 402.7 Number of Conductors in Conduit or Tubing
- 402.8 Grounded Conductor Identification
- 402.9 Marking
 - (A) Method of Marking
 - (B) Optional Marking
- 402.10 Uses Permitted

402.11 Uses Not Permitted

402.12 Overcurrent Protection

ARTICLE 404 – Switches

I. Installation

- 404.1 Scope
- 404.2 Switch Connections
 - (A) Three-Way and Four-Way Switches
 - (B) Grounded Conductors
 - (C) Switches Controlling Lighting Loads
- 404.3 Enclosure
 - (A) General
 - (B) Used as a Raceway
- 404.4 Damp or Wet Locations
 - (A) Surface-Mounted Switch or Circuit Breaker
 - (B) Flush-Mounted Switch or Circuit Breaker
 - (C) Switches in Tub or Shower Spaces
- 404.5 Time Switches, Flashers, and Similar Devices
- 404.6 Position and Connection of Switches
 - (A) Single-Throw Knife Switches
 - (B) Double-Throw Knife Switches
 - (C) Connection of Switches
- 404.7 Indicating
- 404.8 Accessibility and Grouping
 - (A) Location
 - (B) Voltage Between Adjacent Devices
 - (C) Multiple Snap Switches
- 404.9 Provisions for General-Use Snap Switches
 - (A) Faceplates
 - (B) Grounding
 - (C) Construction
- 404.10 Mounting of Snap Switches
 - (A) Surface Type
 - (B) Box Mounted
- 404.11 Circuit Breakers as Switches
- 404.12 Grounding of Enclosures
- 404.13 Knife Switches
 - (A) Isolating Switches
 - (B) To Interrupt Currents
 - (C) General-Use Switches
 - (D) Motor-Circuit Switches
- 404.14 Rating and Use of Snap Switches
 - (A) Alternating-Current General-Use Snap Switch
 - (B) Alternating-Current or Direct-Current General-Use Snap Switch
 - (C) CO/ALR Snap Switches
 - (D) Alternating-Current Specific-Use Snap Switches Rated for 347 Volts
 - (E) Dimmer Switches
 - (F) Cord-and-Plug-Connected Loads

II. Construction Specifications

- 404.15 Marking
 - (A) Ratings
 - (B) Off Indication
- 404.16 600-Volt Knife Switches
- 404.17 Fused Switches
- 404.18 Wire-Bending Space

ARTICLE 406 - Receptacles, Cord

Connectors, and Attachment Plugs (Caps)

- 406.1 Scope

- 406.2 Definition
- 406.3 Receptacle Rating and Type
 - (A) Receptacles
 - (B) Rating
 - (C) Receptacles for Aluminum Conductors
 - (D) Isolated Ground Receptacles
- 406.4 General Installation Requirements
 - (A) Grounding Type
 - (B) To Be Grounded
 - (C) Methods of Grounding
 - (D) Replacements
 - (E) Cord-and-Plug-Connected Equipment
 - (F) Noninterchangeable Types
- 406.5 Receptacle Mounting
 - (A) Boxes That Are Set Back
 - (B) Boxes That Are Flush
 - (C) Receptacles Mounted on Covers
 - (D) Position of Receptacle Faces
 - (E) Receptacles in Countertops and Similar Work Surfaces in Dwelling Units.
 - (F) Exposed Terminals
 - (G) Voltage Between Adjacent Devices
- 406.6 Receptacle Faceplates (Cover Plates)
 - (A) Thickness of Metal Faceplates
 - (B) Grounding
 - (C) Faceplates of Insulating Material
- 406.7 Attachment Plugs, Cord Connectors, and Flanged Surface Devices
 - (A) Construction of Attachment Plugs and Cord Connectors
 - (B) Connection of Attachment Plugs
 - (C) Attachment Plug Ejector Mechanisms
 - (D) Flanged Surface Inlet
- 406.8 Noninterchangeability
- 406.9 Receptacles in Damp or Wet Locations
 - (A) Damp Locations
 - (B) Wet Locations
 - (C) Bathtub and Shower Space
 - (D) Protection for Floor Receptacles
 - (E) Flush Mounting with Faceplate
- 406.10 Grounding-Type Receptacles, Adapters, Cord Connectors, and Attachment Plugs
 - (A) Grounding Poles
 - (B) Grounding-Pole Identification
 - (C) Grounding Terminal Use
 - (D) Grounding-Pole Requirements
 - (E) Use
- 406.11 Connecting Receptacle Grounding Terminal to Box
- 406.12 Tamper-Resistant Receptacles in Dwelling Units
- 406.13 Tamper-Resistant Receptacles in Guest Rooms
- 406.14 Tamper-Resistant Receptacles in Child Care Facilities

ARTICLE 408 - Switchboards and Panelboards

- I. General
 - 408.1 Scope
 - 408.2 Other Articles
 - 408.3 Support and Arrangement of Busbars and Conductors
 - (A) Conductors and Busbars on a Switchboard or Panelboard
 - (B) Overheating and Inductive Effects
 - (C) Used as Service Equipment
 - (D) Terminals
 - (E) Phase Arrangement

- (F) Switchboard or Panelboard Identification
- (G) Minimum Wire-Bending Space
- 408.4 Field Identification Required
 - (A) Circuit Directory or Circuit Identification
 - (B) Source of Supply
- 408.5 Clearance for Conductor Entering Bus Enclosures
- 408.7 Unused Openings
- II. Switchboards
 - 408.16 Switchboards in Damp or Wet Locations
 - 408.17 Location Relative to Easily Ignitable Material
 - 408.18 Clearances
 - (A) From Ceiling
 - (B) Around Switchboards
 - 408.19 Conductor Insulation
 - 408.20 Location of Switchboards
 - 408.22 Grounding of Instruments, Relays, Meters, and Instrument Transformers on Switchboards
- III. Panelboards
 - 408.30 General
 - 408.36 Overcurrent Protection
 - (A) Snap Switches Related at 30 Amperes or Less
 - (B) Supplied Through a Transformer
 - (C) Delta Breakers
 - (D) Back-Fed Devices
 - 408.37 Panelboards in Damp or Wet Location
 - 408.38 Enclosure
 - 408.39 Relative Arrangement of Switches and Fuses
 - 408.40 Grounding of Panelboards
 - 408.41 Grounded Conductor Terminations
- I V. Construction Specifications
 - 408.50 Panels
 - 408.51 Busbars
 - 408.52 Protection of Instrument Circuits
 - 408.53 Component Parts
 - 408.54 Maximum Number of Overcurrent Devices
 - 408.55 Wire-Bending Space Within an Enclosure Containing a Panelboard
 - 408.56 Minimum Spacings
 - 408.58 Panelboard Marking

ARTICLE 409 - Industrial Control Panels

- I. General
 - 409.1 Scope
 - 409.2 Definitions
 - 409.3 Other Articles
- II. Installation
 - 409.20 Conductor — Minimum Size and Ampacity
 - 409.21 Overcurrent Protection
 - (A) General
 - (B) Location
 - (C) Rating
 - 409.22 Short-Circuit Current Rating
 - 409.30 Disconnecting Means
 - 409.60 Grounding
- III. Construction Specifications
 - 409.100 Enclosures
 - 409.102 Busbars and Conductors
 - (A) Support and Arrangement
 - (B) Phase Arrangement
 - 409.104 Wiring Space
 - (A) General

- (B) Wire-Bending Space
- 409.106 Spacings
- 409.108 Service Equipment
- 409.110 Marking

ARTICLE 410 - Luminaires, Lampholders, and Lamps

I. General

- 410.1 Scope
- 410.2 Definitions
- 410.5 Live Parts
- 410.6 Listing Required
- 410.8 Inspection

II. Luminaire Locations

- 410.10 Luminaires in Specific Locations
 - (A) Wet and Damp Locations
 - (B) Corrosive Locations
 - (C) In Ducts or Hoods
 - (D) Bathtub and Shower Areas
 - (E) Luminaires in Indoor Sports, Mixed-Use, and All-Purpose Facilities

- 410.11 Luminaires Near Combustible Material
- 410.12 Luminaires over Combustible Material
- 410.14 Luminaires in Show Windows
- 410.16 Luminaires in Clothes Closets

- (A) Luminaire Types Permitted
- (B) Luminaire Types Not Permitted
- (C) Location

410.18 Space for Cove Lighting

III. Provisions at Luminaire Outlet Boxes, Canopies, and Pans

- 410.20 Space for Conductors
- 410.21 Temperature Limit of Conductors in Outlet Boxes
- 410.22 Outlet Boxes to Be Covered
- 410.23 Covering of Combustible Material at Outlet Boxes
- 410.24 Connection of Electric-Discharge and LED Luminaires

- (A) Independent of the Outlet Box
- (B) Access to Boxes

IV. Luminaire Supports

- 410.30 Supports
 - (A) General
 - (B) Metal or Nonmetallic Poles Supporting Luminaires

410.36 Means of Support

- (A) Outlet Boxes
- (B) Suspended Ceilings
- (C) Luminaire Studs
- (D) Insulating Joints
- (E) Raceway Fittings
- (F) Busways
- (G) Trees

V. Grounding

- 410.40 General
 - 410.42 Luminaire(s) with Exposed Conductive Parts
 - 410.44 Methods of Grounding
 - 410.46 Equipment Grounding Conductor Attachment
- ### VI. Wiring of Luminaires
- 410.48 Luminaire Wiring — General
 - 410.50 Polarization of Luminaires
 - 410.52 Conductor Insulation
 - 410.54 Pendant Conductors for Incandescent Filament Lamps
 - (A) Support
 - (B) Size
 - (C) Twisted or Cabled
 - (C) In Ducts or Hoods

- (D) Bathtub and Shower Areas
- (E) Luminaires in Indoor Sports, Mixed-Use, and All-Purpose Facilities

410.11 Luminaires Near Combustible Material

410.12 Luminaires over Combustible Material

410.14 Luminaires in Show Windows

410.16 Luminaires in Clothes Closets

- (A) Luminaire Types Permitted

- (B) Luminaire Types Not Permitted

- (C) Location

410.18 Space for Cove Lighting

III. Provisions at Luminaire Outlet Boxes, Canopies, and Pans

410.20 Space for Conductors

410.21 Temperature Limit of Conductors in Outlet Boxes

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410.24 Connection of Electric-Discharge and LED Luminaires

- (A) Independent of the Outlet Box

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IV. Luminaire Supports

410.30 Supports

- (A) General

- (B) Metal or Nonmetallic Poles Supporting Luminaires

410.36 Means of Support

- (A) Outlet Boxes

- (B) Suspended Ceilings

- (C) Luminaire Studs

- (D) Insulating Joints

- (E) Raceway Fittings

- (F) Busways

- (G) Trees

V. Grounding

410.40 General

410.42 Luminaire(s) with Exposed Conductive Parts

410.44 Methods of Grounding

410.46 Equipment Grounding Conductor Attachment

VI. Wiring of Luminaires

410.48 Luminaire Wiring — General

410.50 Polarization of Luminaires

410.52 Conductor Insulation

410.54 Pendant Conductors for Incandescent Filament Lamps

- (A) Support

- (B) Size

- (C) Twisted or Cabled

410.56 Protection of Conductors and Insulation

- (A) Properly Secured

- (B) Protection Through Metal

- (C) Luminaire Stems

- (D) Splices and Taps

- (E) Stranding

- (F) Tension

410.59 Cord-Connected Showcases

- (A) Cord Requirements

- (B) Receptacles, Connectors, and Attachment Plugs

- (C) Support

- (D) No Other Equipment

- (E) Secondary Circuit(s)

410.62 Cord-Connected Lampholders and Luminaires

- (A) Lampholders

- (B) Adjustable Luminaires

- (C) Electric-Discharge and LED Luminaires

410.64 Luminaires as Raceways

- (A) Listed
- (B) Through-Wiring
- (C) Luminaires Connected Together
- 410.68 Feeder and Branch-Circuit Conductors and Ballasts
- VII. Construction of Luminaires
- 410.70 Combustible Shades and Enclosures
- 410.74 Luminaire Rating
- (A) Marking
- (B) Electrical Rating
- 410.82 Portable Luminaires
- (A) General
- (B) Portable Handlamps
- 410.84 Cord Bushings
- VIII. Installation of Lampholders
- 410.90 Screw Shell Type
- 410.93 Double-Pole Switched Lampholders
- 410.96 Lampholders in Wet or Damp Locations
- 410.97 Lampholders Near Combustible Material
- IX. Lamps and Auxiliary Equipment
- 410.103 Bases, Incandescent Lamps
- 410.104 Electric-Discharge Lamp Auxiliary Equipment
- (A) Enclosures
- (B) Switching
- X. Special Provisions for Flush and Recessed Luminaires
- 410.110 General
- 410.115 Temperature
- (A) Combustible Material
- (B) Fire-Resistant Construction
- (C) Recessed Incandescent Luminaires
- 410.116 Clearance and Installation
- (A) Clearance
- (B) Installation
- 410.117 Wiring
- (A) General
- (B) Circuit Conductors
- (C) Tap Conductors
- XII. Construction of Flush and Recessed Luminaires
- 410.118 Temperature
- 410.120 Lamp Wattage Marking
- 410.121 Solder Prohibited
- 410.122 Lampholders
- XIII. Special Provisions for Electric-Discharge Lighting Systems of 1000 Volts or Less
- 410.130 General
- (A) Open-Circuit Voltage of 1000 Volts or Less
- (B) Considered as Energized
- (C) Transformers of the Oil-Filled Type
- (D) Additional Requirements
- (E) Thermal Protection — Fluorescent Luminaires
- (F) High-Intensity Discharge Luminaires
- (G) Disconnecting Means
- 410.134 Direct-Current Equipment
- 410.135 Open-Circuit Voltage Exceeding 300 Volts
- 410.136 Luminaire Mounting
- (A) Exposed Components
- (B) Combustible Low-Density Cellulose Fiberboard
- 410.137 Equipment Not Integral with Luminaire
- (A) Metal Cabinets
- (B) Separate Mounting
- (C) Wired Luminaire Sections
- 410.138 Autotransformers
- 410.139 Switches

XIII. Special Provisions for Electric-Discharge Lighting Systems of More Than 1000 Volts

- 410.140 General
- (A) Listing
- (B) Dwelling Occupancies
- (C) Live Parts
- (D) Additional Requirements
- 410.141 Control
- (A) Disconnection
- (B) Within Sight or Locked Type
- 410.142 Lamp Terminals and Lampholders
- 410.143 Transformers
- (A) Type
- (B) Voltage
- (C) Rating
- (D) Secondary Connections
- 410.144 Transformer Locations
- (A) Accessible
- (B) Secondary Conductors
- (C) Adjacent to Combustible Materials
- 410.145 Exposure to Damage
- 410.146 Marking
- XIV. Lighting Track
- 410.151 Installation
- (A) Lighting Track
- (B) Connected Load
- (C) Locations Not Permitted
- (D) Support
- 410.153 Heavy-Duty Lighting Track
- 410.154 Fastening
- 410.155 Construction Requirements
- (A) Construction
- (B) Grounding
- XV. Decorative Lighting and Similar Accessories
- 410.160 Listing of Decorative Lighting

ARTICLE 411 - Lighting Systems Operating at 30 Volts or Less

- 411.1 Scope
- 411.2 Definition
- 411.3 Listing Required
- (A) Listed System
- (B) Assembly of Listed Parts
- 411.4 Specific Location Requirements
- (A) Walls, Floors, and Ceilings
- (B) Pools, Spas, Fountains, and Similar Locations
- 411.5 Secondary Circuits
- (A) Grounding
- (B) Isolation
- (C) Bare Conductors
- (D) Insulated Conductors
- 411.6 Branch Circuit
- 411.7 Hazardous (Classified) Locations

ARTICLE 422 – Appliances

- I. General
- 422.1 Scope
- 422.2 Definition
- 422.3 Other Articles
- 422.4 Live Parts
- II. Installation
- 422.10 Branch-Circuit Rating
- (A) Individual Circuits

(B) Circuits Supplying Two or More Loads
422.11 Overcurrent Protection
(A) Branch-Circuit Overcurrent Protection
(B) Household-Type Appliances with Surface Heating Elements
(C) Infrared Lamp Commercial and Industrial Heating Appliances
(D) Open-Coil or Exposed Sheathed-Coil Types of Surface Heating Elements in Commercial-Type Heating Appliances
(E) Single Non-Motor-Operated Appliance
(F) Electric Heating Appliances Employing Resistance-Type Heating Elements Rated More Than 48 Amperes
(G) Motor-Operated Appliances
422.12 Central Heating Equipment
422.13 Storage-Type Water Heaters
422.14 Infrared Lamp Industrial Heating Appliances
422.15 Central Vacuum Outlet Assemblies
422.16 Flexible Cords
(A) General
(B) Specific Appliances
422.17 Protection of Combustible Material
422.18 Support of Ceiling-Suspended (Paddle) Fans
422.20 Other Installation Methods
III. Disconnecting Means
422.30 General
422.31 Disconnection of Permanently Connected Appliances
(A) Rated at Not over 300 Volt-Amperes or $\frac{1}{8}$ Horsepower
(B) Appliances Rated over 300 Volt-Amperes
(C) Motor-Operated Appliances Rated over $\frac{1}{8}$ Horsepower
422.33 Disconnection of Cord-and-Plug-Connected Appliances
(A) Separable Connector or an Attachment Plug and Receptacle
(B) Connection at the Rear Base of a Range
(C) Rating
422.34 Unit Switch(es) as Disconnecting Means
(A) Multifamily Dwellings
(B) Two-Family Dwellings
(C) One-Family Dwellings
(D) Other Occupancies
422.35 Switch and Circuit Breaker to Be Indicating
IV. Construction
422.40 Polarity in Cord-and-Plug-Connected Appliances
422.41 Cord-and-Plug-Connected Appliances Subject to Immersion
422.42 Signals for Heated Appliances
422.43 Flexible Cords
(A) Heater Cords
(B) Other Heating Appliances
422.44 Cord-and-Plug-Connected Immersion Heaters
422.45 Stands for Cord-and-Plug-Connected Appliances
422.46 Flatirons
422.47 Water Heater Controls
422.48 Infrared Lamp Industrial Heating Appliances
(A) 300 Watts or Less
(B) Over 300 Watts
422.49 High-Pressure Spray Washers
422.50 Cord-and-Plug-Connected Pipe Heating Assemblies
422.51 Cord-and-Plug-Connected Vending Machines
422.52 Electric Drinking Fountains
V. Marking
422.60 Nameplate

(A) Nameplate Marking
(B) To Be Visible
422.61 Marking of Heating Elements
422.62 Appliances Consisting of Motors and Other Loads
(A) Nameplate Horsepower Markings
(B) Additional Nameplate Markings
ARTICLE 424 - Fixed Electric Space-Heating Equipment
I. General
424.1 Scope
424.2 Other Articles
424.3 Branch Circuits
(A) Branch-Circuit Requirements
(B) Branch-Circuit Sizing
424.6 Listed Equipment
II. Installation
424.9 General
424.10 Special Permission
424.11 Supply Conductors
424.12 Locations
(A) Exposed to Physical Damage
(B) Damp or Wet Locations
424.13 Spacing from Combustible Materials
III. Control and Protection of Fixed Electric Space-Heating Equipment
424.19 Disconnecting Means
(A) Heating Equipment with Supplementary Overcurrent Protection
(B) Heating Equipment Without Supplementary Overcurrent Protection
(C) Unit Switch(es) as Disconnecting Means
424.20 Thermostatically Controlled Switching Devices
(A) Serving as Both Controllers and Disconnecting Means
(B) Thermostats That Do Not Directly Interrupt All Ungrounded Conductors
424.21 Switch and Circuit Breaker to Be Indicating
424.22 Overcurrent Protection
(A) Branch-Circuit Devices
(B) Resistance Elements
(C) Overcurrent Protective Devices
(D) Branch-Circuit Conductors
(E) Conductors for Subdivided Loads
IV. Marking of Heating Equipment
424.28 Nameplate
(A) Marking Required
(B) Location
424.29 Marking of Heating Elements
V. Electric Space-Heating Cables
424.34 Heating Cable Construction
424.35 Marking of Heating Cables
424.36 Clearances of Wiring in Ceilings
424.38 Area Restrictions
(A) Shall Not Extend Beyond the Room or Area
(B) Uses Prohibited
(C) In Closet Ceilings as Low-Temperature Heat Sources to Control Relative Humidity
424.39 Clearance from Other Objects and Openings
424.40 Splices
424.41 Installation of Heating Cables on Dry Board, in Plaster, and on Concrete Ceilings
(A) In Walls

- (B) Adjacent Runs
- (C) Surfaces to Be Applied
- (D) Splices
- (E) Ceiling Surface
- (F) Secured
- (G) Dry Board Installations
- (H) Free from Contact with Conductive Surfaces
- (I) Joists
- (J) Crossing Joists
- 424.42 Finished Ceilings
- 424.43 Installation of Nonheating Leads of Cables
 - (A) Free Nonheating Leads
 - (B) Leads in Junction Box
 - (C) Excess Leads
- 424.44 Installation of Cables in Concrete or Poured Masonry Floors
 - (A) Watts per Linear Meter (Foot)
 - (B) Spacing Between Adjacent Runs
 - (C) Secured in Place
 - (D) Spacings Between Heating Cable and Metal Embedded in the Floor
 - (E) Leads Protected
 - (F) Bushings or Approved Fittings
 - (G) Ground-Fault Circuit-Interrupter Protection
- 424.45 Inspection and Tests
- VI. Duct Heaters
 - 424.57 General
 - 424.58 Identification
 - 424.59 Airflow
 - 424.60 Elevated Inlet Temperature
 - 424.61 Installation of Duct Heaters with Heat Pumps and Air Conditioners
 - 424.62 Condensation
 - 424.63 Fan Circuit Interlock
 - 424.64 Limit Controls
 - 424.65 Location of Disconnecting Means
 - 424.66 Installation
- VII. Resistance-Type Boilers
 - 424.70 Scope
 - 424.71 Identification
 - 424.72 Overcurrent Protection
 - (A) Boiler Employing Resistance-Type Immersion Heating Elements in an ASME-Rated and Stamped Vessel
 - (B) Boiler Employing Resistance-Type Heating Elements Rated More Than 48 Amperes and Not Contained in an ASME-Rated and Stamped Vessel
 - (C) Supplementary Overcurrent Protective Devices
 - (D) Conductors Supplying Supplementary Overcurrent Protective Devices
 - (E) Conductors for Subdivided Loads
 - 424.73 Overtemperature Limit Control
 - 424.74 Overpressure Limit Control
- VIII. Electrode-Type Boilers
 - 424.80 Scope
 - 424.81 Identification
 - 424.82 Branch-Circuit Requirements
 - 424.83 Overtemperature Limit Control
 - 424.84 Overpressure Limit Control
 - 424.85 Grounding
 - 424.86 Markings
- IX. Electric Radiant Heating Panels and Heating Panel Sets
 - 424.90 Scope
 - 424.91 Definitions
 - 424.92 Markings
 - (A) Location
 - (B) Identified as Suitable
 - (C) Required Markings
 - (D) Labels Provided by Manufacturer
 - 424.93 Installation
 - (A) General
 - (B) Heating Panel Sets
 - 424.94 Clearances of Wiring in Ceilings

424.95 Location of Branch-Circuit and Feeder Wiring in Walls

- (A) Exterior Walls
- (B) Interior Walls

424.96 Connection to Branch-Circuit Conductors

- (A) General
- (B) Heating Panels
- (C) Heating Panel Sets

424.97 Nonheating Leads

424.98 Installation in Concrete or Poured Masonry

- (A) Maximum Heated Area
- (B) Secured in Place and Identified as Suitable
- (C) Expansion Joints
- (D) Spacings
- (E) Protection of Leads
- (F) Bushings or Fittings Required

424.99 Installation Under Floor Covering

- (A) Identification
- (B) Maximum Heated Area
- (C) Installation

ARTICLE 426 - Fixed Outdoor Electric Deicing and Snow-Melting Equipment

I. General

426.1 Scope

- (A) Embedded
- (B) Exposed

426.2 Definitions

426.3 Application of Other Articles

426.4 Continuous Load

II. Installation

426.10 General

426.11 Use

426.12 Thermal Protection

426.13 Identification

426.14 Special Permission

I II. Resistance Heating Elements

426.20 Embedded Deicing and Snow-Melting Equipment

- (A) Watt Density
- (B) Spacing
- (C) Cover
- (D) Secured

(E) Expansion and Contraction

426.21 Exposed Deicing and Snow-Melting Equipment

- (A) Secured
- (B) Overtemperature
- (C) Expansion and Contraction
- (D) Flexural Capability

426.22 Installation of Nonheating Leads for Embedded Equipment

- (A) Grounding Sheath or Braid
- (B) Raceways
- (C) Bushings
- (D) Expansion and Contraction
- (E) Leads in Junction Boxes

426.23 Installation of Nonheating Leads for Exposed Equipment

- (A) Nonheating Leads
- (B) Protection

426.24 Electrical Connection

- (A) Heating Element Connections

(B) Circuit Connections

426.25 Marking

426.26 Corrosion Protection

426.27 Grounding Braid or Sheath

426.28 Ground-Fault Protection of Equipment

IV. Impedance Heating

426.30 Personnel Protection

426.31 Isolation Transformer

426.32 Voltage Limitations

426.33 Induced Currents

426.34 Grounding

V. Skin-Effect Heating

426.40 Conductor Ampacity

426.41 Pull Boxes

426.42 Single Conductor in Enclosure

426.43 Corrosion Protection

426.44 Grounding

VI. Control and Protection

426.50 Disconnecting Means

(A) Disconnection

(B) Cord-and-Plug-Connected Equipment

426.51 Controllers

(A) Temperature Controller with "Off" Position

(B) Temperature Controller Without "Off" Position

(C) Remote Temperature Controller

(D) Combined Switching Devices

426.54 Cord-and-Plug-Connected Deicing and Snow-Melting Equipment

ARTICLE 427 - Fixed Electric Heating Equipment for Pipelines and Vessels

I. General

427.1 Scope

427.2 Definitions

427.3 Application of Other Articles

427.4 Continuous Load

II. Installation

427.10 General

427.11 Use

427.12 Thermal Protection

427.13 Identification

III. Resistance Heating Elements

427.14 Secured

427.15 Not in Direct Contact

427.16 Expansion and Contraction

427.17 Flexural Capability

427.18 Power Supply Leads

(A) Nonheating Leads

(B) Power Supply Leads Protection

(C) Interconnecting Leads

427.19 Electrical Connections

(A) Nonheating Interconnections

(B) Circuit Connections

427.20 Marking

427.22 Ground-Fault Protection of Equipment

427.23 Grounded Conductive Covering

(A) Heating Wires or Cables

(B) Heating Panels

IV. Impedance Heating

427.25 Personnel Protection

427.26 Isolation Transformer

427.27 Voltage Limitations

- 427.28 Induced Currents
- 427.29 Grounding
- 427.30 Secondary Conductor Sizing

V. Induction Heating

- 427.35 Scope
- 427.36 Personnel Protection
- 427.37 Induced Current

VI. Skin-Effect Heating

- 427.45 Conductor Ampacity
- 427.46 Pull Boxes
- 427.47 Single Conductor in Enclosure
- 427.48 Grounding

VII. Control and Protection

- 427.55 Disconnecting Means
 - (A) Switch or Circuit Breaker
 - (B) Cord-and-Plug-Connected Equipment
- 427.56 Controls
 - (A) Temperature Control with “Off” Position
 - (B) Temperature Control Without “Off” Position
 - (C) Remote Temperature Controller
 - (D) Combined Switching Devices
- 427.57 Overcurrent Protection

ARTICLE 430 - Motors, Motor Circuits, and Controllers

I. General

- 430.1 Scope
- 430.2 Definitions
- 430.4 Part-Winding Motors
- 430.5 Other Articles
- 430.6 Ampacity and Motor Rating Determination
 - (A) General Motor Applications
 - (B) Torque Motors
 - (C) Alternating-Current Adjustable Voltage Motors
 - (D) Valve Actuator Motor Assemblies
- 430.7 Marking on Motors and Multimotor Equipment
 - (A) Usual Motor Applications
 - (B) Locked-Rotor Indicating Code Letters
 - (C) Torque Motors
 - (D) Multimotor and Combination-Load Equipment
- 430.8 Marking on Controllers
- 430.9 Terminals
 - (A) Markings
 - (B) Conductors
 - (C) Torque Requirements
- 430.10 Wiring Space in Enclosures
 - (A) General
 - (B) Wire-Bending Space in Enclosures
- 430.11 Protection Against Liquids
- 430.12 Motor Terminal Housings
 - (A) Material
 - (B) Dimensions and Space — Wire-to-Wire Connections
 - (C) Dimensions and Space — Fixed Terminal Connections
 - (D) Large Wire or Factory Connections
 - (E) Equipment Grounding Connections
- 430.13 Bushing
- 430.14 Location of Motors
 - (A) Ventilation and Maintenance
 - (B) Open Motors
- 430.16 Exposure to Dust Accumulations
- 430.17 Highest Rated or Smallest Rated Motor
- 430.18 Nominal Voltage of Rectifier Systems

II. Motor Circuit Conductors

- 430.21 General
- 430.22 Single Motor
 - (A) Direct-Current Motor-Rectifier Supplied
 - (B) Multispeed Motor
 - (C) Wye-Start, Delta-Run Motor
 - (D) Part-Winding Motor
 - (E) Other Than Continuous Duty
 - (F) Separate Terminal Enclosure
 - (G) Conductors for Small Motors
- 430.23 Wound-Rotor Secondary
 - (A) Continuous Duty
 - (B) Other Than Continuous Duty
 - (C) Resistor Separate from Controller
- 430.24 Several Motors or a Motor(s) and Other Load(s)
- 430.25 Multimotor and Combination-Load Equipment
- 430.26 Feeder Demand Factor
- 430.27 Capacitors with Motors
- 430.28 Feeder Taps
- 430.29 Constant Voltage Direct-Current Motors — Power Resistors

III. Motor and Branch-Circuit Overload Protection

- 430.31 General
- 430.32 Continuous-Duty Motors
 - (A) More Than 1 Horsepower
 - (B) One Horsepower or Less, Automatically Started
 - (C) Selection of Overload Device
 - (D) One Horsepower or Less, Nonautomatically Started
 - (E) Wound-Rotor Secondaries
- 430.33 Intermittent and Similar Duty
- 430.35 Shunting During Starting Period
 - (A) Nonautomatically Started
 - (B) Automatically Started
- 430.36 Fuses — In Which Conductor
- 430.37 Devices Other Than Fuses — In Which Conductor
- 430.38 Number of Conductors Opened by Overload Device
- 430.39 Motor Controller as Overload Protection
- 430.40 Overload Relays
- 430.42 Motors on General-Purpose Branch Circuits
 - (A) Not over 1 Horsepower
 - (B) Over 1 Horsepower
 - (C) Cord-and-Plug-Connected
 - (D) Time Delay
- 430.43 Automatic Restarting
- 430.44 Orderly Shutdown

IV. Motor Branch-Circuit Short-Circuit and Ground-Fault Protection

- 430.51 General
- 430.52 Rating or Setting for Individual Motor Circuit
 - (A) General
 - (B) All Motors
 - (C) Rating or Setting
 - (D) Torque Motors
- 430.53 Several Motors or Loads on One Branch Circuit
 - (A) Not Over 1 Horsepower
 - (B) If Smallest Rated Motor Protected
 - (C) Other Group Installations
 - (D) Single Motor Taps
- 430.54 Multimotor and Combination-Load Equipment
- 430.55 Combined Overcurrent Protection
- 430.56 Branch-Circuit Protective Devices — In Which Conductor

430.57 Size of Fuseholder
430.58 Rating of Circuit Breaker
V. Motor Feeder Short-Circuit and Ground-Fault Protection
430.61 General
430.62 Rating or Setting — Motor Load
(A) Specific Load
(B) Other Installations
430.63 Rating or Setting — Motor Load and Other Load(s)
VI. Motor Control Circuits
430.71 General
430.72 Overcurrent Protection
(A) General
(B) Conductor Protection
(C) Control Circuit Transformer
430.73 Protection of Conductors from Physical Damage
430.74 Electrical Arrangement of Control Circuits
430.75 Disconnection
(A) General
(B) Control Transformer in Controller Enclosure
VII. Motor Controllers
430.81 General
(A) Stationary Motor of $\frac{1}{8}$ Horsepower or Less
(B) Portable Motor of $\frac{1}{8}$ Horsepower or Less
430.82 Controller Design
(A) Starting and Stopping
(B) Autotransformer
(C) Rheostats
430.83 Ratings
(A) General
(B) Small Motors
(C) Stationary Motors of 2 Horsepower or Less
(D) Torque Motors
(E) Voltage Rating
430.84 Need Not Open All Conductors
430.85 In Grounded Conductors
430.87 Number of Motors Served by Each Controller
430.88 Adjustable-Speed Motors
430.89 Speed Limitation
430.90 Combination Fuseholder and Switch as Controller
VIII. Motor Control Centers
430.92 General
430.94 Overcurrent Protection
430.95 Service Equipment
430.96 Grounding
430.97 Busbars and Conductors
(A) Support and Arrangement
(B) Phase Arrangement
(C) Minimum Wire-Bending Space
(D) Spacings
(E) Barriers
430.98 Marking
(A) Motor Control Centers
(B) Motor Control Units
IX. Disconnecting Means
430.101 General
430.102 Location
(A) Controller
(B) Motor
430.103 Operation
430.104 To Be Indicating
430.105 Grounded Conductors
430.107 Readily Accessible

430.108 Every Disconnecting Means
430.109 Type
(A) General
(B) Stationary Motors of $\frac{1}{8}$ Horsepower or Less
(C) Stationary Motors of 2 Horsepower or Less
(D) Autotransformer-Type Controlled Motors
(E) Isolating Switches
(F) Cord-and-Plug-Connected Motors
(G) Torque Motors
430.110 Ampere Rating and Interrupting Capacity
(A) General
(B) For Torque Motors
(C) For Combination Loads
430.111 Switch or Circuit Breaker as Both Controller and Disconnecting Means
(A) General
(B) Type
430.112 Motors Served by Single Disconnecting Means
430.113 Energy from More Than One Source
X. Adjustable-Speed Drive Systems
430.120 General
430.122 Conductors — Minimum Size and Ampacity
(A) Branch/Feeder Circuit Conductors
(B) Bypass Device
430.124 Overload Protection
(A) Included in Power Conversion Equipment
(B) Bypass Circuits
(C) Multiple Motor Applications
430.126 Motor Overtemperature Protection
(A) General
(B) Multiple Motor Applications
(C) Automatic Restarting and Orderly Shutdown
430.128 Disconnecting Means
XI. Over 600 Volts, Nominal
430.221 General
430.222 Marking on Controllers
430.223 Raceway Connection to Motors
430.224 Size of Conductors
430.225 Motor-Circuit Overcurrent Protection
(A) General
(B) Overload Protection
(C) Fault-Current Protection
430.226 Rating of Motor Control Apparatus
430.227 Disconnecting Means
XII. Protection of Live Parts — All Voltages
430.231 General
430.232 Where Required
430.233 Guards for Attendants
XIII. Grounding — All Voltages
430.241 General
430.242 Stationary Motors
430.243 Portable Motors
430.244 Controllers
430.245 Method of Grounding
(A) Grounding Through Terminal Housings
(B) Separation of Junction Box from Motor
(C) Grounding of Controller-Mounted Devices
XIV. Tables

ARTICLE 440 - Air-Conditioning and Refrigerating Equipment

I. General

440.1 Scope
440.2 Definitions
440.3 Other Articles
(A) Article 430
(B) Articles 422, 424, or 430
(C) Article 422
(D) Other Applicable Articles
440.4 Marking on Hermetic Refrigerant Motor-Compressors and Equipment
(A) Hermetic Refrigerant Motor-Compressor Nameplate
(B) Multimotor and Combination-Load Equipment
(C) Branch-Circuit Selection Current
440.5 Marking on Controllers
440.6 Ampacity and Rating
(A) Hermetic Refrigerant Motor-Compressor
(B) Multimotor Equipment
440.7 Highest Rated (Largest) Motor
440.8 Single Machine
II. Disconnecting Means
440.11 General
440.12 Rating and Interrupting Capacity
(A) Hermetic Refrigerant Motor-Compressor
(B) Combination Loads
(C) Small Motor-Compressors
(D) Disconnecting Means
(E) Disconnecting Means Rated in Excess of 100 Horsepower
440.13 Cord-Connected Equipment
440.14 Location
III. Branch-Circuit Short-Circuit and Ground-Fault Protection
440.21 General
440.22 Application and Selection
(A) Rating or Setting for Individual Motor-Compressor
(B) Rating or Setting for Equipment
(C) Protective Device Rating Not to Exceed the Manufacturer's Values
IV. Branch-Circuit Conductors
440.31 General
440.32 Single Motor-Compressor
440.33 Motor-Compressor(s) With or Without Additional Motor Loads
440.34 Combination Load
440.35 Multimotor and Combination-Load Equipment
V. Controllers for Motor-Compressors
440.41 Rating
(A) Motor-Compressor Controller
(B) Controller Serving More Than One Load
VI. Motor-Compressor and Branch-Circuit Overload Protection
440.51 General
440.52 Application and Selection
(A) Protection of Motor-Compressor
(B) Protection of Motor-Compressor Control Apparatus and Branch-Circuit Conductors
440.53 Overload Relays
440.54 Motor-Compressors and Equipment on 15- or 20-Ampere Branch Circuits — Not Cord-and-Attachment-Plug-Connected
(A) Overload Protection
(B) Time Delay
440.55 Cord-and-Attachment-Plug-Connected Motor-Compressors and Equipment on 15- or 20-Ampere Branch Circuits

(A) Overload Protection
(B) Attachment Plug and Receptacle or Cord Connector Rating
(C) Time Delay
VII. Provisions for Room Air Conditioners
440.60 General
440.61 Grounding
440.62 Branch-Circuit Requirements
(A) Room Air Conditioner as a Single Motor Unit
(B) Where No Other Loads Are Supplied
(C) Where Lighting Units or Other Appliances Are Also Supplied
440.63 Disconnecting Means
440.64 Supply Cords
440.65 Leakage-Current Detector-Interrupter (LCDI) and Arc-Fault Circuit Interrupter (AFCI)

ARTICLE 445 - Generators

445.1 Scope
445.10 Location
445.11 Marking
445.12 Overcurrent Protection
(A) Constant-Voltage Generators
(B) Two-Wire Generators
(C) 65 Volts or Less
(D) Balancer Sets
(E) Three-Wire, Direct-Current Generators
445.13 Ampacity of Conductors
445.14 Protection of Live Parts
445.15 Guards for Attendants
445.16 Bushings
445.17 Generator Terminal Housings
445.18 Disconnecting Means Required for Generators
445.19 Generators Supplying Multiple Loads

ARTICLE 450 - Transformers and Transformer Vaults (Including Secondary Ties)

450.1 Scope
I. General Provisions
450.2 Definition
450.3 Overcurrent Protection
(A) Transformers Over 600 Volts, Nominal
(B) Transformers 600 Volts, Nominal, or Less
(C) Voltage Transformers
450.4 Autotransformers 600 Volts, Nominal, or Less
(A) Overcurrent Protection
(B) Transformer Field-Connected as an Autotransformer
450.5 Grounding Autotransformers
(A) Three-Phase, 4-Wire System
(B) Ground Reference for Fault Protection Devices
(C) Ground Reference for Damping Transitory Overvoltages
450.6 Secondary Ties
(A) Tie Circuits
(B) Overcurrent Protection for Secondary Connections
(C) Grounding
450.7 Parallel Operation
450.8 Guarding
(A) Mechanical Protection
(B) Case or Enclosure
(C) Exposed Energized Parts
(D) Voltage Warning

- 450.9 Ventilation
- 450.10 Grounding
- 450.11 Marking
- 450.12 Terminal Wiring Space
- 450.13 Accessibility
- (A) Open Installations
- (B) Hollow Space Installations
- 450.14 Disconnecting Means

II. Specific Provisions Applicable to Different Types of Transformers

- 450.21 Dry-Type Transformers Installed Indoors
- (A) Not over 112½ kVA
- (B) Over 112½ kVA
- (C) Over 35,000 Volts
- 450.22 Dry-Type Transformers Installed Outdoors
- 450.23 Less-Flammable Liquid-Insulated Transformers
- (A) Indoor Installations
- (B) Outdoor Installations
- 450.24 Nonflammable Fluid-Insulated Transformers
- 450.25 Askarel-Insulated Transformers Installed Indoors
- 450.26 Oil-Insulated Transformers Installed Indoors
- 450.27 Oil-Insulated Transformers Installed Outdoors
- 450.28 Modification of Transformers

III. Transformer Vaults

- 450.41 Location
- 450.42 Walls, Roofs, and Floors
- 450.43 Doorways
- (A) Type of Door
- (B) Sills
- (C) Locks
- 450.45 Ventilation Openings
- (A) Location
- (B) Arrangement
- (C) Size
- (D) Covering
- (E) Dampers
- (F) Ducts
- 450.46 Drainage
- 450.47 Water Pipes and Accessories
- 450.48 Storage in Vaults

ARTICLE 455 - Phase Converters

I. General

- 455.1 Scope
- 455.2 Definitions
- 455.3 Other Articles
- 455.4 Marking
- 455.5 Equipment Grounding Connection
- 455.6 Conductors
- (A) Ampacity
- (B) Manufactured Phase Marking
- 455.7 Overcurrent Protection
- (A) Variable Loads
- (B) Fixed Loads
- 455.8 Disconnecting Means

- (A) Location
- (B) Type
- (C) Rating
- (D) Voltage Ratios

- 455.9 Connection of Single-Phase Loads
- 455.10 Terminal Housings

II. Specific Provisions Applicable to Different Types of Phase Converters

- 455.20 Disconnecting Means
- 455.21 Start-Up
- 455.22 Power Interruption
- 455.23 Capacitors

ARTICLE 460 - Capacitors

- 460.1 Scope
- 460.2 Enclosing and Guarding
- (A) Containing More Than 11 L (3 gal) of Flammable Liquid
- (B) Accidental Contact
- I. 600 Volts, Nominal, and Under
- 460.6 Discharge of Stored Energy
- (A) Time of Discharge
- (B) Means of Discharge
- 460.8 Conductors
- (A) Ampacity
- (B) Overcurrent Protection
- (C) Disconnecting Means
- 460.9 Rating or Setting of Motor Overload Device
- 460.10 Grounding
- 460.12 Marking
- II. Over 600 Volts, Nominal
- 460.24 Switching
- (A) Load Current
- (B) Isolation
- (C) Additional Requirements for Series Capacitors
- 460.25 Overcurrent Protection
- (A) Provided to Detect and Interrupt Fault Current
- (B) Single Pole or Multiple Devices
- (C) Protected Individually or in Groups
- (D) Protective Devices Rated or Adjusted
- 460.26 Identification
- 460.27 Grounding
- 460.28 Means for Discharge
- (A) Means to Reduce the Residual Voltage
- (B) Connection to Terminals

ARTICLE 470 - Resistors and Reactors

I. 600 Volts, Nominal, and Under

- 470.1 Scope
- 470.2 Location
- 470.3 Space Separation
- 470.4 Conductor Insulation
- II. Over 600 Volts, Nominal
- 470.18 General
- (A) Protected Against Physical Damage
- (B) Isolated by Enclosure or Elevation
- (C) Combustible Materials
- (D) Clearances
- (E) Temperature Rise from Induced Circulating Currents
- 470.19 Grounding
- 470.20 Oil-Filled Reactors

ARTICLE 480 - Storage Batteries

- 480.1 Scope
- 480.2 Definitions
- 480.3 Wiring and Equipment Supplied from Batteries
- 480.4 Overcurrent Protection for Prime Movers
- 480.5 Disconnecting Means
- 480.6 Insulation of Batteries Not over 250 Volts
- (A) Vented Lead-Acid Batteries
- (B) Vented Alkaline-Type Batteries

- (C) Rubber Jars
- (D) Sealed Cells or Batteries
- 480.7 Insulation of Batteries of over 250 Volts
- 480.8 Racks and Trays
 - (A) Racks
 - (B) Trays
- 480.9 Battery Locations
 - (A) Ventilation
 - (B) Live Parts
 - (C) Working Space
- 480.10 Vents
 - (A) Vented Cells
 - (B) Sealed Cells

ARTICLE 490 - Equipment, Over 600 Volts, Nominal

- I. General
 - 490.1 Scope
 - 490.2 Definition
 - 490.3 Oil-Filled Equipment
- II. Equipment — Specific Provisions
 - 490.21 Circuit-Interrupting Devices
 - (A) Circuit Breakers
 - (B) Power Fuses and Fuseholders
 - (C) Distribution Cutouts and Fuse Links — Expulsion Type
 - (D) Oil-Filled Cutouts
 - (E) Load Interrupters
 - 490.22 Isolating Means
 - 490.23 Voltage Regulators
 - 490.24 Minimum Space Separation
- III. Equipment — Metal-Enclosed Power Switchgear and Industrial Control Assemblies
 - 490.30 General
 - 490.31 Arrangement of Devices in Assemblies
 - 490.32 Guarding of High-Voltage Energized Parts Within a Compartment
 - 490.33 Guarding of Energized Parts Operating at 600 Volts, Nominal, or Less Within Compartments
 - 490.34 Clearance for Cable Conductors Entering Enclosure
 - 490.35 Accessibility of Energized Parts
 - (A) High-Voltage Equipment
 - (B) Control Equipment
 - (C) High-Voltage Instruments or Control Transformers and Space Heaters
 - 490.36 Grounding
 - 490.37 Grounding of Devices
 - 490.38 Door Stops and Cover Plates
 - 490.39 Gas Discharge from Interrupting Devices
 - 490.40 Visual Inspection Windows
 - 490.41 Location of Industrial Control Equipment
 - (A) Control and Instrument Transfer Switch Handles or Push Buttons
 - (B) Infrequently Operated Devices
 - 490.42 Interlocks — Interrupter Switches
 - 490.43 Stored Energy for Opening
 - 490.44 Fused Interrupter Switches
 - (A) Supply Terminals
 - (B) Backfeed
 - (C) Switching Mechanism
 - 490.45 Circuit Breakers — Interlocks
 - (A) Circuit Breakers
 - (B) Mechanical Interlocks

- 490.46 Circuit Breaker Locking
- 490.47 Metal-Enclosed and Metal-Clad Service Equipment
- IV. Mobile and Portable Equipment
 - 490.51 General
 - (A) Covered
 - (B) Other Requirements
 - (C) Protection
 - (D) Disconnecting Means
 - 490.52 Overcurrent Protection
 - 490.53 Enclosures
 - 490.54 Collector Rings
 - 490.55 Power Cable Connections to Mobile Machines
 - 490.56 High-Voltage Portable Cable for Main Power Supply
 - V. Electrode-Type Boilers
 - 490.70 General
 - 490.71 Electrical Supply System
 - 490.72 Branch-Circuit Requirements
 - (A) Rating
 - (B) Common-Trip Fault-Interrupting Device
 - (C) Phase-Fault Protection
 - (D) Ground Current Detection
 - (E) Grounded Neutral Conductor
 - 490.73 Pressure and Temperature Limit Control
 - 490.74 Bonding

ARTICLE 500 - Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2

- 500.1 Scope — Articles 500 Through 504
- 500.2 Definitions
- 500.3 Other Articles
- 500.4 General
 - (A) Documentation
 - (B) Reference Standards
- 500.5 Classifications of Locations
 - (A) Classifications of Locations
 - (B) Class I Locations
 - (C) Class II Locations
 - (D) Class III Locations
- 500.6 Material Groups
 - (A) Class I Group Classifications
 - (B) Class II Group Classifications
- 500.7 Protection Techniques
 - (A) Explosionproof Equipment
 - (B) Dust Ignitionproof
 - (C) Dusttight
 - (D) Purged and Pressurized
 - (E) Intrinsic Safety
 - (F) Nonincendive Circuit
 - (G) Nonincendive Equipment
 - (H) Nonincendive Component
 - (I) Oil Immersion
 - (J) Hermetically Sealed
 - (K) Combustible Gas Detection System
 - (L) Other Protection Techniques
- 500.8 Equipment
 - (A) Suitability
 - (B) Approval for Class and Properties
 - (C) Marking
 - (D) Temperature
 - (E) Threading
 - (F) Optical Fiber Cables

500.9 Specific Occupancies

ARTICLE 501 - Class I Locations

I. General

501.1 Scope

501.5 Zone Equipment

II. Wiring

501.10 Wiring Methods

(A) Class I, Division 1

(B) Class I, Division 2

501.15 Sealing and Drainage

(A) Conduit Seals, Class I, Division 1

(B) Conduit Seals, Class I, Division 2

(C) Class I, Divisions 1 and 2

(D) Cable Seals, Class I, Division 1

(E) Cable Seals, Class I, Division 2

(F) Drainage

501.17 Process Sealing

501.20 Conductor Insulation, Class I, Divisions 1 and 2

501.25 Uninsulated Exposed Parts, Class I, Divisions 1 and 2

501.30 Grounding and Bonding, Class I, Divisions 1 and 2

(A) Bonding

(B) Types of Equipment Grounding Conductors

501.35 Surge Protection

(A) Class I, Division 1

(B) Class I, Division 2

501.40 Multiwire Branch Circuits

III. Equipment

501.100 Transformers and Capacitors

(A) Class I, Division 1

(B) Class I, Division 2

501.105 Meters, Instruments, and Relays

(A) Class I, Division 1

(B) Class I, Division 2

501.115 Switches, Circuit Breakers, Motor Controllers, and Fuses

(A) Class I, Division 1

(B) Class I, Division 2

501.120 Control Transformers and Resistors

(A) Class I, Division 1

(B) Class I, Division 2

501.125 Motors and Generators

(A) Class I, Division 1

(B) Class I, Division 2

501.130 Luminaires

(A) Class I, Division 1

(B) Class I, Division 2

501.135 Utilization Equipment

(A) Class I, Division 1

(B) Class I, Division 2

501.140 Flexible Cords, Class I, Divisions 1 and 2

(A) Permitted Uses

(B) Installation

501.145 Receptacles and Attachment Plugs, Class I, Divisions 1 and 2

501.150 Signaling, Alarm, Remote-Control, and Communications Systems

(A) Class I, Division 1

(B) Class I, Division 2

ARTICLE 502 - Class II Locations

I. General

502.1 Scope

502.5 Explosionproof Equipment

502.6 Zone Equipment

II. Wiring

502.10 Wiring Methods

(A) Class II, Division 1

(B) Class II, Division 2

502.15 Sealing, Class II, Divisions 1 and 2

502.25 Uninsulated Exposed Parts, Class II, Divisions 1 and 2

502.30 Grounding and Bonding, Class II, Divisions 1 and 2

(A) Bonding

(B) Types of Equipment Grounding Conductors

502.35 Surge Protection — Class II, Divisions 1 and 2

502.40 Multiwire Branch Circuits

III. Equipment

502.100 Transformers and Capacitors

(A) Class II, Division 1

(B) Class II, Division 2

502.115 Switches, Circuit Breakers, Motor Controllers, and Fuses

(A) Class II, Division 1

(B) Class II, Division 2

502.120 Control Transformers and Resistors

(A) Class II, Division 1

(B) Class II, Division 2

502.125 Motors and Generators

(A) Class II, Division 1

(B) Class II, Division 2

502.128 Ventilating Piping

(A) Class II, Division 1

(B) Class II, Division 2

502.130 Luminaires

(A) Class II, Division 1

(B) Class II, Division 2

502.135 Utilization Equipment

(A) Class II, Division 1

(B) Class II, Division 2

502.140 Flexible Cords — Class II, Divisions 1 and 2

502.145 Receptacles and Attachment Plugs

(A) Class II, Division 1

(B) Class II, Division 2

502.150 Signaling, Alarm, Remote-Control, and Communications Systems; and Meters, Instruments, and Relays

(A) Class II, Division 1

(B) Class II, Division 2

ARTICLE 503 - Class III Locations

I. General

503.1 Scope

503.5 General

503.6 Zone Equipment

II. Wiring

503.10 Wiring Methods

(A) Class III, Division 1

(B) Class III, Division 2

503.25 Uninsulated Exposed Parts, Class III, Divisions 1 and 2

503.30 Grounding and Bonding — Class III, Divisions 1 and 2

(A) Bonding

(B) Types of Equipment Grounding Conductors III. Equipment

503.100 Transformers and Capacitors — Class III, Divisions 1 and 2

503.115 Switches, Circuit Breakers, Motor Controllers, and Fuses — Class III, Divisions 1 and 2
503.120 Control Transformers and Resistors — Class III, Divisions 1 and 2
503.125 Motors and Generators — Class III, Divisions 1 and 2
503.128 Ventilating Piping — Class III, Divisions 1 and 2
503.130 Luminaires — Class III, Divisions 1 and 2
(A) Fixed Lighting
(B) Physical Damage
(C) Pendant Luminaires
(D) Portable Lighting Equipment
503.135 Utilization Equipment — Class III, Divisions 1 and 2
(A) Heaters
(B) Motors
(C) Switches, Circuit Breakers, Motor Controllers, and Fuses
503.140 Flexible Cords — Class III, Divisions 1 and 2
503.145 Receptacles and Attachment Plugs — Class III, Divisions 1 and 2
503.150 Signaling, Alarm, Remote-Control, and Local Loudspeaker Intercommunications Systems — Class III, Divisions 1 and 2
503.155 Electric Cranes, Hoists, and Similar Equipment — Class III, Divisions 1 and 2
(A) Power Supply
(B) Contact Conductors
(C) Current Collectors
(D) Control Equipment
503.160 Storage Battery Charging Equipment — Class III, Divisions 1 and 2

ARTICLE 504 - Intrinsically Safe Systems

504.1 Scope
504.2 Definitions
504.3 Application of Other Articles
504.4 Equipment
504.10 Equipment Installation
(A) Control Drawing
(B) Location
504.20 Wiring Methods
504.30 Separation of Intrinsically Safe Conductors
(A) From Nonintrinsically Safe Circuit Conductors
(B) From Different Intrinsically Safe Circuit Conductors
504.50 Grounding
(A) Intrinsically Safe Apparatus, Enclosures, and Raceways
(B) Associated Apparatus and Cable Shields
(C) Connection to Grounding Electrodes
504.60 Bonding
(A) Hazardous Locations
(B) Unclassified
504.70 Sealing
504.80 Identification
(A) Terminals
(B) Wiring
(C) Color Coding

ARTICLE 505 - Zone 0, 1, and 2

Locations

505.1 Scope
505.2 Definitions
505.3 Other Articles
505.4 General

(A) Documentation for Industrial Occupancies
(B) Reference Standards
505.5 Classifications of Locations
(A) Classification of Locations
(B) Class I, Zone 0, 1, and 2 Locations
505.6 Material Groups
(A) Group IIC
(B) Group IIB
(C) Group IIA
505.7 Special Precaution
(A) Implementation of Zone Classification System
(B) Dual Classification
(C) Reclassification Permitted
(D) Solid Obstacles
505.8 Protection Techniques
(A) Flameproof “d”
(B) Purged and Pressurized
(C) Intrinsic Safety
(D) Type of Protection “n”
(E) Oil Immersion “o”
(F) Increased Safety “e”
(G) Encapsulation “m”
(H) Powder Filling “q”
(I) Combustible Gas Detection System
505.9 Equipment
(A) Suitability
(B) Listing
(C) Marking
(D) Class I Temperature
(E) Threading
(F) Optical Fiber Cable
505.15 Wiring Methods
(A) Class I, Zone 0
(B) Class I, Zone 1
(C) Class I, Zone 2
505.16 Sealing and Drainage
(A) Zone 0
(B) Zone 1
(C) Zone 2
(D) Class I, Zones 0, 1, and 2
(E) Drainage
505.17 Flexible Cords, Class I, Zones 1 and 2
505.18 Conductors and Conductor Insulation
(A) Conductors
(B) Conductor Insulation
505.19 Uninsulated Exposed Parts
505.20 Equipment Requirements
(A) Zone 0
(B) Zone 1
(C) Zone 2
(D) Manufacturer’s Instructions
505.21 Multiwire Branch Circuits
505.22 Increased Safety “e” Motors and Generators
505.25 Grounding and Bonding
(A) Bonding
(B) Types of Equipment Grounding Conductors
505.26 Process Sealing

ARTICLE 506 - Zone 20, 21, and 22 Locations for Combustible Dusts or Ignitable Fibers/Flyings

506.1 Scope

506.2 Definitions

506.4 General

- (A) Documentation for Industrial Occupancies
- (B) Reference Standards

506.5 Classification of Locations

- (A) Classifications of Locations
- (B) Zone 20, Zone 21, and Zone 22 Locations

506.6 Special Precaution

- (A) Implementation of Zone Classification System
- (B) Dual Classification
- (C) Reclassification Permitted
- (D) Simultaneous Presence of Flammable Gases and Combustible Dusts or Fibers/Flyings

506.8 Protection Techniques

- (A) Dust Ignitionproof
- (B) Pressurized
- (C) Intrinsic Safety
- (D) Dusttight
- (E) Protection by “mD”
- (F) Nonincendive Circuit
- (G) Nonincendive Equipment
- (H) Protection by Enclosure “tD”
- (I) Protection by Pressurization “pD”
- (J) Protection by Intrinsic Safety “iD”

506.9 Equipment Requirements

- (A) Suitability
- (B) Listing
- (C) Marking
- (D) Temperature Classifications
- (E) Threading
- (F) Optical Fiber Cable

506.15 Wiring Methods

- (A) Zone 20
- (B) Zone 21
- (C) Zone 22

506.16 Sealing

506.17 Flexible Cords

506.20 Equipment Installation

- (A) Zone 20
- (B) Zone 21
- (C) Zone 22
- (D) Manufacturer’s Instructions
- (E) Temperature

506.21 Multiwire Branch Circuits

506.25 Grounding and Bonding

- (A) Bonding
- (B) Types of Equipment Grounding Conductors

ARTICLE 510 - Hazardous (Classified) Locations — Specific

510.1 Scope

510.2 General

ARTICLE 511 - Commercial Garages, Repair and Storage

511.1 Scope

511.2 Definitions

511.3 Area Classification, General

- (A) Parking Garages
- (B) Repair Garages, With Dispensing
- (C) Major Repair Garages
- (D) Minor Repair Garages

(E) Modifications to Classification

511.4 Wiring and Equipment in Class I Locations

- (A) Wiring Located in Class I Locations
- (B) Equipment Located in Class I Locations

511.7 Wiring and Equipment Installed Above Class I Locations

- (A) Wiring in Spaces Above Class I Locations
- (B) Electrical Equipment Installed Above Class I Locations

511.9 Sealing

511.10 Special Equipment

- (A) Battery Charging Equipment
- (B) Electric Vehicle Charging Equipment

511.12 Ground-Fault Circuit-Interrupter Protection for Personnel

511.16 Grounding and Bonding Requirements

- (A) General Grounding Requirements
- (B) Supplying Circuits with Grounded and Grounding Conductors in Class I Locations

ARTICLE 513 - Aircraft Hangars

513.1 Scope

513.2 Definitions

513.3 Classification of Locations

- (A) Below Floor Level
- (B) Areas Not Cut Off or Ventilated
- (C) Vicinity of Aircraft
- (D) Areas Suitably Cut Off and Ventilated

513.4 Wiring and Equipment in Class I Locations

- (A) General
- (B) Stanchions, Rostrums, and Docks

513.7 Wiring and Equipment Not Installed in Class I Locations

- (A) Fixed Wiring
- (B) Pendants
- (C) Arcing Equipment
- (D) Lampholders
- (E) Stanchions, Rostrums, or Docks
- (F) Mobile Stanchions

513.8 Underground Wiring

- (A) Wiring and Equipment Embedded, Under Slab, or Underground
- (B) Uninterrupted Raceways, Embedded, Under Slab, or Underground

513.9 Sealing

513.10 Special Equipment

- (A) Aircraft Electrical Systems
- (B) Aircraft Battery Charging and Equipment
- (C) External Power Sources for Energizing Aircraft
- (D) Mobile Servicing Equipment with Electrical Components
- (E) Portable Equipment

513.12 Ground-Fault Circuit-Interrupter Protection for Personnel

513.16 Grounding and Bonding Requirements

- (A) General Grounding Requirements
- (B) Supplying Circuits with Grounded and Grounding Conductors in Class I Locations

ARTICLE 514 - Motor Fuel Dispensing Facilities

514.1 Scope

514.2 Definition

514.3 Classification of Locations

- (A) Unclassified Locations

(B) Classified Locations

514.4 Wiring and Equipment Installed in Class I Locations

514.7 Wiring and Equipment Above Class I Locations

514.8 Underground Wiring

514.9 Sealing

(A) At Dispenser

(B) At Boundary

514.11 Circuit Disconnects

(A) General

(B) Attended Self-Service Motor Fuel Dispensing Facilities

(C) Unattended Self-Service Motor Fuel Dispensing Facilities

514.13 Provisions for Maintenance and Service of Dispensing Equipment

514.16 Grounding and Bonding

ARTICLE 515 - Bulk Storage Plants

515.1 Scope

515.2 Definition

515.3 Class I Locations

515.4 Wiring and Equipment Located in Class I Locations

515.7 Wiring and Equipment Above Class I Locations

(A) Fixed Wiring

(B) Fixed Equipment

(C) Portable Luminaires or Other Utilization Equipment

515.8 Underground Wiring

(A) Wiring Method

(B) Insulation

(C) Nonmetallic Wiring

515.9 Sealing

515.10 Special Equipment — Gasoline Dispensers

515.16 Grounding and Bonding

ARTICLE 516 - Spray Application, Dipping, and Coating Processes

516.1 Scope

516.2 Definitions

516.3 Classification of Locations

(A) Class I, Division 1 or Class I, Zone 0 Locations

(B) Class I or Class II, Division 1 Locations

(C) Class I or Class II, Division 2 Locations

(D) Enclosed Coating and Dipping Operations

(E) Adjacent Locations

(F) Unclassified Locations

516.4 Wiring and Equipment in Class I Locations

(A) Wiring and Equipment — Vapors

(B) Wiring and Equipment — Vapors and Residues

(C) Illumination

(D) Portable Equipment

(E) Electrostatic Equipment

516.7 Wiring and Equipment Not Within Class I and II Locations

(A) Wiring

(B) Equipment

516.10 Special Equipment

(A) Fixed Electrostatic Equipment

(B) Electrostatic Hand-Spraying Equipment

(C) Powder Coating

516.16 Grounding

ARTICLE 517 - Health Care Facilities

I. General

517.1 Scope

517.2 Definitions

II. Wiring and Protection

517.10 Applicability

(A) Applicability

(B) Not Covered

517.11 General Installation — Construction Criteria

517.12 Wiring Methods

517.13 Grounding of Receptacles and Fixed Electrical Equipment in Patient Care Areas

(A) Wiring Methods

(B) Insulated Equipment Grounding Conductor

517.14 Panelboard Bonding

517.16 Receptacles with Insulated Grounding Terminals

517.17 Ground-Fault Protection

(A) Applicability

(B) Feeders

(C) Selectivity

(D) Testing

517.18 General Care Areas

(A) Patient Bed Location

(B) Patient Bed Location Receptacles

(C) Pediatric Locations

517.19 Critical Care Areas

(A) Patient Bed Location Branch Circuits

(B) Patient Bed Location Receptacles

(C) Patient Care Vicinity Grounding and Bonding (Optional)

(D) Equipment Grounding and Bonding

(E) Additional Protective Techniques in Critical Care Areas (Optional)

(F) Isolated Power System Equipment Grounding

(G) Special-Purpose Receptacle Grounding

517.20 Wet Procedure Locations

(A) Receptacles and Fixed Equipment

(B) Isolated Power Systems

517.21 Ground-Fault Circuit-Interrupter Protection for Personnel

III. Essential Electrical System

517.25 Scope

517.26 Application of Other Articles

517.30 Essential Electrical Systems for Hospitals

(A) Applicability

(B) General

(C) Wiring Requirements

(D) Capacity of Systems

(E) Receptacle Identification

517.31 Emergency System

517.32 Life Safety Branch

(A) Illumination of Means of Egress

(B) Exit Signs

(C) Alarm and Alerting Systems

(D) Communications Systems

(E) Generator Set and Transfer Switch Locations

(F) Generator Set Accessories

(G) Elevators

(H) Automatic Doors

517.33 Critical Branch

(A) Task Illumination and Selected Receptacles

(B) Subdivision of the Critical Branch

517.34 Equipment System Connection to Alternate Power Source

(A) Equipment for Delayed Automatic Connection

(B) Equipment for Delayed Automatic or Manual Connection

(C) AC Equipment for Nondelayed Automatic Connection

517.35 Sources of Power
(A) Two Independent Sources of Power
(B) Alternate Source of Power
(C) Location of Essential Electrical System Components
517.40 Essential Electrical Systems for Nursing Homes and Limited Care Facilities
(A) Applicability
(B) Inpatient Hospital Care Facilities
(C) Facilities Contiguous or Located on the Same Site with Hospitals
517.41 Essential Electrical Systems
(A) General
(B) Transfer Switches
(C) Capacity of System
(D) Separation from Other Circuits
(E) Receptacle Identification
517.42 Automatic Connection to Life Safety Branch
(A) Illumination of Means of Egress
(B) Exit Signs
(C) Alarm and Alerting Systems
(D) Communications Systems
(E) Dining and Recreation Areas
(F) Generator Set Location
(G) Elevators
517.43 Connection to Critical Branch
(A) Delayed Automatic Connection
(B) Delayed Automatic or Manual Connection
517.44 Sources of Power
(A) Two Independent Sources of Power
(B) Alternate Source of Power
(C) Location of Essential Electrical System Components
517.45 Essential Electrical Systems for Other Health Care Facilities
(A) Essential Electrical Distribution
(B) Electrical Life Support Equipment
(C) Critical Care Areas
(D) Power Systems
IV. Inhalation Anesthetizing Locations
517.60 Anesthetizing Location Classification
(A) Hazardous (Classified) Location
(B) Other-Than-Hazardous (Classified) Location
517.61 Wiring and Equipment
(A) Within Hazardous (Classified) Anesthetizing Locations
(B) Above Hazardous (Classified) Anesthetizing Locations
(C) Other-Than-Hazardous (Classified) Anesthetizing Locations
517.62 Grounding
517.63 Grounded Power Systems in Anesthetizing Locations
(A) Battery-Powered Lighting Units
(B) Branch-Circuit Wiring
(C) Fixed Lighting Branch Circuits
(D) Remote-Control Stations
(E) Location of Isolated Power Systems
(F) Circuits in Anesthetizing Locations
517.64 Low-Voltage Equipment and Instruments
(A) Equipment Requirements
(B) Power Supplies
(C) Isolated Circuits
(D) Controls
(E) Battery-Powered Appliances
(F) Receptacles or Attachment Plugs
V. X-Ray Installations

517.71 Connection to Supply Circuit
(A) Fixed and Stationary Equipment
(B) Portable, Mobile, and Transportable Equipment
(C) Over 600-Volt Supply
517.72 Disconnecting Means
(A) Capacity
(B) Location
(C) Portable Equipment
517.73 Rating of Supply Conductors and Overcurrent Protection
(A) Diagnostic Equipment
(B) Therapeutic Equipment
517.74 Control Circuit Conductors
(A) Number of Conductors in Raceway
(B) Minimum Size of Conductors
517.75 Equipment Installations
517.76 Transformers and Capacitors
517.77 Installation of High-Tension X-Ray Cables
517.78 Guarding and Grounding
(A) High-Voltage Parts
(B) Low-Voltage Cables
(C) Non-Current-Carrying Metal Parts
VI. Communications, Signaling Systems, Data Systems, Fire Alarm Systems, and Systems Less Than 120 Volts, Nominal
517.80 Patient Care Areas
517.81 Other-Than-Patient-Care Areas
517.82 Signal Transmission Between Appliances
(A) General
(B) Common Signal Grounding Wire
VII. Isolated Power Systems
517.160 Isolated Power Systems
(A) Installations
(B) Line Isolation Monitor

ARTICLE 518 - Assembly Occupancies

518.1 Scope
518.2 General Classification
(A) Examples
(B) Multiple Occupancies
(C) Theatrical Areas
518.3 Other Articles
(A) Hazardous (Classified) Areas
(B) Temporary Wiring
(C) Emergency Systems
518.4 Wiring Methods
(A) General
(B) Nonrated Construction
(C) Spaces with Finish Rating
518.5 Supply

ARTICLE 520 - Theaters, Audience Areas of Motion Picture and Television Studios Performance Areas, and Similar Locations

I. General
520.1 Scope
520.2 Definitions
520.3 Motion Picture Projectors
520.4 Audio Signal Processing, Amplification, and Reproduction Equipment

520.5 Wiring Methods
(A) General
(B) Portable Equipment
(C) Nonrated Construction
520.6 Number of Conductors in Raceway
520.7 Enclosing and Guarding Live Parts
520.8 Emergency Systems
520.9 Branch Circuits
520.10 Portable Equipment Used Outdoors
II. Fixed Stage Switchboards
520.21 Dead Front
520.22 Guarding Back of Switchboard
520.23 Control and Overcurrent Protection of Receptacle Circuits
520.24 Metal Hood
520.25 Dimmers
(A) Disconnection and Overcurrent Protection
(B) Resistance- or Reactor-Type Dimmers
(C) Autotransformer-Type Dimmers
(D) Solid-State-Type Dimmers
520.26 Type of Switchboard
(A) Manual
(B) Remotely Controlled
(C) Intermediate
520.27 Stage Switchboard Feeders
(A) Type of Feeder
(B) Neutral Conductor
(C) Supply Capacity
III. Fixed Stage Equipment Other Than Switchboards
520.41 Circuit Loads
(A) Circuits Rated 20 Amperes or Less
(B) Circuits Rated Greater Than 20 Amperes
520.42 Conductor Insulation
520.43 Footlights
(A) Metal Trough Construction
(B) Other-Than-Metal Trough Construction
(C) Disappearing Footlights
520.44 Borders, Proscenium Sidelights, Drop Boxes, and Connector Strips
(A) General
(B) Connector Strips and Drop Boxes
(C) Cords and Cables for Border Lights, Drop Boxes, and Connector Strips
520.45 Receptacles
520.46 Connector Strips, Drop Boxes, Floor Pockets, and Other Outlet Enclosures
520.47 Backstage Lamps (Bare Bulbs)
520.48 Curtain Machines
520.49 Smoke Ventilator Control
IV. Portable Switchboards on Stage
520.50 Road Show Connection Panel (A Type of Patch Panel)
(A) Load Circuits
(B) Circuit Transfer
(C) Overcurrent Protection
(D) Enclosure
520.51 Supply
520.52 Overcurrent Protection for Branch Circuits
520.53 Construction and Feeders
(A) Enclosure
(B) Energized Parts
(C) Switches and Circuit Breakers
(D) Circuit Protection

(E) Dimmers
(F) Interior Conductors
(G) Pilot Light
(H) Supply Conductors
(I) Cable Arrangement
(J) Number of Supply Interconnections
(K) Single-Pole Separable Connectors
(L) Protection of Supply Conductors and Connectors
(M) Flanged Surface Inlets
(N) Terminals
(O) Neutral Conductor
(P) Qualified Personnel
V. Portable Stage Equipment Other Than Switchboards
520.61 Arc Lamps
520.62 Portable Power Distribution Units
(A) Enclosure
(B) Receptacles and Overcurrent Protection
(C) Busbars and Terminals
(D) Flanged Surface Inlets
(E) Cable Arrangement
520.63 Bracket Fixture Wiring
(A) Bracket Wiring
(B) Mounting
520.64 Portable Strips
520.65 Festoons
520.66 Special Effects
520.67 Multipole Branch-Circuit Cable Connectors
520.68 Conductors for Portables
(A) Conductor Type
(B) Conductor Ampacity
520.69 Adapters
(A) No Reduction in Current Rating
(B) Connectors
(C) Conductor Type
VI. Dressing Rooms
520.71 Pendant Lampholders
520.72 Lamp Guards
520.73 Switches Required
VII. Grounding
520.81 Grounding

ARTICLE 522 - Control Systems for Permanent Amusement Attractions

I. General
522.1 Scope
522.2 Definitions
522.5 Voltage Limitations
522.7 Maintenance
II. Control Circuits
522.10 Power Sources for Control Circuits
(A) Power-Limited Control Circuits
(B) Non-Power-Limited Control Circuits
III. Control Circuit Wiring Methods
522.20 Conductors, Busbars, and Slip Rings
522.21 Conductor Sizing
(A) Conductors Within a Listed Component or Assembly
(B) Conductors Within an Enclosure or Operator Station
(C) Conductors Outside of an Enclosure or Operator Station
522.22 Conductor Ampacity
522.23 Overcurrent Protection for Conductors
522.24 Conductors of Different Circuits in the Same Cable, Cable Tray, Enclosure, or Raceway

- (A) Two or More Control Circuits
- (B) Control Circuits with Power Circuits
- 522.25 Ungrounded Control Circuits
- 522.28 Control Circuits in Wet Locations

ARTICLE 525 - Carnivals, Circuses, Fairs, and Similar Events

I. General Requirements

525.1 Scope

525.2 Definitions

525.3 Other Articles

(A) Portable Wiring and Equipment

(B) Permanent Structures

(C) Audio Signal Processing, Amplification, and Reproduction Equipment

(D) Attractions Utilizing Pools, Fountains, and Similar Installations with Contained Volumes of Water

525.5 Overhead Conductor Clearances

(A) Vertical Clearances

(B) Clearance to Portable Structures

525.6 Protection of Electrical Equipment

II. Power Sources

525.10 Services

(A) Guarding

(B) Mounting and Location

525.11 Multiple Sources of Supply

III. Wiring Methods

525.20 Wiring Methods

(A) Type

(B) Single-Conductor

(C) Open Conductors

(D) Splices

(E) Cord Connectors

(F) Support

(G) Protection

(H) Boxes and Fittings

525.21 Rides, Tents and Concessions

(A) Disconnecting Means

(B) Portable Wiring Inside Tents and Concessions

525.22 Portable Distribution or Termination Boxes

(A) Construction

(B) Busbars and Terminals

(C) Receptacles and Overcurrent Protection

(D) Single-Pole Connectors

525.23 Ground-Fault Circuit-Interrupter (GFCI) Protection

(A) Where GFCI Protection Is Required

(B) Where GFCI Protection Is Not Required

(C) Where GFCI Protection Is Not Permitted

IV. Grounding and Bonding

525.30 Equipment Bonding

525.31 Equipment Grounding

525.32 Grounding Conductor Continuity Assurance(F) Support

(G) Protection

(H) Boxes and Fittings

525.21 Rides, Tents and Concessions

(A) Disconnecting Means

(B) Portable Wiring Inside Tents and Concessions

525.22 Portable Distribution or Termination Boxes

(A) Construction

(B) Busbars and Terminals

(C) Receptacles and Overcurrent Protection

(D) Single-Pole Connectors

525.23 Ground-Fault Circuit-Interrupter (GFCI) Protection

(A) Where GFCI Protection Is Required

(B) Where GFCI Protection Is Not Required

(C) Where GFCI Protection Is Not Permitted

IV. Grounding and Bonding

525.30 Equipment Bonding

525.31 Equipment Grounding

525.32 Grounding Conductor Continuity Assurance

ARTICLE 530 - Motion Picture and Television Studios and Similar Locations

I. General

530.1 Scope

530.2 Definitions

530.6 Portable Equipment

II. Stage or Set

530.11 Permanent Wiring

530.12 Portable Wiring

(A) Stage Set Wiring

(B) Stage Effects and Electrical Equipment Used as Stage Properties

(C) Other Electrical Equipment

530.13 Stage Lighting and Effects Control

530.14 Plugging Boxes

530.15 Enclosing and Guarding Live Parts

(A) Live Parts

(B) Switches

(C) Rheostats

(D) Current-Carrying Parts

530.16 Portable Luminaires

530.17 Portable Arc Lamps

(A) Portable Carbon Arc Lamps

(B) Portable Noncarbon Arc Electric-Discharge Lamps

530.18 Overcurrent Protection — General

(A) Stage Cables

(B) Feeders

(C) Cable Protection

(D) Location Boards

(E) Plugging Boxes

(F) Alternating-Current Power Distribution Boxes

(G) Lighting

530.19 Sizing of Feeder Conductors for Television Studio Sets

(A) General

(B) Portable Feeders

530.20 Grounding

530.21 Plugs and Receptacles

(A) Rating

(B) Interchangeability

530.22 Single-Pole Separable Connectors

(A) General

(B) Interchangeability

530.23 Branch Circuits

III. Dressing Rooms

530.31 Dressing Rooms

IV. Viewing, Cutting, and Patching Tables

530.41 Lamps at Tables

V. Cellulose Nitrate Film Storage Vaults

530.51 Lamps in Cellulose Nitrate Film Storage Vaults

530.52 Electrical Equipment in Cellulose Nitrate Film Storage Vaults

VI. Substations

530.61 Substations

530.62 Portable Substations

530.63 Overcurrent Protection of Direct-Current Generators

530.64 Direct-Current Switchboards

(A) General

(B) Circuit Breaker Frames

ARTICLE 540 - Motion Picture

Projection Rooms

I. General

540.1 Scope

540.2 Definitions

II. Equipment and Projectors of the Professional Type

540.10 Motion Picture Projection Room Required

540.11 Location of Associated Electrical Equipment

(A) Motor Generator Sets, Transformers, Rectifiers, Rheostats, and Similar Equipment

(B) Switches, Overcurrent Devices, or Other Equipment

(C) Emergency Systems

540.12 Work Space

540.13 Conductor Size

540.14 Conductors on Lamps and Hot Equipment

540.15 Flexible Cords

540.20 Listing Requirements

540.21 Marking

III. Nonprofessional Projectors

540.31 Motion Picture Projection Room Not Required

540.32 Listing Requirements

IV. Audio Signal Processing, Amplification, and Reproduction Equipment

540.50 Audio Signal Processing, Amplification, and Reproduction Equipment

ARTICLE 545 - Manufactured Buildings

545.1 Scope

545.2 Definitions

545.4 Wiring Methods

(A) Methods Permitted

(B) Securing Cables

545.5 Supply Conductors

545.6 Installation of Service-Entrance Conductors

545.7 Service Equipment

545.8 Protection of Conductors and Equipment

545.9 Boxes

(A) Other Dimensions

(B) Not Over 1650 cm³ (100 in.³)

545.10 Receptacle or Switch with Integral Enclosure

545.11 Bonding and Grounding

545.12 Grounding Electrode Conductor

545.13 Component Interconnections

ARTICLE 547 - Agricultural Buildings

547.1 Scope

(A) Excessive Dust and Dust with Water

(B) Corrosive Atmosphere

547.2 Definitions

547.3 Other Articles

547.4 Surface Temperatures

547.5 Wiring Methods

(A) Wiring Systems

(B) Mounting

(C) Equipment Enclosures, Boxes, Conduit Bodies, and Fittings

(D) Flexible Connections

(E) Physical Protection

(F) Separate Equipment Grounding Conductor

(G) Receptacles

547.6 Switches, Receptacles, Circuit Breakers, Controllers, and Fuses

547.7 Motors

547.8 Luminaires

(A) Minimize the Entrance of Dust

(B) Exposed to Physical Damage

(C) Exposed to Water

547.9 Electrical Supply to Building(s) or Structure(s) from a Distribution Point

(A) Site-Isolating Device

(B) Service Disconnecting Means and Overcurrent Protection at the Building(s) or Structure(s)

(C) Service Disconnecting Means and Overcurrent Protection at the Distribution Point

(D) Identification

547.10 Equipotential Planes and Bonding of Equipotential Planes

(A) Where Required

(B) Bonding

ARTICLE 550

Mobile Homes, Manufactured Homes, and Mobile Home Parks

I. General

550.1 Scope

550.2 Definitions

550.4 General Requirements

(A) Mobile Home Not Intended as a Dwelling Unit

(B) In Other Than Mobile Home Parks

(C) Connection to Wiring System

(D) Listed or Labeled

II. Mobile and Manufactured Homes

550.10 Power Supply

(A) Feeder

(B) Power-Supply Cord

(C) Attachment Plug Cap

(D) Overall Length of a Power-Supply Cord

(E) Marking

(F) Point of Entrance

(G) Protected

(H) Protection Against Corrosion and Mechanical Damage

(I) Mast Weatherhead or Raceway

550.11 Disconnecting Means and Branch-Circuit Protective Equipment

(A) Disconnecting Means

(B) Branch-Circuit Protective Equipment

(C) Two-Pole Circuit Breakers

(D) Electrical Nameplates

550.12 Branch Circuits

(A) Lighting

(B) Small Appliances

(C) Laundry Area

(D) General Appliances

(E) Bathrooms

550.13 Receptacle Outlets

(A) Grounding-Type Receptacle Outlets

- (B) Ground-Fault Circuit Interrupters (GFCI)
- (C) Cord-Connected Fixed Appliance
- (D) Receptacle Outlets Required
- (E) Pipe Heating Cable(s) Outlet
- (F) Receptacle Outlets Not Permitted
- (G) Receptacle Outlets Not Required
- 550.14** Luminaires and Appliances
 - (A) Fasten Appliances in Transit
 - (B) Accessibility
 - (C) Pendants
 - (D) Bathtub and Shower Luminaires
- 550.15** Wiring Methods and Materials
 - (A) Nonmetallic Boxes
 - (B) Nonmetallic Cable Protection
 - (C) Metal-Covered and Nonmetallic Cable Protection
 - (D) Metal Faceplates
 - (E) Installation Requirements
 - (F) Raceways
 - (G) Switches
 - (H) Under-Chassis Wiring (Exposed to Weather)
 - (I) Boxes, Fittings, and Cabinets
 - (J) Appliance Terminal Connections
 - (K) Component Interconnections
- 550.16** Grounding
 - (A) Grounded Conductor
 - (B) Equipment Grounding Means
 - (C) Bonding of Non-Current-Carrying Metal Parts
- 550.17** Testing
 - (A) Dielectric Strength Test
 - (B) Continuity and Operational Tests and Polarity Checks
- 550.18** Calculations
 - (A) Lighting, Small-Appliance, and Laundry Load
 - (B) Total Load for Determining Power Supply
 - (C) Optional Method of Calculation for Lighting and Appliance Load
- 550.19** Interconnection of Multiple-Section Mobile or Manufactured Home Units
 - (A) Wiring Methods
 - (B) Disconnecting Means
- 550.20** Outdoor Outlets, Luminaires, Air-Cooling Equipment, and So Forth
 - (A) Listed for Outdoor Use
 - (B) Outside Heating Equipment, Air-Conditioning Equipment, or Both
- 550.25** Arc-Fault Circuit-Interrupter Protection
 - (A) Definition
 - (B) Mobile Homes and Manufactured Homes
- III. Services and Feeders
 - 550.30** Distribution System
 - 550.31** Allowable Demand Factors
 - 550.32** Service Equipment
 - (A) Mobile Home Service Equipment
 - (B) Manufactured Home Service Equipment
 - (C) Rating
 - (D) Additional Outside Electrical Equipment
 - (E) Additional Receptacles
 - (F) Mounting Height
 - (G) Marking
 - 550.33** Feeder
 - (A) Feeder Conductors
 - (B) Feeder Capacity

ARTICLE 551 - Recreational Vehicles and Recreational Vehicle Parks

- I. General
 - 551.1** Scope
 - 551.2** Definitions
 - 551.4** General Requirements
 - (A) Not Covered
 - (B) Systems
- II. Combination Electrical Systems
 - 551.20** Combination Electrical Systems
 - (A) General
 - (B) Voltage Converters (120-Volt Alternating Current to Low-Voltage Direct Current)
 - (C) Bonding Voltage Converter Enclosures
 - (D) Dual-Voltage Fixtures, Including Luminaires or Appliances
 - (E) Autotransformers
 - (F) Receptacles and Plug Caps
- III. Other Power Sources
 - 551.30** Generator Installations
 - (A) Mounting
 - (B) Generator Protection
 - (C) Installation of Storage Batteries and Generators
 - (D) Ventilation of Generator Compartments
 - (E) Supply Conductors
 - 551.31** Multiple Supply Source
 - (A) Multiple Supply Sources
 - (B) Multiple Supply Sources Capacity
 - (C) Alternate Power Sources Exceeding 30 Amperes
 - (D) Power-Supply Assembly Not Less Than 30 Amperes
 - 551.32** Other Sources
 - 551.33** Alternate Source Restrictions
- IV. Nominal 120-Volt or 120/240-Volt Systems
 - 551.40** 120-Volt or 120/240-Volt, Nominal, Systems
 - (A) General Requirements
 - (B) Materials and Equipment
 - (C) Ground-Fault Circuit-Interrupter Protection
 - 551.41** Receptacle Outlets Required
 - (A) Spacing
 - (B) Location
 - (C) Ground-Fault Circuit-Interrupter Protection
 - (D) Face-Up Position
 - 551.42** Branch Circuits Required
 - (A) One 15-Ampere Circuit
 - (B) One 20-Ampere Circuit
 - (C) Two to Five 15- or 20-Ampere Circuits
 - (D) More Than Five Circuits Without a Listed Energy Management System
 - 551.43** Branch-Circuit Protection
 - (A) Rating
 - (B) Protection for Smaller Conductors
 - (C) Fifteen-Ampere Receptacle Considered Protected by 20 Amperes
 - 551.44** Power-Supply Assembly
 - (A) Fifteen-Ampere Main Power-Supply Assembly
 - (B) Twenty-Ampere Main Power-Supply Assembly
 - (C) Thirty-Ampere Main Power-Supply Assembly
 - (D) Fifty-Ampere Power-Supply Assembly
 - 551.45** Distribution Panelboard
 - (A) Listed and Appropriately Rated
 - (B) Location

(C) Dead-Front Type
551.46 Means for Connecting to Power Supply
(A) Assembly
(B) Cord
(C) Attachment Plugs
(D) Labeling at Electrical Entrance
(E) Location
551.47 Wiring Methods
(A) Wiring Systems
(B) Conduit and Tubing
(C) Nonmetallic Boxes
(D) Boxes
(E) Mounting
(F) Raceway and Cable Continuity
(G) Protected
(H) Bends
(I) Cable Supports
(J) Nonmetallic Box Without Cable Clamps
(K) Physical Damage
(L) Receptacle Faceplates
(M) Metal Faceplates Grounded
(N) Moisture or Physical Damage
(O) Component Interconnections
(P) Method of Connecting Expandable Units
(Q) Prewiring for Air-Conditioning Installation
(R) Prewiring for Generator Installation
(S) Prewiring for Other Circuits
551.48 Conductors and Boxes
551.49 Grounded Conductors
551.50 Connection of Terminals and Splices
551.51 Switches
(A) Rating
(B) Location
551.52 Receptacles
551.53 Luminaires
(A) General
(B) Shower Luminaires
(C) Outdoor Outlets, Luminaires, Air-Cooling Equipment, and So On
551.54 Grounding
(A) Power-Supply Grounding
(B) Distribution Panelboard
(C) Insulated Grounded Conductor (Neutral Conductor)
551.55 Interior Equipment Grounding
(A) Exposed Metal Parts
(B) Equipment Grounding and Bonding Conductors
(C) Grounding of Electrical Equipment
(D) Grounding Connection in Nonmetallic Box
(E) Grounding Continuity
(F) Cord-Connected Appliances
551.56 Bonding of Non-Current-Carrying Metal Parts
(A) Required Bonding
(B) Bonding Chassis
(C) Bonding Conductor Requirements
(D) Metallic Roof and Exterior Bonding
(E) Gas, Water, and Waste Pipe Bonding
(F) Furnace and Metal Air Duct Bonding
551.57 Appliance Accessibility and Fastening
V. Factory Tests
551.60 Factory Tests (Electrical)
VI. Recreational Vehicle Parks
551.71 Type Receptacles Provided

551.72 Distribution System
551.73 Calculated Load
(A) Basis of Calculations
(B) Transformers and Secondary Distribution Panelboards
(C) Demand Factors
(D) Feeder-Circuit Capacity
551.74 Overcurrent Protection
551.75 Grounding
551.76 Grounding — Recreational Vehicle Site Supply Equipment
(A) Exposed Non-Current-Carrying Metal Parts
(B) Secondary Distribution System
(C) Grounded Conductor Not to Be Used as an Equipment Ground
(D) No Connection on the Load Side
551.77 Recreational Vehicle Site Supply Equipment
(A) Location
(B) Disconnecting Means
(C) Access
(D) Mounting Height
(E) Working Space
(F) Marking
551.78 Protection of Outdoor Equipment
(A) Wet Locations
(B) Meters
551.79 Clearance for Overhead Conductors
551.80 Underground Service, Feeder, Branch-Circuit, and Recreational Vehicle Site Feeder-Circuit Conductors
(A) General
(B) Protection Against Physical Damage
551.81 Receptacles

ARTICLE 552 - Park Trailers

I. General
552.1 Scope
552.2 Definition
552.4 General Requirements
II. Low-Voltage Systems
552.10 Low-Voltage Systems
(A) Low-Voltage Circuits
(B) Low-Voltage Wiring
(C) Low-Voltage Wiring Methods
(D) Battery Installations
(E) Overcurrent Protection
(F) Switches
(G) Luminaires
III. Combination Electrical Systems
552.20 Combination Electrical Systems
(A) General
(B) Voltage Converters (120-Volt Alternating Current to Low-Voltage Direct Current)
(C) Bonding Voltage Converter Enclosures
(D) Dual-Voltage Fixtures Including Luminaires or Appliances
(E) Autotransformers
(F) Receptacles and Plug Caps
IV. Nominal 120-Volt or 120/240-Volt Systems
552.40 120-Volt or 120/240-Volt, Nominal, Systems
(A) General Requirements
(B) Materials and Equipment
552.41 Receptacle Outlets Required
(A) Spacing
(B) Location

- (C) Ground-Fault Circuit-Interrupter Protection
- (D) Pipe Heating Cable Outlet
- (E) Outdoor Receptacle Outlets
- (F) Receptacle Outlets Not Permitted
- 552.43** Power Supply
 - (A) Feeder
 - (B) Power-Supply Cord
 - (C) Mast Weatherhead or Raceway
- 552.44** Cord
 - (A) Permanently Connected
 - (B) Cord Length
 - (C) Attachment Plugs
 - (D) Labeling at Electrical Entrance
 - (E) Location
- 552.45** Distribution Panelboard
 - (A) Listed and Appropriately Rated
 - (B) Location
 - (C) Dead-Front Type
- 552.46** Branch Circuits
 - (A) Two to Five 15- or 20-Ampere Circuits
 - (B) More Than Five Circuits
- 552.47** Calculations
 - (A) Lighting and Small-Appliance Load
 - (B) Total Load for Determining Power Supply
 - (C) Optional Method of Calculation for Lighting and Appliance Load
- 552.48** Wiring Methods
 - (A) Wiring Systems
 - (B) Conduit and Tubing
 - (C) Nonmetallic Boxes
 - (D) Boxes
 - (E) Mounting
 - (F) Cable Sheath
 - (G) Protected
 - (H) Cable Supports
 - (I) Nonmetallic Box Without Cable Clamps
 - (J) Physical Damage
 - (K) Receptacle Faceplates
 - (L) Metal Faceplates Grounded
 - (M) Moisture or Physical Damage
 - (N) Component Interconnections
 - (O) Method of Connecting Expandable Units
 - (P) Prewiring for Air-Conditioning Installation
- 552.49** Maximum Number of Conductors in Boxes
- 552.50** Grounded Conductors
- 552.51** Connection of Terminals and Splices
- 552.52** Switches
 - (A) Lighting Circuits
 - (B) Motors or Other Loads
- 552.53** Receptacles
- 552.54** Luminaires
 - (A) General
 - (B) Shower Luminaires
 - (C) Outdoor Outlets, Luminaires, Air-Cooling Equipment, and So On
- 552.55** Grounding
 - (A) Power-Supply Grounding
 - (B) Distribution Panelboard
 - (C) Insulated Grounded Conductor
- 552.56** Interior Equipment Grounding
 - (A) Exposed Metal Parts
 - (B) Equipment Grounding Conductors

- (C) Grounding of Electrical Equipment
- (D) Grounding Connection in Nonmetallic Box
- (E) Grounding Continuity
- (F) Cord-Connected Appliances
- 552.57** Bonding of Non-Current-Carrying Metal Parts
 - (A) Required Bonding
 - (B) Bonding Chassis
 - (C) Bonding Conductor Requirements
 - (D) Metallic Roof and Exterior Bonding
 - (E) Gas, Water, and Waste Pipe Bonding
 - (F) Furnace and Metal Air Duct Bonding
- 552.58** Appliance Accessibility and Fastening
- 552.59** Outdoor Outlets, Fixtures, Including Luminaires, Air-Cooling Equipment, and So On
 - (A) Listed for Outdoor Use
 - (B) Outside Heating Equipment, Air-Conditioning Equipment, or Both
- V. Factory Tests
- 552.60** Factory Tests (Electrical)
 - (A) Circuits of 120 Volts or 120/240 Volts
 - (B) Low-Voltage Circuits

ARTICLE 553 - Floating Buildings

- I. General
 - 553.1** Scope
 - 553.2** Definition
- II. Services and Feeders
 - 553.4** Location of Service Equipment
 - 553.5** Service Conductors
 - 553.6** Feeder Conductors
 - 553.7** Installation of Services and Feeders
 - (A) Flexibility
 - (B) Wiring Methods
- III. Grounding
 - 553.8** General Requirements
 - (A) Grounding of Electrical and Nonelectrical Parts
 - (B) Installation and Connection of Equipment Grounding Conductor
 - (C) Identification of Equipment Grounding Conductor
 - (D) Grounding Electrode Conductor Connection
 - 553.9** Insulated Neutral
 - 553.10** Equipment Grounding
 - (A) Electrical Systems
 - (B) Cord-Connected Appliances
 - 553.11** Bonding of Non-Current-Carrying Metal Parts

ARTICLE 555 - Marinas and Boatyards

- 555.1** Scope
- 555.2** Definitions
- 555.3** Ground-Fault Protection
- 555.4** Distribution System
- 555.5** Transformers
- 555.7** Location of Service Equipment
- 555.9** Electrical Connections
- 555.10** Electrical Equipment Enclosures
 - (A) Securing and Supporting
 - (B) Location
- 555.11** Circuit Breakers, Switches, Panelboards, and Marine Power Outlets
- 555.12** Load Calculations for Service and Feeder Conductors
- 555.13** Wiring Methods and Installation
 - (A) Wiring Methods

- (B) Installation
- 555.15 Grounding
 - (A) Equipment to Be Grounded
 - (B) Type of Equipment Grounding Conductor
 - (C) Size of Equipment Grounding Conductor
 - (D) Branch-Circuit Equipment Grounding Conductor
 - (E) Feeder Equipment Grounding Conductors
- 555.17 Disconnecting Means for Shore Power Connection(s)
 - (A) Type
 - (B) Location
- 555.19 Receptacles
 - (A) Shore Power Receptacles
 - (B) Other Than Shore Power
- 555.21 Motor Fuel Dispensing Stations — Hazardous (Classified) Locations
 - (A) General
 - (B) Classification of Class I, Division 1 and 2 Areas
- 555.22 Repair Facilities — Hazardous (Classified) Locations
- 555.23 Marine Hoists, Railways, Cranes, and Monorails

ARTICLE 590 - Temporary Installations

- 590.1 Scope
- 590.2 All Wiring Installations
 - (A) Other Articles
 - (B) Approval
- 590.3 Time Constraints
 - (A) During the Period of Construction
 - (B) 90 Days
 - (C) Emergencies and Tests
 - (D) Removal
- 590.4 General
 - (A) Services
 - (B) Feeders
 - (C) Branch Circuits
 - (D) Receptacles
 - (E) Disconnecting Means
 - (F) Lamp Protection
 - (G) Splices
 - (H) Protection from Accidental Damage
 - (I) Termination(s) at Devices
 - (J) Support
- 590.5 Listing of Decorative Lighting
- 590.6 Ground-Fault Protection for Personnel
 - (A) Receptacle Outlets
 - (B) Use of Other Outlets
- 590.7 Guarding

ARTICLE 600 - Electric Signs and Outline Lighting

- I. General
 - 600.1 Scope
 - 600.2 Definitions
 - 600.3 Listing
 - (A) Field-Installed Skeleton Tubing
 - (B) Outline Lighting
 - 600.4 Markings
 - (A) Signs and Outline Lighting Systems
 - (B) Signs with Lampholders for Incandescent Lamps
 - (C) Visibility
 - (D) Durability
 - (E) Section Signs

- 600.5 Branch Circuits
 - (A) Required Branch Circuit
 - (B) Rating
 - (C) Wiring Methods
- 600.6 Disconnects
 - (A) Location
 - (B) Control Switch Rating
- 600.7 Grounding and Bonding
 - (A) Grounding
 - (B) Bonding
- 600.8 Enclosures
 - (A) Strength
 - (B) Material
 - (C) Minimum Thickness of Enclosure Metal
 - (D) Protection of Metal
- 600.9 Location
 - (A) Vehicles
 - (B) Pedestrians
 - (C) Adjacent to Combustible Materials
 - (D) Wet Location
- 600.10 Portable or Mobile Signs
 - (A) Support
 - (B) Attachment Plug
 - (C) Wet or Damp Location
 - (D) Dry Location
- 600.12 Field-Installed Secondary Wiring
 - (A) 1000 Volts or Less
 - (B) Over 1000 Volts
 - (C) Class 2
- 600.21 Ballasts, Transformers, and Electronic Power Supplies
 - (A) Accessibility
 - (B) Location
 - (C) Wet Location
 - (D) Working Space
 - (E) Attic and Soffit Locations
 - (F) Suspended Ceilings
- 600.22 Ballasts
 - (A) Type
 - (B) Thermal Protection
- 600.23 Transformers and Electronic Power Supplies
 - (A) Type
 - (B) Secondary-Circuit Ground-Fault Protection
 - (C) Voltage
 - (D) Rating
 - (E) Secondary Connections
 - (F) Marking
- 600.24 Class 2 Power Sources
 - (A) Listing
 - (B) Grounding
 - (C) Wiring Methods on the Supply Side of the Class 2 Power Supply
 - (D) Secondary Wiring
- II. Field-Installed Skeleton Tubing, Outline Lighting, and Secondary Wiring
 - 600.30 Applicability
 - 600.31 Neon Secondary-Circuit Wiring, 1000 Volts or Less, Nominal
 - (A) Wiring Method
 - (B) Insulation and Size
 - (C) Number of Conductors in Raceway
 - (D) Installation
 - (E) Protection of Leads

600.32 Neon Secondary-Circuit Wiring, over 1000 Volts, Nominal

- (A) Wiring Methods
- (B) Insulation and Size
- (C) Installation
- (D) Bends in Conductors
- (E) Spacing
- (F) Insulators and Bushings
- (G) Conductors in Raceways
- (H) Between Neon Tubing and Midpoint Return
- (I) Dwelling Occupancies
- (J) Length of Secondary Circuit Conductors
- (K) Splices

600.33 LED Sign Illumination Systems, Secondary Wiring

- (A) Insulation and Sizing of Class 2 Conductors
- (B) Installation
- (C) Protection Against Physical Damage
- (D) Grounding and Bonding

60 0.41 Neon Tubing

- (A) Design
- (B) Support
- (C) Spacing
- (D) Protection

60 0.42 Electrode Connections

- (A) Points of Transition
- (B) Accessibility
- (C) Electrode Connection
- (D) Support
- (E) Receptacles
- (F) Bushings
- (G) Wet Locations
- (H) Electrode Enclosures

ARTICLE 604 - Manufactured Wiring Systems

604.1 Scope

604.2 Definition

604.4 Uses Permitted

604.5 Uses Not Permitted

604.6 Construction

- (A) Cable or Conduit Types
- (B) Marking
- (C) Receptacles and Connectors
- (D) Other Component Parts

604.7 Installation

ARTICLE 605 - Office Furnishings (Consisting of Lighting Accessories and Wired Partitions)

605.1 Scope

605.2 General

- (A) Use
- (B) Hazardous (Classified) Locations

605.3 Wireways

605.4 Partition Interconnections

605.5 Lighting Accessories

- (A) Support
- (B) Connection
- (C) Receptacle Outlet

605.6 Fixed-Type Partitions

605.7 Freestanding-Type Partitions

605.8 Freestanding-Type Partitions, Cord-and-Plug-Connected

(A) Flexible Power-Supply Cord

(B) Receptacle Supplying Power

(C) Receptacle Outlets, Maximum

(D) Multiwire Circuits, Not Permitted

ARTICLE 610 - Cranes and Hoists

610.1 Scope

610.2 Definition

610.3 Special Requirements for Particular Locations

(A) Hazardous (Classified) Locations

(B) Combustible Materials

(C) Electrolytic Cell Lines

II. Wiring

61 0.11 Wiring Method

(A) Contact Conductor

(B) Exposed Conductors

(C) Flexible Connections to Motors and Similar Equipment

(D) Pushbutton Station Multiconductor Cable

(E) Flexibility to Moving Parts

610.12 Raceway or Cable Terminal Fittings

(A) Separately Bushed Hole

(B) Bushing in Lieu of a Box

610.13 Types of Conductors

(A) Exposed to External Heat or Connected to Resistors

(B) Contact Conductors

(C) Flexibility

(D) Class 1, Class 2, and Class 3 Circuits

610.14 Rating and Size of Conductors

(A) Ampacity

(B) Secondary Resistor Conductors

(C) Minimum Size

(D) Contact Conductors

(E) Calculation of Motor Load

(F) Other Loads

(G) Nameplate

61 0.15 Common Return

III. Contact Conductors

610.21 Installation of Contact Conductors

(A) Locating or Guarding Contact Conductors

(B) Contact Wires

(C) Supports Along Runways

(D) Supports on Bridges

(E) Supports for Rigid Conductors

(F) Track as Circuit Conductor

(G) Electrical Continuity of Contact Conductors

(H) Not to Supply Other Equipment

61 0.22 Collectors

IV. Disconnecting Means

610.31 Runway Conductor Disconnecting Means

610.32 Disconnecting Means for Cranes and Monorail Hoists

610.33 Rating of Disconnecting Means

V. Overcurrent Protection

610.41 Feeders, Runway Conductors

(A) Single Feeder

(B) More Than One Feeder Circuit

610.42 Branch-Circuit Short-Circuit and Ground-Fault Protection

(A) Fuse or Circuit Breaker Rating

(B) Taps

61 0.43 Overload Protection

(A) Motor and Branch-Circuit Overload Protection

(B) Manually Controlled Motor

(C) Multimotor

(D) Hoists and Monorail Hoists

VI. Control

61 0.51 Separate Controllers

(A) Motions with More Than One Motor

(B) Multiple Motion Controller

61 0.53 Overcurrent Protection

(A) Taps to Control Transformers

(B) Continuity of Power

61 0.55 Limit Switch

61 0.57 Clearance

VII. Grounding

61 0.61 Grounding

ARTICLE 620 - Elevators, Dumbwaiters, Escalators, Moving Walks, Platform Lifts, and Stairway Chairlifts

I. General

620.1 Scope

620.2 Definitions

620.3 Voltage Limitations

(A) Power Circuits

(B) Lighting Circuits

(C) Heating and Air-Conditioning Circuits

620.4 Live Parts Enclosed

620.5 Working Clearances

(A) Flexible Connections to Equipment

(B) Guards

(C) Examination, Adjusting, and Servicing

(D) Low Voltage

II. Conductors

620.11 Insulation of Conductors

(A) Hoistway Door Interlock Wiring

(B) Traveling Cables

(C) Other Wiring

(D) Insulation

620.12 Minimum Size of Conductors

(A) Traveling Cables

(B) Other Wiring

620.13 Feeder and Branch-Circuit Conductors

(A) Conductors Supplying Single Motor

(B) Conductors Supplying a Single Motor Controller

(C) Conductors Supplying a Single Power Transformer

(D) Conductors Supplying More Than One Motor, Motor
Controller, or Power Transformer

620.14 Feeder Demand Factor

620.15 Motor Controller Rating

III. Wiring

620.21 Wiring Methods

(A) Elevators

(B) Escalators

(C) Platform Lifts and Stairway Chairlift Raceways

620.22 Branch Circuits for Car Lighting, Receptacle(s),
Ventilation, Heating, and Air-Conditioning

(A) Car Light Source

(B) Air-Conditioning and Heating Source

620.23 Branch Circuits for Machine Room or Control
Room/Machinery Space or Control Space Lighting and
Receptacle(s)

(A) Separate Branch Circuit

(B) Lighting Switch

(C) Duplex Receptacle

620.24 Branch Circuit for Hoistway Pit Lighting and
Receptacle(s)

(A) Separate Branch Circuit

(B) Lighting Switch

(C) Duplex Receptacle

620.25 Branch Circuits for Other Utilization Equipment

(A) Additional Branch Circuits

(B) Overcurrent Devices

IV. Installation of Conductors

620.32 Metal Wireways and Nonmetallic Wireways

620.33 Number of Conductors in Raceways

620.34 Supports

620.35 Auxiliary Gutters

620.36 Different Systems in One Raceway or Traveling Cable

620.37 Wiring in Hoistways, Machine Rooms, Control
Rooms, Machinery Spaces, and Control Spaces

(A) Uses Permitted

(B) Lightning Protection

(C) Main Feeders

620.38 Electrical Equipment in Garages and Similar
Occupancies

V. Traveling Cables

620.41 Suspension of Traveling Cables

620.42 Hazardous (Classified) Locations

620.43 Location of and Protection for Cables

620.44 Installation of Traveling Cables

VI. Disconnecting Means and Control

62 0.51 Disconnecting Means

(A) Type

(B) Operation

(C) Location

(D) Identification and Signs

620.52 Power from More Than One Source

(A) Single-Car and Multicar Installations

(B) Warning Sign for Multiple Disconnecting Means

(C) Interconnection Multicar Controllers

620.53 Car Light, Receptacle(s), and Ventilation
Disconnecting Means

620.54 Heating and Air-Conditioning Disconnecting Means

620.55 Utilization Equipment Disconnecting Means

VII. Overcurrent Protection

62 0.61 Overcurrent Protection

(A) Operating Devices and Control and Signaling Circuits

(B) Overload Protection for Motors

(C) Motor Feeder Short-Circuit and Ground-Fault Protection

(D) Motor Branch-Circuit Short-Circuit and Ground-Fault
Protection

62 0.62 Selective Coordination

VIII. Machine Rooms, Control Rooms, Machinery Spaces,
and Control Spaces

62 0.71 Guarding Equipment

(A) Motor Controllers

(B) Driving Machines

IX. Grounding

620.81 Metal Raceways Attached to Cars

62 0.82 Electric Elevators

62 0.83 Nonelectric Elevators

620.84 Escalators, Moving Walks, Platform Lifts, and
Stairway Chairlifts

620.85 Ground-Fault Circuit-Interrupter Protection for
Personnel

- X. Emergency and Standby Power Systems
- 620.91 Emergency and Standby Power Systems
- (A) Regenerative Power
- (B) Other Building Loads
- (C) Disconnecting Means

ARTICLE 625 - Electric Vehicle Charging System

- I. General
- 625.1 Scope
- 625.2 Definitions
- 625.4 Voltages
- 625.5 Listed or Labeled
- II. Wiring Methods
- 625.9 Electric Vehicle Coupler
- (A) Polarization
- (B) Noninterchangeability
- (C) Construction and Installation
- (D) Unintentional Disconnection
- (E) Grounding Pole
- (F) Grounding Pole Requirements
- III. Equipment Construction
- 625.13 Electric Vehicle Supply Equipment
- 625.14 Rating
- 625.15 Markings
- (A) General
- (B) Ventilation Not Required
- (C) Ventilation Required
- 625.16 Means of Coupling
- 625.17 Cable
- 625.18 Interlock
- 625.19 Automatic De-Energization of Cable
- IV. Control and Protection
- 625.21 Overcurrent Protection
- 625.22 Personnel Protection System
- 625.23 Disconnecting Means
- 625.25 Loss of Primary Source
- 625.26 Interactive Systems
- V. Electric Vehicle Supply Equipment Locations
- 625.28 Hazardous (Classified) Locations
- 625.29 Indoor Sites
- (A) Location
- (B) Height
- (C) Ventilation Not Required
- (D) Ventilation Required
- 625.30 Outdoor Sites
- (A) Location
- (B) Height

ARTICLE 626 - Electrified Truck Parking Spaces

- I. General
- 626.1 Scope
- 626.2 Definitions
- 626.3 Other Articles
- (A) Vehicle Repair and Storage Facilities
- (B) Motor Fuel Dispensing Stations
- 626.4 General
- (A) Not Covered
- (B) Distribution System Voltages
- (C) Connection to Wiring System
- II. Electrified Truck Parking Space Electrical Wiring Systems

- 62 6.10 Branch Circuits
 - 626.11 Feeder and Service Load Calculations
 - (A) Parking Space Load
 - (B) Demand Factors
 - (C) Two or More Electrified Truck Parking Spaces
 - (D) Conductor Rating
 - III. Electrified Truck Parking Space Supply Equipment
 - 626.22 Wiring Methods and Materials
 - (A) Electrified Truck Parking Space Supply Equipment Type
 - (B) Mounting Height
 - (C) Access to Working Space
 - (D) Disconnecting Means
 - 626.23 Overhead Gantry or Cable Management System
 - (A) Cable Management
 - (B) Strain Relief
 - 626.24 Electrified Truck Parking Space Supply Equipment Connection Means
 - (A) General
 - (B) Receptacle
 - (C) Disconnecting Means, Parking Space
 - (D) Ground-Fault Circuit-Interrupter Protection for Personnel
 - 626.25 Separable Power-Supply Cable Assembly
 - (A) Rating(s)
 - (B) Power-Supply Cord
 - 626.26 Loss of Primary Power
 - 62 6.27 Interactive Systems
 - IV. Transport Refrigerated Units (TRUs)
 - 626.30 Transport Refrigerated Units
 - (A) Branch Circuits
 - (B) Electrified Truck Parking Space Supply Equipment
 - 626.31 Disconnecting Means and Receptacles
 - (A) Disconnecting Means
 - (B) Location
 - (C) Receptacles
 - 626.32 Separable Power Supply Cable Assembly
 - (A) Rating(s)
 - (B) Cord Assemblies
 - (C) Attachment Plug(s) and Cord Connector(s)
- ## **ARTICLE 630 - Electric Welders**
- I. General
 - 630.1 Scope
 - II. Arc Welders
 - 630.11 Ampacity of Supply Conductors
 - (A) Individual Welders
 - (B) Group of Welders
 - 630.12 Overcurrent Protection
 - (A) For Welders
 - (B) For Conductors
 - 630.13 Disconnecting Means
 - 630.14 Marking
 - 630.15 Grounding of Welder Secondary Circuit
 - III. Resistance Welders
 - 630.31 Ampacity of Supply Conductors
 - (A) Individual Welders
 - (B) Groups of Welders
 - 630.32 Overcurrent Protection
 - (A) For Welders
 - (B) For Conductors
 - 630.33 Disconnecting Means
 - 630.34 Marking
 - IV. Welding Cable
 - 630.41 Conductors

- 630.42 Installation
- (A) Cable Support
- (B) Spread of Fire and Products of Combustion
- (C) Signs I. General

630.1 Scope

II. Arc Welders

630.11 Ampacity of Supply Conductors

- (A) Individual Welders
- (B) Group of Welders

630.12 Overcurrent Protection

- (A) For Welders
- (B) For Conductors

630.13 Disconnecting Means

630.14 Marking

630.15 Grounding of Welder Secondary Circuit

III. Resistance Welders

630.31 Ampacity of Supply Conductors

- (A) Individual Welders
- (B) Groups of Welders

630.32 Overcurrent Protection

- (A) For Welders
- (B) For Conductors

630.33 Disconnecting Means

630.34 Marking

IV. Welding Cable

630.41 Conductors

630.42 Installation

- (A) Cable Support
- (B) Spread of Fire and Products of Combustion
- (C) Signs

ARTICLE 640 - Audio Signal Processing, Amplification, and Reproduction Equipment

I. General

640.1 Scope

640.2 Definitions

640.3 Locations and Other Articles

- (A) Spread of Fire or Products of Combustion
- (B) Ducts, Plenums, and Other Air-Handling Spaces
- (C) Cable Trays
- (D) Hazardous (Classified) Locations
- (E) Assembly Occupancies
- (F) Theaters, Audience Areas of Motion Picture and Television Studios, and Similar Locations
- (G) Carnivals, Circuses, Fairs, and Similar Events
- (H) Motion Picture and Television Studios
- (I) Swimming Pools, Fountains, and Similar Locations
- (J) Combination Systems
- (K) Antennas
- (L) Generators
- (M) Organ Pipes

640.4 Protection of Electrical Equipment

640.5 Access to Electrical Equipment Behind Panels Designed to Allow Access

640.6 Mechanical Execution of Work

- (A) Neat and Workmanlike Manner
- (B) Installation of Audio Distribution Cables
- (C) Abandoned Audio Distribution Cables
- (D) Installed Audio Distribution Cable Identified for Future Use

640.7 Grounding

(A) General

- (B) Separately Derived Systems with 60 Volts to Ground
- (C) Isolated Ground Receptacles

640.8 Grouping of Conductors

640.9 Wiring Methods

(A) Wiring to and Between Audio Equipment

- (B) Auxiliary Power Supply Wiring
- (C) Output Wiring and Listing of Amplifiers
- (D) Use of Audio Transformers and Autotransformers

640.10 Audio Systems Near Bodies of Water

- (A) Equipment Supplied by Branch-Circuit Power
- (B) Equipment Not Supplied by Branch-Circuit Power

II. Permanent Audio System Installations

640.21 Use of Flexible Cords and Cables

- (A) Between Equipment and Branch-Circuit Power
- (B) Between Loudspeakers and Amplifiers or Between Loudspeakers
- (C) Between Equipment
- (D) Between Equipment and Power Supplies Other Than Branch-Circuit Power
- (E) Between Equipment Racks and Premises Wiring System

640.22 Wiring of Equipment Racks and Enclosures

640.23 Conduit or Tubing

- (A) Number of Conductors
- (B) Nonmetallic Conduit or Tubing and Insulating Bushings

640.24 Wireways, Gutters, and Auxiliary Gutters

640.25 Loudspeaker Installation in Fire Resistance-Rated Partitions, Walls, and Ceilings

III. Portable and Temporary Audio System Installations

640.41 Multipole Branch-Circuit Cable Connectors

640.42 Use of Flexible Cords and Cables

- (A) Between Equipment and Branch-Circuit Power
- (B) Between Loudspeakers and Amplifiers, or Between Loudspeakers
- (C) Between Equipment and/or Between Equipment Racks
- (D) Between Equipment, Equipment Racks, and Power Supplies Other Than Branch-Circuit Power
- (E) Between Equipment Racks and Branch-Circuit Power

640.43 Wiring of Equipment Racks

640.44 Environmental Protection of Equipment

640.45 Protection of Wiring

640.46 Equipment Access

ARTICLE 645 - Information Technology Equipment

645.1 Scope

645.2 Definitions

645.3 Other Articles

- (A) Spread of Fire or Products of Combustion
- (B) Plenums
- (C) Grounding
- (D) Electrical Classification of Data Circuits
- (E) Fire Alarm Equipment
- (F) Communications Equipment
- (G) Community Antenna Television and Radio Distribution Systems Equipment

645.4 Special Requirements for Information Technology Equipment Room

645.5 Supply Circuits and Interconnecting Cables

- (A) Branch-Circuit Conductors
- (B) Power-Supply Cords
- (C) Interconnecting Cables

- (D) Physical Protection
- (E) Under Raised Floors
- (F) Securing in Place
- (G) Abandoned Supply Circuits and Interconnecting Cables
- (H) Installed Supply Circuits and Interconnecting Cables Identified for Future Use
- 645.6 Cables Not in Information Technology Equipment Room
- 645.10 Disconnecting Means
 - (A) Remote Disconnect Controls
 - (B) Critical Operations Data Systems
- 645.11 Uninterruptible Power Supplies (UPSs)
- 645.15 Grounding
- 645.16 Marking
- 645.17 Power Distribution Units
- 645.25 Engineering Supervision

ARTICLE 647 - Sensitive Electronic Equipment

- 647.1 Scope
- 647.3 General
- 647.4 Wiring Methods
 - (A) Panelboards and Overcurrent Protection
 - (B) Junction Boxes
 - (C) Conductor Identification
 - (D) Voltage Drop
- 647.5 Three-Phase Systems
- 647.6 Grounding
 - (A) General
 - (B) Grounding Conductors Required
- 647.7 Receptacles
 - (A) General
 - (B) Isolated Ground Receptacles
- 647.8 Lighting Equipment
 - (A) Disconnecting Means
 - (B) Luminaires
 - (C) Screw-Shell

ARTICLE 650 - Pipe Organs

- 650.1 Scope
- 650.3 Other Articles
 - (A) Electronic Organ Equipment
 - (B) Optical Fiber Cable
- 650.4 Source of Energy
- 650.5 Grounding
- 650.6 Conductors
 - (A) Size
 - (B) Insulation
 - (C) Conductors to Be Cabled
 - (D) Cable Covering
- 650.7 Installation of Conductors
- 650.8 Overcurrent Protection

ARTICLE 660 - X-Ray Equipment

- I. General
 - 660.1 Scope
 - 660.2 Definitions
 - 660.3 Hazardous (Classified) Locations I. General
 - 660.1 Scope
 - 660.2 Definitions
 - 660.3 Hazardous (Classified) Locations
 - 660.4 Connection to Supply Circuit
 - (A) Fixed and Stationary Equipment

- (B) Portable, Mobile, and Transportable Equipment
- (C) Over 600 Volts, Nominal
- 660.5 Disconnecting Means
- 660.6 Rating of Supply Conductors and Overcurrent Protection
 - (A) Branch-Circuit Conductors
 - (B) Feeder Conductors
- 660.7 Wiring Terminals
- 660.9 Minimum Size of Conductors
- 660.10 Equipment Installations
- II. Control
 - 660.20 Fixed and Stationary Equipment
 - (A) Separate Control Device
 - (B) Protective Device
 - 660.21 Portable and Mobile Equipment
 - 660.23 Industrial and Commercial Laboratory Equipment
 - (A) Radiographic and Fluoroscopic Types
 - (B) Diffraction and Irradiation Types
 - 660.24 Independent Control
- III. Transformers and Capacitors
 - 660.35 General
 - 660.36 Capacitors
- IV. Guarding and Grounding
 - 660.47 General
 - (A) High-Voltage Parts
 - (B) Low-Voltage Cables
 - 660.48 Grounding

ARTICLE 665 - Induction and Dielectric Heating Equipment

- I. General
 - 665.1 Scope
 - 665.2 Definitions
 - 665.4 Hazardous (Classified) Locations
 - 665.5 Output Circuit
 - 665.7 Remote Control
 - (A) Multiple Control Points
 - (B) Foot Switches
 - 665.10 Ampacity of Supply Conductors
 - (A) Nameplate Rating
 - (B) Motor-Generator Equipment
 - 665.11 Overcurrent Protection
 - 665.12 Disconnecting Means
- II. Guarding, Grounding, and Labeling
 - 665.19 Component Interconnection
 - 665.20 Enclosures
 - 665.21 Control Panels
 - 665.22 Access to Internal Equipment
 - 665.23 Warning Labels or Signs
 - 665.24 Capacitors
 - 665.25 Dielectric Heating Applicator Shielding
 - 665.26 Grounding and Bonding
 - 665.27 Marking

ARTICLE 668 - Electrolytic Cells

- 668.1 Scope
- 668.2 Definitions
- 668.3 Other Articles
 - (A) Lighting, Ventilating, Material Handling
 - (B) Systems Not Electrically Connected
 - (C) Electrolytic Cell Lines
- 668.10 Cell Line Working Zone
 - (A) Area Covered

(B) Area Not Covered

668.11 Direct-Current Cell Line Process Power Supply

(A) Not Grounded

(B) Metal Enclosures Grounded

(C) Grounding Requirements

668.12 Cell Line Conductors

(A) Insulation and Material

(B) Size

(C) Connections

668.13 Disconnecting Means

(A) More Than One Process Power Supply

(B) Removable Links or Conductors

668.14 Shunting Means

(A) Partial or Total Shunting

(B) Shunting One or More Cells

668.15 Grounding

668.20 Portable Electrical Equipment

(A) Portable Electrical Equipment Not to Be Grounded

(B) Isolating Transformers

(C) Marking

668.21 Power-Supply Circuits and Receptacles for Portable Electrical Equipment

(A) Isolated Circuits

(B) Noninterchangeability

(C) Marking

668.30 Fixed and Portable Electrical Equipment

(A) Electrical Equipment Not Required to Be Grounded

(B) Exposed Conductive Surfaces Not Required to Be Grounded

(C) Wiring Methods

(D) Circuit Protection

(E) Bonding

668.31 Auxiliary Nonelectrical Connections

668.32 Cranes and Hoists

(A) Conductive Surfaces to Be Insulated from Ground

(B) Hazardous Electrical Conditions

668.40 Enclosures

ARTICLE 669 - Electroplating

669.1 Scope

669.3 General

669.5 Branch-Circuit Conductors

669.6 Wiring Methods

(A) Systems Not Exceeding 50 Volts Direct Current

(B) Systems Exceeding 50 Volts Direct Current

669.7 Warning Signs

669.8 Disconnecting Means

(A) More Than One Power Supply

(B) Removable Links or Conductors

669.9 Overcurrent Protection

ARTICLE 670 - Industrial Machinery

670.1 Scope

670.2 Definition

670.3 Machine Nameplate Data

(A) Permanent Nameplate

(B) Overcurrent Protection

670.4 Supply Conductors and Overcurrent Protection

(A) Size

(B) Disconnecting Means

(C) Overcurrent Protection

670.5 Short-Circuit Current Rating

ARTICLE 675 - Electrically Driven or Controlled Irrigation Machines

I. General

675.1 Scope

675.2 Definitions

675.4 Irrigation Cable

(A) Construction

(B) Alternate Wiring Methods

(C) Supports

(D) Fittings

675.5 More Than Three Conductors in a Raceway or Cable

675.6 Marking on Main Control Panel

675.7 Equivalent Current Ratings

(A) Continuous-Current Rating

(B) Locked-Rotor Current

675.8 Disconnecting Means

(A) Main Controller

(B) Main Disconnecting Means

(C) Disconnecting Means for Individual Motors and Controllers

675.9 Branch-Circuit Conductors

675.10 Several Motors on One Branch Circuit

(A) Protection Required

(B) Individual Protection Not Required

675.11 Collector Rings

(A) Transmitting Current for Power Purposes

(B) Control and Signal Purposes

(C) Grounding

(D) Protection

675.12 Grounding

675.13 Methods of Grounding

675.14 Bonding

675.15 Lightning Protection

675.16 Energy from More Than One Source

675.17 Connectors

II. Center Pivot Irrigation Machines

675.21 General

675.22 Equivalent Current Ratings

(A) Continuous-Current Rating

(B) Locked-Rotor Current

ARTICLE 680 - Swimming Pools, Fountains, and Similar Installations

I. General

680.1 Scope

680.2 Definitions

680.3 Other Articles

680.4 Approval of Equipment

680.5 Ground-Fault Circuit Interrupters

680.6 Grounding

680.7 Cord-and-Plug-Connected Equipment

(A) Length

(B) Equipment Grounding

(C) Construction

680.8 Overhead Conductor Clearances

(A) Power

(B) Communications Systems

(C) Network-Powered Broadband Communications Systems

680.9 Electric Pool Water Heaters

680.10 Underground Wiring Location

680.11 Equipment Rooms and Pits

680.12 Maintenance Disconnecting Means

II. Permanently Installed Pools

680.20 General

680.21 Motors

(A) Wiring Methods

(B) Double Insulated Pool Pumps

(C) GFCI Protection

680.22 Lighting, Receptacles, and Equipment

(A) Receptacles

(B) Luminaires, Lighting Outlets, and Ceiling-Suspended

(Paddle) Fans

(C) Switching Devices

(D) Other Outlets

680.23 Underwater Luminaires

(A) General

(B) Wet-Niche Luminaires

(C) Dry-Niche Luminaires

(D) No-Niche Luminaires

(E) Through-Wall Lighting Assembly

(F) Branch-Circuit Wiring

680.24 Junction Boxes and Electrical Enclosures for Transformers or Ground-Fault Circuit Interrupters

(A) Junction Boxes

(B) Other Enclosures

(C) Protection

(D) Grounding Terminals

(E) Strain Relief

(F) Grounding

680.25 Feeders

(A) Wiring Methods

(B) Grounding

680.26 Equipotential Bonding

(A) Performance

(B) Bonded Parts

(C) Pool Water

680.27 Specialized Pool Equipment

(A) Underwater Audio Equipment

(B) Electrically Operated Pool Covers

(C) Deck Area Heating

III. Storable Pools

680.30 General

680.31 Pumps

680.32 Ground-Fault Circuit Interrupters Required

680.33 Luminaires

(A) Within the Low Voltage Contact Limit

(B) Over the Low Voltage Contact Limit But Not over 150 Volts

680.34 Receptacle Locations

IV. Spas and Hot Tubs

680.40 General

680.41 Emergency Switch for Spas and Hot Tubs

680.42 Outdoor Installations

(A) Flexible Connections

(B) Bonding

(C) Interior Wiring to Outdoor Installations

680.43 Indoor Installations

(A) Receptacles

(B) Installation of Luminaires, Lighting Outlets, and Ceiling-Suspended (Paddle) Fans

(C) Switches

(D) Bonding

(E) Methods of Bonding

(F) Grounding

(G) Underwater Audio Equipment

680.44 Protection

(A) Listed Units

(B) Other Units

V. Fountains

680.50 General

680.51 Luminaires, Submersible Pumps, and Other Submersible Equipment

(A) Ground-Fault Circuit Interrupter

(B) Operating Voltage

(C) Luminaire Lenses

(D) Overheating Protection

(E) Wiring

(F) Servicing

(G) Stability

680.52 Junction Boxes and Other Enclosures

(A) General

(B) Underwater Junction Boxes and Other Underwater Enclosures

680.53 Bonding

680.54 Grounding

680.55 Methods of Grounding

(A) Applied Provisions

(B) Supplied by a Flexible Cord

680.56 Cord-and-Plug-Connected Equipment

(A) Ground-Fault Circuit Interrupter

(B) Cord Type

(C) Sealing

(D) Terminations

680.57 Signs

(A) General

(B) Ground-Fault Circuit-Interrupter Protection for Personnel

(C) Location

(D) Disconnect

(E) Bonding and Grounding

680.58 GFCI Protection for Adjacent Receptacle Outlets

VI. Pools and Tubs for Therapeutic Use

680.60 General

680.61 Permanently Installed Therapeutic Pools

680.62 Therapeutic Tubs (Hydrotherapeutic Tanks)

(A) Protection

(B) Bonding

(C) Methods of Bonding

(D) Grounding

(E) Receptacles

(F) Luminaires

VII. Hydromassage Bathtubs

680.70 General

680.71 Protection

680.72 Other Electrical Equipment

680.73 Accessibility

680.74 Bonding

ARTICLE 682 - Natural and Artificially Made Bodies of Water

I. General

682.1 Scope

682.2 Definitions

682.3 Other Articles

II. Installation

682.10 Electrical Equipment and Transformers

- 682.11 Location of Service Equipment
 - 682.12 Electrical Connections
 - 682.13 Wiring Methods and Installation
 - 682.14 Submersible or Floating Equipment Power Connection(s)
 - (A) Type and Marking
 - (B) Location
 - 682.15 Ground-Fault Circuit-Interrupter (GFCI) Protection
- ### III. Grounding and Bonding
- 682.30 Grounding
 - 682.31 Equipment Grounding Conductors
 - (A) Type
 - (B) Feeders
 - (C) Branch Circuits
 - (D) Cord-and-Plug-Connected Appliances
 - 682.32 Bonding of Non-Current-Carrying Metal Parts
 - 682.33 Equipotential Planes and Bonding of Equipotential Planes
 - (A) Areas Requiring Equipotential Planes
 - (B) Areas Not Requiring Equipotential Planes
 - (C) Bonding

ARTICLE 685 - Integrated Electrical Systems

I. General

- 685.1 Scope
 - 685.3 Application of Other Articles
- ### II. Orderly Shutdown
- 685.10 Location of Overcurrent Devices in or on Premises
 - 685.12 Direct-Current System Grounding
 - 685.14 Ungrounded Control Circuits

ARTICLE 690 - Solar Photovoltaic (PV) Systems

I. General

- 690.1 Scope
 - 690.2 Definitions
 - 690.3 Other Articles
 - 690.4 Installation
 - (A) Photovoltaic Systems
 - (B) Identification and Grouping
 - (C) Module Connection Arrangement
 - (D) Equipment
 - (E) Wiring and Connections
 - (F) Circuit Routing
 - (G) Bipolar Photovoltaic Systems
 - (H) Multiple Inverters
 - 690.5 Ground-Fault Protection
 - (A) Ground-Fault Detection and Interruption
 - (B) Isolating Faulted Circuits
 - (C) Labels and Markings
 - 690.6 Alternating-Current (ac) Modules
 - (A) Photovoltaic Source Circuits
 - (B) Inverter Output Circuit
 - (C) Disconnecting Means
 - (D) Ground-Fault Detection
 - (E) Overcurrent Protection
- ### II. Circuit Requirements
- 690.7 Maximum Voltage
 - (A) Maximum Photovoltaic System Voltage
 - (B) Direct-Current Utilization Circuits
 - (C) Photovoltaic Source and Output Circuits

- (D) Circuits over 150 Volts to Ground
 - (E) Bipolar Source and Output Circuits
- ### 690.8 Circuit Sizing and Current
- (A) Calculation of Maximum Circuit Current
 - (B) Ampacity and Overcurrent Device Ratings
 - (C) Systems with Multiple Direct-Current Voltages
 - (D) Sizing of Module Interconnection Conductors
- ### 690.9 Overcurrent Protection
- (A) Circuits and Equipment
 - (B) Power Transformers
 - (C) Photovoltaic Source Circuits
 - (D) Direct-Current Rating
 - (E) Series Overcurrent Protection
- ### 690.10 Stand-Alone Systems
- (A) Inverter Output
 - (B) Sizing and Protection
 - (C) Single 120-Volt Supply
 - (D) Energy Storage or Backup Power System Requirements
 - (E) Back-fed Circuit Breakers
- ### 690.11 Arc-Fault Circuit Protection (Direct Current)
- ### III. Disconnecting Means
- 690.13 All Conductors
 - 690.14 Additional Provisions
 - (A) Disconnecting Means
 - (B) Equipment
 - (C) Requirements for Disconnecting Means
 - (D) Utility-Interactive Inverters Mounted in Not-Readily-Accessible Locations
 - 690.15 Disconnection of Photovoltaic Equipment
 - 690.16 Fuses
 - (A) Disconnecting Means
 - (B) Fuse Servicing
 - 690.17 Switch or Circuit Breaker
 - 690.18 Installation and Service of an Array
- ### IV. Wiring Methods
- 690.31 Methods Permitted
 - (A) Wiring Systems
 - (B) Single-Conductor Cable
 - (C) Flexible Cords and Cables
 - (D) Small-Conductor Cables
 - (E) Direct-Current Photovoltaic Source and Output Circuits Inside a Building
 - (F) Flexible, Fine-Stranded Cables
 - 690.32 Component Interconnections
 - 690.33 Connectors
 - (A) Configuration
 - (B) Guarding
 - (C) Type
 - (D) Grounding Member
 - (E) Interruption of Circuit
 - 690.34 Access to Boxes
 - 690.35 Ungrounded Photovoltaic Power Systems
- ### V. Grounding
- 690.41 System Grounding
 - 690.42 Point of System Grounding Connection
 - 690.43 Equipment Grounding
 - (A) Equipment Grounding Required
 - (B) Equipment Grounding Conductor Required
 - (C) Structure as Equipment Grounding Conductor
 - (D) Photovoltaic Mounting Systems and Devices
 - (E) Adjacent Modules
 - (F) All Conductors Together

690.45 Size of Equipment Grounding Conductors
(A) General
(B) Ground-Fault Protection Not Provided
690.46 Array Equipment Grounding Conductors
690.47 Grounding Electrode System
(A) Alternating-Current Systems
(B) Direct-Current Systems
(C) Systems with Alternating-Current and Direct-Current Grounding Requirements
690.48 Continuity of Equipment Grounding Systems
690.49 Continuity of Photovoltaic Source and Output Circuit Grounded Conductors
690.50 Equipment Bonding Jumpers
VI. Marking
690.51 Modules
690.52 Alternating-Current Photovoltaic Modules
690.53 Direct-Current Photovoltaic Power Source
690.54 Interactive System Point of Interconnection
690.55 Photovoltaic Power Systems Employing Energy Storage
690.56 Identification of Power Sources
(A) Facilities with Stand-Alone Systems
(B) Facilities with Utility Services and PV Systems
VII. Connection to Other Sources
690.57 Load Disconnect
690.60 Identified Interactive Equipment
690.61 Loss of Interactive System Power
690.63 Unbalanced Interconnections
690.64 Point of Connection
VIII. Storage Batteries
690.71 Installation
(A) General
(B) Dwellings
(C) Current Limiting
(D) Battery Nonconductive Cases and Conductive Racks
(E) Disconnection of Series Battery Circuits
(F) Battery Maintenance Disconnecting Means
(G) Battery Systems of More Than 48 Volts
690.72 Charge Control
(A) General
(B) Diversion Charge Controller
(C) Buck/Boost Direct-Current Converters
690.74 Battery Interconnections
(A) Flexible Cables
IX. Systems over 600 Volts
690.80 General
690.85 Definitions

ARTICLE 692 - Fuel Cell Systems

I. General
692.1 Scope
692.2 Definitions
692.3 Other Articles
692.4 Installation
(A) Fuel Cell System
(B) Identification
(C) System Installation
692.6 Listing Requirement
II. Circuit Requirements
692.8 Circuit Sizing and Current
(A) Nameplate Rated Circuit Current
(B) Conductor Ampacity and Overcurrent Device Ratings
(C) Ampacity of Grounded or Neutral Conductor

692.9 Overcurrent Protection
(A) Circuits and Equipment
(B) Accessibility
692.10 Stand-Alone Systems
(A) Fuel Cell System Output
(B) Sizing and Protection
(C) Single 120-Volt Nominal Supply
III. Disconnecting Means
692.13 All Conductors
692.17 Switch or Circuit Breaker
IV. Wiring Methods
692.31 Wiring Systems
V. Grounding
692.41 System Grounding
(A) AC Systems
(B) DC Systems
(C) Systems with Alternating-Current and Direct-Current Grounding Requirements
692.44 Equipment Grounding Conductor
692.45 Size of Equipment Grounding Conductor
692.47 Grounding Electrode System
VI. Marking
692.53 Fuel Cell Power Sources
692.54 Fuel Shut-Off
692.56 Stored Energy
VII. Connection to Other Circuits
692.59 Transfer Switch
692.60 Identified Interactive Equipment
692.61 Output Characteristics
692.62 Loss of Interactive System Power
692.64 Unbalanced Interconnections
692.65 Utility-Interactive Point of Connection
VIII. Outputs Over 600 Volts
692.80 General

ARTICLE 694 - Small Wind Electric Systems

I. General
694.1 Scope
694.2 Definitions
694.3 Other Articles
694.7 Installation
(A) Small Wind Electric Systems
(B) Equipment
(C) Diversion Load Controllers
(D) Surge Protective Devices (SPD)
(E) Receptacles
II. Circuit Requirements
694.10 Maximum Voltage
(A) Wind Turbine Output Circuits
(B) Direct-Current Utilization Circuits
(C) Circuits over 150 Volts to Ground
694.12 Circuit Sizing and Current
(A) Calculation of Maximum Circuit Current
(B) Ampacity and Overcurrent Device Ratings
694.15 Overcurrent Protection
(A) Circuits and Equipment
(B) Power Transformers
(C) Direct-Current Rating
694.18 Stand-Alone Systems
(A) Inverter Output
(B) Sizing and Protection

- (C) Single 120-Volt Supply
- (D) Energy Storage or Backup Power System Requirements
- III. Disconnecting Means
 - 694.20 All Conductors
 - 694.22 Additional Provisions
 - (A) Disconnecting Means
 - (B) Equipment
 - (C) Requirements for Disconnecting Means
 - (D) Equipment that is not Readily Accessible
 - 694.24 Disconnection of Small Wind Electric System Equipment
 - 694.26 Fuses
 - 694.28 Installation and Service of a Wind Turbine
- IV. Wiring Methods
 - 694.30 Permitted Methods
 - (A) Wiring Systems
 - (B) Flexible Cords and Cables
 - (C) Direct-Current Turbine Output Circuits Inside a Building
- V. Grounding
 - 694.40 Equipment Grounding
 - (A) General
 - (B) Guy Wires
 - (C) Tower Grounding
- VI. Marking
 - 694.50 Interactive System Point of Interconnection
 - 694.52 Power Systems Employing Energy Storage
 - 694.54 Identification of Power Sources
 - (A) Facilities with Stand-Alone Systems
 - (B) Facilities with Utility Services and Small Wind Electric Systems
 - 694.56 Instructions for Disabling Turbine
- VII. Connection to Other Sources
 - 694.60 Identified Interactive Equipment
 - 694.62 Installation
 - 694.66 Operating Voltage Range
 - 694.68 Point of Connection
- VIII. Storage Batteries
 - 694.70 Installation
 - (A) General
 - (B) Dwellings
 - (C) Current Limiting
 - (D) Battery Nonconductive Cases and Conductive Racks
 - (E) Disconnection of Series Battery Circuits
 - (F) Battery Maintenance Disconnecting Means
 - (G) Battery Systems of More Than 48 Volts
 - 694.75 Charge Control
 - (A) General
 - (B) Diversion Charge Controller
- IX. Systems over 600 Volts
 - 694.80 General
 - 694.85 Cable and Equipment Ratings
 - (A) Battery Circuits
 - (B) Other Circuits

ARTICLE 695 - Fire Pumps

- 695.1 Scope
 - (A) Covered
 - (B) Not Covered
- 695.2 Definitions
- 695.3 Power Source(s) for Electric Motor-Driven Fire Pumps
 - (A) Individual Sources
 - (B) Multiple Sources
 - (C) Multibuilding Campus-Style Complexes

- (D) On-Site Standby Generator as Alternate Source
- (E) Arrangement
- (F) Phase Converters
- 695.4 Continuity of Power
 - (A) Direct Connection
 - (B) Connection through Disconnecting Means and Overcurrent Device
- 695.5 Transformers
 - (A) Size
 - (B) Overcurrent Protection
 - (C) Feeder Source
- 695.6 Power Wiring
 - (A) Supply Conductors
 - (B) Conductor Size
 - (C) Overload Protection
 - (D) Pump Wiring
 - (E) Loads Supplied by Controllers and Transfer Switches
 - (F) Mechanical Protection
 - (G) Ground-Fault Protection of Equipment
 - (H) Listed Electrical Circuit Protective System to Controller Wiring
 - (I) Junction Boxes
 - (J) Raceway Terminations
- 695.7 Voltage Drop
 - (A) Starting
 - (B) Running
- 695.10 Listed Equipment
- 695.12 Equipment Location
 - (A) Controllers and Transfer Switches
 - (B) Engine-Drive Controllers
 - (C) Storage Batteries
 - (D) Energized Equipment
 - (E) Protection Against Pump Water
 - (F) Mounting
- 695.14 Control Wiring
 - (A) Control Circuit Failures
 - (B) Sensor Functioning
 - (C) Remote Device(s)
 - (D) Engine-Drive Control Wiring
 - (E) Electric Fire Pump Control Wiring Methods
 - (F) Generator Control Wiring Methods

ARTICLE 700 - Emergency Systems

- I. General
 - 700.1 Scope
 - 700.2 Definitions
 - 700.3 Tests and Maintenance
 - (A) Conduct or Witness Test
 - (B) Tested Periodically
 - (C) Battery Systems Maintenance
 - (D) Written Record
 - (E) Testing Under Load
 - 700.4 Capacity
 - (A) Capacity and Rating
 - (B) Selective Load Pickup, Load Shedding, and Peak Load Shaving
 - 700.5 Transfer Equipment
 - (A) General
 - (B) Bypass Isolation Switches
 - (C) Automatic Transfer Switches
 - (D) Use
 - 700.6 Signals
 - (A) Derangement

- (B) Carrying Load
 - (C) Not Functioning
 - (D) Ground Fault
- 700.7 Signs

- (A) Emergency Sources
- (B) Grounding

II. Circuit Wiring

700.10 Wiring, Emergency System

- (A) Identification
- (B) Wiring
- (C) Wiring Design and Location
- (D) Fire Protection

III. Sources of Power

700.12 General Requirements

- (A) Storage Battery
- (B) Generator Set
- A) Storage Battery
- (B) Generator Set
- (C) Uninterruptible Power Supplies
- (D) Separate Service
- (E) Fuel Cell System
- (F) Unit Equipment

IV. Emergency System Circuits for Lighting and Power

700.15 Loads on Emergency Branch Circuits

700.16 Emergency Illumination

700.17 Branch Circuits for Emergency Lighting

700.18 Circuits for Emergency Power

V. Control — Emergency Lighting Circuits

700.20 Switch Requirements

700.21 Switch Location

700.22 Exterior Lights

700.23 Dimmer Systems

700.24 Automatic Load Control Relay

VI. Overcurrent Protection

700.25 Accessibility

700.26 Ground-Fault Protection of Equipment

700.27 Coordination

ARTICLE 701 - Legally Required Standby Systems

I. General

701.1 Scope

701.2 Definition

701.3 Tests and Maintenance

- (A) Conduct or Witness Test
- (B) Tested Periodically
- (C) Battery Systems Maintenance
- (D) Written Record
- (E) Testing Under Load

701.4 Capacity and Rating

701.5 Transfer Equipment

- (A) General
- (B) Bypass Isolation Switches
- (C) Automatic Transfer Switches

701.6 Signals

- (A) Derangement
- (B) Carrying Load
- (C) Not Functioning
- (D) Ground Fault

701.7 Signs

- (A) Mandated Standby
- (B) Grounding

II. Circuit Wiring

701.10 Wiring Legally Required Standby Systems

III. Sources of Power

701.12 General Requirements

- (A) Storage Battery
- (B) Generator Set
- (C) Uninterruptible Power Supplies
- (D) Separate Service
- (E) Connection Ahead of Service Disconnecting Means
- (F) Fuel Cell System
- (G) Unit Equipment

IV. Overcurrent Protection

701.25 Accessibility

701.26 Ground-Fault Protection of Equipment

701.27 Coordination

ARTICLE 702 - Optional Standby Systems

I. General

702.1 Scope

702.2 Definition

702.4 Capacity and Rating

- (A) Available Short-Circuit Current
- (B) System Capacity

702.5 Transfer Equipment

702.6 Signals

702.7 Signs

- (A) Standby
- (B) Grounding

II. Wiring

702.10 Wiring Optional Standby Systems

702.11 Portable Generator Grounding

- (A) Separately Derived System
- (B) Nonseparately Derived System

702.12 Outdoor Generator Sets

ARTICLE 705 - Interconnected Electric Power Production Sources

I. General

705.1 Scope

705.2 Definitions

705.3 Other Articles

705.4 Equipment Approval

705.6 System Installation

705.10 Directory

705.12 Point of Connection

- (A) Supply Side
- (B) Integrated Electrical Systems
- (C) Greater Than 100 kW
- (D) Utility-Interactive Inverters

705.14 Output Characteristics

705.16 Interrupting and Short-Circuit Current Rating

705.20 Disconnecting Means, Sources

705.21 Disconnecting Means, Equipment

705.22 Disconnect Device

705.30 Overcurrent Protection

- (A) Solar Photovoltaic Systems
- (B) Transformers
- (C) Fuel Cell Systems
- (D) Utility-Interactive Inverters
- (E) Generators

705.32 Ground-Fault Protection

- 705.40 Loss of Primary Source
- 705.42 Loss of 3-Phase Primary Source
- 705.50 Grounding
- II. Utility-Interactive Inverters
- 705.60 Circuit Sizing and Current
 - (A) Calculation of Maximum Circuit Current
 - (B) Ampacity and Overcurrent Device Ratings
- 705.65 Overcurrent Protection
 - (A) Circuits and Equipment
 - (B) Power Transformers
- 705.70 Utility-Interactive Inverters Mounted in Not-Readily-Accessible Locations
- 705.80 Utility-Interactive Power Systems Employing Energy Storage
- 705.82 Hybrid Systems
- 705.95 Ampacity of Neutral Conductor
 - (A) Neutral Conductor for Single Phase, 2-Wire Inverter Output
 - (B) Neutral Conductor for Instrumentation, Voltage Detection and Phase Detection
- 705.100 Unbalanced Interconnections
 - (A) Single Phase
 - (B) Three Phase
- III. Generators
- 705.130 Overcurrent Protection
- 705.143 Synchronous Generators

ARTICLE 708 - Critical Operations Power Systems (COPS)

- I. General
- 708.1 Scope
- 708.2 Definitions
- 708.4 Risk Assessment
 - (A) Conducting Risk Assessment
 - (B) Identification of Hazards
 - (C) Developing Mitigation Strategy
- 708.5 Physical Security
 - (A) Risk Assessment
 - (B) Restricted Access
- 708.6 Testing and Maintenance
 - (A) Conduct or Witness Test
 - (B) Tested Periodically
 - (C) Maintenance
 - (D) Written Record
 - (E) Testing Under Load
- 708.8 Commissioning
 - (A) Commissioning Plan
 - (B) Component and System Tests
 - (C) Baseline Test Results
 - (D) Functional Performance Tests
- II. Circuit Wiring and Equipment
- 708.10 Feeder and Branch Circuit Wiring
 - (A) Identification
 - (B) Wiring
 - (C) COPS Feeder Wiring Requirements
 - (D) COPS Branch Circuit Wiring
- 708.11 Branch Circuit and Feeder Distribution Equipment
 - (A) Branch Circuit Distribution Equipment
 - (B) Feeder Distribution Equipment
- 708.12 Feeders and Branch Circuits Supplied by COPS
- 708.14 Wiring of HVAC, Fire Alarm, Security, Emergency Communications, and Signaling Systems

- III. Power Sources and Connection
 - 708.20 Sources of Power
 - (A) General Requirements
 - (B) Fire Protection
 - (C) Grounding
 - (D) Surge Protection Devices
 - (E) Storage Battery
 - (F) Generator Set
 - (G) Uninterruptible Power Supplies
 - (H) Fuel Cell System
 - 708.21 Ventilation
 - 708.22 Capacity of Power Sources
 - (A) Capacity and Rating
 - (B) Selective Load Pickup, Load Shedding, and Peak Load Shaving
 - (C) Duration of COPS Operation
 - 708.24 Transfer Equipment
 - (A) General
 - (B) Bypass Isolation Switches
 - (C) Automatic Transfer Switches
 - (D) Use
 - 708.30 Branch Circuits Supplied by COPS
 - IV. Overcurrent Protection
 - 708.50 Accessibility
 - 708.52 Ground-Fault Protection of Equipment
 - (A) Applicability
 - (B) Feeders
 - (C) Testing
 - (D) Selectivity
 - 708.54 Coordination
 - V. System Performance and Analysis
 - 708.64 Emergency Operations Plan
- ## **ARTICLE 720 - Circuits and Equipment Operating at Less Than 50 Volts**
- 720.1 Scope
 - 720.2 Other Articles
 - 720.3 Hazardous (Classified) Locations
 - 720.4 Conductors
 - 720.5 Lampholders
 - 720.6 Receptacle Rating
 - 720.7 Receptacles Required
 - 720.9 Batteries
 - 720.11 Mechanical Execution of Work
- ## **ARTICLE 725 - Class 1, Class 2, and Class 3 Remote-Control, Signaling, and Power-Limited Circuits**
- I. General
 - 725.1 Scope
 - 725.2 Definitions
 - 725.3 Other Articles
 - (A) Number and Size of Conductors in Raceway
 - (B) Spread of Fire or Products of Combustion
 - (C) Ducts, Plenums, and Other Air-Handling Spaces
 - (D) Hazardous (Classified) Locations
 - (E) Cable Trays
 - (F) Motor Control Circuits
 - (G) Instrumentation Tray Cable
 - (H) Raceways Exposed to Different Temperatures

(I) Vertical Support for Fire-Rated Cables and Conductors
(J) Bushing
725.21 Access to Electrical Equipment Behind Panels
Designed to Allow Access
725.24 Mechanical Execution of Work
725.25 Abandoned Cables
725.30 Class 1, Class 2, and Class 3 Circuit Identification
725.31 Safety-Control Equipment
(A) Remote-Control Circuits
(B) Physical Protection
725.35 Class 1, Class 2, and Class 3 Circuit Requirements
II. Class 1 Circuits
725.41 Class 1 Circuit Classifications and Power Source
Requirements
(A) Class 1 Power-Limited Circuits
(B) Class 1 Remote-Control and Signaling Circuits
725.43 Class 1 Circuit Overcurrent Protection
725.45 Class 1 Circuit Overcurrent Device Location
(A) Point of Supply
(B) Feeder Taps
(C) Branch-Circuit Taps
(D) Primary Side of Transformer
(E) Input Side of Electronic Power Source
725.46 Class 1 Circuit Wiring Methods
725.48 Conductors of Different Circuits in the Same Cable,
Cable Tray, Enclosure, or Raceway
(A) Two or More Class 1 Circuits
(B) Class 1 Circuits with Power-Supply Circuits
725.49 Class 1 Circuit Conductors
(A) Sizes and Use
(B) Insulation
725.51 Number of Conductors in Cable Trays and Raceway,
and Ampacity Adjustment
(A) Class 1 Circuit Conductors
(B) Power-Supply Conductors and Class 1 Circuit Conductors
(C) Class 1 Circuit Conductors in Cable Trays
725.52 Circuits Extending Beyond One Building
III. Class 2 and Class 3 Circuits
725.121 Power Sources for Class 2 and Class 3 Circuits
(A) Power Source
(B) Interconnection of Power Sources
725.124 Circuit Marking
725.127 Wiring Methods on Supply Side of the Class 2 or
Class 3 Power Source
725.130 Wiring Methods and Materials on Load Side of the
Class 2 or Class 3 Power Source
(A) Class 1 Wiring Methods and Materials
(B) Class 2 and Class 3 Wiring Methods
725.133 Installation of Conductors and Equipment in Cables,
Compartments, Cable Trays, Enclosures, Manholes, Outlet
Boxes, Device Boxes, and Raceways for Class 2 and Class 3
Circuits
725.136 Separation from Electric Light, Power, Class
1, Non-Power-Limited Fire Alarm Circuit Conductors, and
Medium-Power Network-Powered Broadband
Communications Cables
(A) General
(B) Separated by Barriers
(C) Raceways Within Enclosures
(D) Associated Systems Within Enclosures
(E) Enclosures with Single Opening
(F) Manholes

(G) Cable Trays
(H) In Hoistways
(I) Other Applications
725.139 Installation of Conductors of Different Circuits in the
Same Cable, Enclosure, Cable Tray, or Raceway
(A) Two or More Class 2 Circuits
(B) Two or More Class 3 Circuits
(C) Class 2 Circuits with Class 3 Circuits
(D) Class 2 and Class 3 Circuits with Communications
Circuits
(E) Class 2 or Class 3 Cables with Other Circuit Cables
(F) Class 2 or Class 3 Conductors or Cables and Audio System
Circuits
725.141 Installation of Circuit Conductors Extending Beyond
One Building
725.143 Support of Conductors
725.154 Applications of Listed Class 2, Class 3, and PLTC
Cables
(A) Plenums
(B) Riser
(C) Cable Trays
(D) Industrial Establishments
(E) Other Wiring Within Buildings
(F) Cross-Connect Arrays
(G) Class 2 and Class 3 Cable Substitutions
(H) Class 2, Class 3, PLTC Circuit Integrity (CI) Cable or
Electrical Circuit Protective System
(I) Thermocouple Circuits
IV. Listing Requirements
725.179 Listing and Marking of Class 2, Class 3, and Type
PLTC Cables
(A) Types CL2P and CL3P
(B) Types CL2R and CL3R
(C) Types CL2 and CL3
(D) Types CL2X and CL3X
(E) Type PLTC
(F) Circuit Integrity (CI) Cable or Electrical Circuit Protective
System
(G) Class 2 and Class 3 Cable Voltage Ratings
(H) Class 3 Single Conductors
(I) Plenum Signaling Raceways
(J) Riser Signaling Raceways
(K) General-Purpose Signaling Raceways
(L) Marking

ARTICLE 727 - Instrumentation Tray Cable: Type ITC

727.1 Scope
727.2 Definition
727.3 Other Articles
727.4 Uses Permitted
727.5 Uses Not Permitted
727.6 Construction
727.7 Marking
727.8 Allowable Ampacity
727.9 Overcurrent Protection
727.10 Bends

ARTICLE 760 - Fire Alarm Systems

I. General
760.1 Scope
760.2 Definitions
760.3 Other Articles

- (A) Spread of Fire or Products of Combustion
- (B) Ducts, Plenums, and Other Air-Handling Spaces
- (C) Hazardous (Classified) Locations
- (D) Corrosive, Damp, or Wet Locations
- (E) Building Control Circuits
- (F) Optical Fiber Cables
- (G) Installation of Conductors with Other Systems
- (H) Raceways or Sleeves Exposed to Different Temperatures
- (I) Vertical Support for Fire Rated Cables and Conductors
- (J) Number and Size of Cables and Conductors in Raceway
- (K) Bushing

760.21 Access to Electrical Equipment Behind Panels Designed to Allow Access

760.24 Mechanical Execution of Work

760.25 Abandoned Cables

760.30 Fire Alarm Circuit Identification

760.32 Fire Alarm Circuits Extending Beyond One Building

760.35 Fire Alarm Circuit Requirements

- (A) Non-Power-Limited Fire Alarm (NPLFA) Circuits
- (B) Power-Limited Fire Alarm (PLFA) Circuits

II. Non-Power-Limited Fire Alarm (NPLFA) Circuits

760.41 NPLFA Circuit Power Source Requirements

- (A) Power Source
- (B) Branch Circuit

760.43 NPLFA Circuit Overcurrent Protection

760.45 NPLFA Circuit Overcurrent Device Location

760.46 NPLFA Circuit Wiring

760.48 Conductors of Different Circuits in Same Cable, Enclosure, or Raceway

- (A) Class 1 with NPLFA Circuits
- (B) Fire Alarm with Power-Supply Circuits

760.49 NPLFA Circuit Conductors

- (A) Sizes and Use
- (B) Insulation
- (C) Conductor Materials

760.51 Number of Conductors in Cable Trays and Raceways, and Ampacity Adjustment Factors

- (A) NPLFA Circuits and Class 1 Circuits
- (B) Power-Supply Conductors and Fire Alarm Circuit Conductors
- (C) Cable Trays

760.53 Multiconductor NPLFA Cables

- (A) NPLFA Wiring Method
- (B) Applications of Listed NPLFA Cables

III. Power-Limited Fire Alarm (PLFA) Circuits

760.121 Power Sources for PLFA Circuits

- (A) Power Source
- (B) Branch Circuit

760.124 Circuit Marking

760.127 Wiring Methods on Supply Side of the PLFA Power Source

760.130 Wiring Methods and Materials on Load Side of the PLFA Power Source

- (A) NPLFA Wiring Methods and Materials
- (B) PLFA Wiring Methods and Materials

760.133 Installation of Conductors and Equipment in Cables, Compartments, Cable Trays, Enclosures, Manholes, Outlet Boxes, Device Boxes, and Raceways for Power-Limited Circuits

760.136 Separation from Electric Light, Power, Class 1, NPLFA, and Medium-Power Network-Powered Broadband Communications Circuit Conductors

- (A) General
- (B) Separated by Barriers
- (C) Raceways Within Enclosures
- (D) Associated Systems Within Enclosures
- (E) Enclosures with Single Opening
- (F) In Hoistways
- (G) Other Applications

760.139 Installation of Conductors of Different PLFA Circuits, Class 2, Class 3, and Communications Circuits in the Same Cable, Enclosure, Cable Tray, or Raceway

- (A) Two or More PLFA Circuits
- (B) Class 2 Circuits with PLFA Circuits
- (C) Low-Power Network-Powered Broadband Communications Cables and PLFA Cables
- (D) Audio System Circuits and PLFA Circuits

760.142 Conductor Size

760.143 Support of Conductors

760.145 Current-Carrying Continuous Line-Type Fire Detectors

- (A) Application
- (B) Installation

760.154 Applications of Listed PLFA Cables

- (A) Plenum
- (B) Riser
- (C) Other Wiring Within Buildings
- (D) Fire Alarm Cable Substitutions

IV. Listing Requirements

760.176 Listing and Marking of NPLFA Cables

- (A) NPLFA Conductor Materials
- (B) Insulated Conductors
- (C) Type NPLFP
- (D) Type NPLFR
- (E) Type NPLF
- (F) Fire Alarm Circuit Integrity (CI) Cable or Electrical Circuit Protective System
- (G) NPLFA Cable Markings

760.179 Listing and Marking of PLFA Cables and Insulated Continuous Line-Type Fire Detectors

- (A) Conductor Materials
- (B) Conductor Size
- (C) Ratings
- (D) Type FPLP
- (E) Type FPLR
- (F) Type FPL
- (G) Fire Alarm Circuit Integrity (CI) Cable or Electrical Circuit Protective System
- (H) Coaxial Cables
- (I) Cable Marking
- (J) Insulated Continuous Line-Type Fire Detectors

ARTICLE 770 - Optical Fiber Cables and Raceways

I. General

770.1 Scope

770.2 Definitions

770.3 Other Articles

- (A) Hazardous (Classified) Locations
- (B) Composite Cables

770.12 Innerduct for Optical Fiber Cables

770.21 Access to Electrical Equipment Behind Panels Designed to Allow Access

770.24 Mechanical Execution of Work

770.25 Abandoned Cables
770.26 Spread of Fire or Products of Combustion
II. Cables Outside and Entering Buildings
770.48 Unlisted Cables and Raceways Entering Buildings
(A) Conductive and Nonconductive Cables
(B) Nonconductive Cables in Raceway
III. Protection
770.93 Grounding or Interruption of Non-Current-Carrying Metallic Members of Optical Fiber Cables
(A) Entering Buildings
(B) Terminating on the Outside of Buildings
IV. Grounding Methods
770.100 Entrance Cable Bonding and Grounding
(A) Bonding Conductor or Grounding Electrode Conductor
(B) Electrode
(C) Electrode Connection
(D) Bonding of Electrodes
770.106 Grounding and Bonding of Entrance Cables at Mobile Homes
(A) Grounding
(B) Bonding
V. Installation Methods Within Buildings
770.110 Raceways for Optical Fiber Cables
(A) Types of Raceways
(B) Raceway Fill for Optical Fiber Cables
770.113 Installation of Optical Fiber Cables and Raceways, and Cable Routing Assemblies
(A) Listing
(B) Fabricated Ducts Used for Environmental Air
(C) Other Spaces Used for Environmental Air (Plenums)
(D) Risers – Cables, Raceways, and Cable Routing Assemblies in Vertical Runs
(E) Risers – Cables and Raceways in Metal Raceways
(F) Risers – Cables, Raceways, and Cable Routing Assemblies in Fireproof Shafts
(G) Risers – One- and Two-Family Dwellings
(H) Cable Trays
(I) Distributing Frames and Cross-Connect Arrays
(J) Other Building Locations
770.114 Grounding
770.133 Installation of Optical Fibers and Electrical Conductors
(A) With Conductors for Electric Light, Power, Class 1, Non-Power-Limited Fire Alarm, or Medium Power Network-Powered Broadband Communications Circuits
(B) With Communication Cables
(C) With Other Circuits
(D) Support of Cables
770.154 Applications of Listed Optical Fiber Cables and Raceways, and Cable Routing Assemblies
VI. Listing Requirements
770.179 Optical Fiber Cables
(A) Types OFNP and OFCP
(B) Types OFNR and OFCR
(C) Types OFNG and OFCG
(D) Types OFN and OFC
(E) Optical Fiber Circuit Integrity (CI) Cables
770.182 Optical Fiber Raceways and Cable Routing Assemblies
(A) Plenum Optical Fiber Raceway
(B) Riser Optical Fiber Raceways and Cable Routing Assemblies

(C) General-Purpose Optical Fiber Cable Raceways and Cable Routing Assemblies

ARTICLE 800 - Communications Circuits

I. General
800.1 Scope
800.2 Definitions
800.3 Other Articles
(A) Hazardous (Classified) Locations
(B) Wiring in Ducts for Dust, Loose Stock, or Vapor Removal
(C) Equipment in Other Space Used for Environmental Air
(D) Network-Powered Broadband Communications Systems
(E) Premises-Powered Broadband Communications Systems
(F) Optical Fiber Cable
(G) Cable Routing Assemblies
800.18 Installation of Equipment
800.21 Access to Electrical Equipment Behind Panels Designed to Allow Access
800.24 Mechanical Execution of Work
800.25 Abandoned Cables
800.26 Spread of Fire or Products of Combustion
II. Wires and Cables Outside and Entering Buildings
800.44 Overhead (Aerial) Communications Wires and Cables
(A) On Poles and In-Span
(B) Above Roofs
800.47 Underground Communications Wires and Cables Entering Buildings
(A) With Electric Light or Power Conductors
(B) Underground Block Distribution
800.48 Unlisted Cables Entering Buildings
800.50 Circuits Requiring Primary Protectors
(A) Insulation, Wires, and Cables
(B) On Buildings
(C) Entering Buildings
800.53 Lightning Conductors
III. Protection
800.90 Protective Devices
(A) Application
(B) Location
(C) Hazardous (Classified) Locations
(D) Secondary Protectors
800.93 Grounding or Interruption of Metallic Sheath Members of Communications Cables
(A) Entering Buildings
(B) Terminating on the Outside of Buildings
IV. Grounding Methods
800.100 Cable and Primary Protector Bonding and Grounding
(A) Bonding Conductor or Grounding Electrode Conductor
(B) Electrode
(C) Electrode Connection
(D) Bonding of Electrodes
800.106 Primary Protector Grounding and Bonding at Mobile Homes
(A) Grounding
(B) Bonding
V. Installation Methods Within Buildings
800.110 Raceways for Communications Wires and Cables
(A) Types of Raceways
(B) Raceway Fill for Communications Wires and Cables
800.113 Installation of Communications Wires, Cables and Raceways

- (A) Listing
- (B) Fabricated Ducts Used for Environmental Air
- (C) Other Spaces Used For Environmental Air (Plenums)
- (D) Risers – Cables and Raceways in Vertical Runs
- (E) Risers – Cables and Raceways in Metal Raceways
- (F) Risers – Cables and Raceways in Fireproof Shafts
- (G) Risers – One- and Two-Family Dwellings
- (H) Cable Trays
- (I) Distributing Frames and Cross-Connect Arrays
- (J) Other Building Locations
- (K) Multifamily Dwellings
- (L) One- and Two-Family Dwellings
- 800.133** Installation of Communications Wires, Cables, and Equipment
 - (A) Separation from Other Conductors
 - (B) Support of Communications Wires and Cables
- 800.154** Applications of Listed Communications Wires, Cables, and Raceways
- 800.156** Dwelling Unit Communications Outlet
- VI. Listing Requirements
 - 800.170** Equipment
 - (A) Primary Protectors
 - (B) Secondary Protectors
 - 800.173** Drop Wire and Cable
 - 800.179** Communications Wires and Cables
 - (A) Type CMP
 - (B) Type CMR
 - (C) Type CMG
 - (D) Type CM
 - (E) Type CMX
 - (F) Type CMUC Undercarpet Wires and Cables
 - (G) Communications Circuit Integrity (CI) Cables
 - (H) Communications Wires
 - (I) Hybrid Power and Communications Cables
 - 800.182** Communications Raceways and Cable Routing Assemblies
 - (A) Plenum Communications Raceways
 - (B) Riser Communications Raceways and Cable Routing Assemblies
 - (C) General-Purpose Communications Raceways and Cable Routing Assemblies

ARTICLE 810 - Radio and Television Equipment

- I. General
 - 810.1** Scope
 - 810.2** Definitions
 - 810.3** Other Articles
 - 810.4** Community Television Antenna
 - 810.5** Radio Noise Suppressors
- II. Receiving Equipment — Antenna Systems
 - 810.11** Material
 - 810.12** Supports
 - 810.13** Avoidance of Contacts with Conductors of Other Systems
 - 810.14** Splices
 - 810.15** Grounding
 - 810.16** Size of Wire-Strung Antenna — Receiving Station
 - (A) Size of Antenna Conductors
 - (B) Self-Supporting Antennas
 - 810.17** Size of Lead-in — Receiving Station
 - 810.18** Clearances — Receiving Stations

- (A) Outside of Buildings
- (B) Antennas and Lead-ins — Indoors
- (C) In Boxes or Other Enclosures
- 810.19** Electrical Supply Circuits Used in Lieu of Antenna — Receiving Stations
- 810.20** Antenna Discharge Units — Receiving Stations
 - (A) Where Required
 - (B) Location
 - (C) Grounding
- 810.21** Bonding Conductors and Grounding Electrode Conductors — Receiving Stations
 - (A) Material
 - (B) Insulation
 - (C) Supports
 - (D) Mechanical Protection
 - (E) Run in Straight Line
 - (F) Electrode
 - (G) Inside or Outside Building
 - (H) Size
 - (I) Common Ground
 - (J) Bonding of Electrodes
 - (K) Electrode Connection
- III. Amateur and Citizen Band Transmitting and Receiving Stations — Antenna Systems
 - 810.51** Other Sections
 - 810.52** Size of Antenna
 - 810.53** Size of Lead-in Conductors
 - 810.54** Clearance on Building
 - 810.55** Entrance to Building
 - 810.56** Protection Against Accidental Contact
 - 810.57** Antenna Discharge Units — Transmitting Stations
 - 810.58** Bonding Conductors and Grounding Electrode Conductors — Amateur and Citizen Band Transmitting and Receiving Stations
 - (A) Other Sections
 - (B) Size of Protective Bonding Conductor or Grounding Electrode Conductor
 - (C) Size of Operating Bonding Conductor or Grounding Electrode Conductor
- IV. Interior Installation — Transmitting Stations
 - 810.70** Clearance from Other Conductors
 - 810.71** General
 - (A) Enclosing
 - (B) Grounding of Controls
 - (C) Interlocks on Doors

ARTICLE 820 - Community Antenna Television and Radio Distribution Systems

- I. General
 - 820.1** Scope
 - 820.2** Definitions
 - 820.3** Other Articles
 - (A) Hazardous (Classified) Locations
 - (B) Installation and Use
 - (C) Installations of Conductive and Nonconductive Optical Fiber Cables
 - (D) Communications Circuits
 - (E) Network-Powered Broadband Communications Systems
 - (F) Premises-Powered Broadband Communications Systems
 - (G) Alternate Wiring Methods
 - (H) Cable Routing Assemblies

820.15 Power Limitations
820.21 Access to Electrical Equipment Behind Panels
Designed to Allow Access
820.24 Mechanical Execution of Work
820.25 Abandoned Cables
820.26 Spread of Fire or Products of Combustion
II. Coaxial Cables Outside and Entering Buildings
820.44 Overhead (Aerial) Coaxial Cables
(A) On Poles and In-Span
(B) Above Roofs
(C) On Masts
(D) Between Buildings
(E) On Buildings
820.47 Underground Coaxial Cables Entering Buildings
(A) Underground Systems with Electric Light and Power
Conductors
(B) Direct-Buried Cables and Raceways
820.48 Unlisted Cables Entering Buildings
III. Protection
820.93 Grounding of the Outer Conductive Shield of Coaxial
Cables
(A) Entering Buildings
(B) Terminating Outside of the Building
(C) Location
(D) Hazardous (Classified) Locations
IV. Grounding Methods
820.100 Cable Bonding and Grounding
(A) Bonding Conductor or Grounding Electrode Conductor
(B) Electrode
(C) Electrode Connection
(D) Bonding of Electrodes
(E) Shield Protection Devices
820.103 Equipment Grounding
820.106 Grounding and Bonding at Mobile Homes
(A) Grounding
(B) Bonding
V. Installation Methods Within Buildings
820.110 Raceways for Coaxial Cables
(A) Types of Raceways
(B) Raceway Fill for Coaxial Cables
820.113 Installation of Coaxial Cables
(A) Listing
(B) Fabricated Ducts Used for Environmental Air
(C) Other Spaces Used for Environmental Air (Plenums)
(D) Risers – Cables in Vertical Runs
(E) Risers – Cables in Metal Raceways
(F) Risers – Cables in Fireproof Shafts
(G) Risers – One- and Two-Family Dwellings
(H) Cable Trays
(I) Distributing Frames and Cross-Connect Arrays
(J) Other Building Locations
(K) One- and Two-Family and Multifamily Dwellings
820.133 Installation of Coaxial Cables and Equipment
(A) Separation from Other Conductors
(B) Support of Coaxial Cables
820.154 Applications of Listed CATV Cables
VI. Listing Requirements
820.179 Coaxial Cables
(A) Type CATVP
(B) Type CATVR
(C) Type CATV
(D) Type CATVX

ARTICLE 830 - Network-Powered Broadband Communications Systems

I. General
830.1 Scope
830.2 Definitions
830.3 Other Articles
(A) Hazardous (Classified) Locations
(B) Equipment in Other Space Used for Environmental Air
(C) Output Circuits
(D) Installation and Use
(E) Protection Against Physical Damage
(F) Cable Routing Assemblies
830.15 Power Limitations
830.21 Access to Electrical Equipment Behind Panels
Designed to Allow Access
830.24 Mechanical Execution of Work
830.25 Abandoned Cables
830.26 Spread of Fire or Products of Combustion
II. Cables Outside and Entering Buildings
830.40 Entrance Cables
(A) Medium-Power Circuits
(B) Low-Power Circuits
830.44 Overhead (Aerial) Cables
(A) On Poles and In-Span
(B) Above Roofs
(C) Clearance from Ground
(D) Over Pools
(E) Final Spans
(F) Between Buildings
(G) On Buildings
830.47 Underground Network-Powered Broadband
Communications Cables Entering Buildings
(A) Underground Systems with Electric Light and Power
Conductors
(B) Direct-Buried Cables and Raceways
(C) Mechanical Protection
(D) Pools
III. Protection
830.90 Primary Electrical Protection
(A) Application
(B) Location
(C) Hazardous (Classified) Locations
830.93 Grounding or Interruption of Metallic Members of
Network-Powered Broadband Communications Cables
(A) Entering Buildings
(B) Terminating Outside of the Building
IV. Grounding Methods
830.100 Cable, Network Interface Unit, and Primary Protector
Bonding and Grounding
(A) Bonding Conductor or Grounding Electrode Conductor
(B) Electrode
(C) Electrode Connection
(D) Bonding of Electrodes
830.106 Grounding and Bonding at Mobile Homes
(A) Grounding
(B) Bonding
V. Installation Methods Within Buildings
830.110 Raceways for Low- and Medium-Power Network-
Powered Broadband Communications Cables
(A) Raceways Recognized in **Chapter 3**

(B) Raceway Fill for Network-Powered Broadband Communications Cables
830.113 Installation of Network-Powered Broadband Communications Cables
(A) Listing
(B) Fabricated Ducts Used for Environmental Air
(C) Other Spaces Used for Environmental Air (Plenums)
(D) Risers – Cables in Vertical Runs
(E) Risers – Cables in Metal Raceways
(F) Risers – Cables in Fireproof Shafts
(G) Risers – One- and Two-Family Dwellings
(H) Other Building Locations
830.133 Installation of Network-Powered Broadband Communications Cables and Equipment
(A) Separation of Conductors
(B) Support of Network-Powered Broadband Communications Cables
830.154 Applications of Network-Powered Broadband Communications System Cables
830.160 Bends
VI. Listing Requirements
830.179 Network-Powered Broadband Communications Equipment and Cables
(A) Network-Powered Broadband Communications Medium-Power Cables
(B) Network-Powered Broadband Communications Low-Power Cables

ARTICLE 840 - Premises-Powered Broadband Communications Systems

I. General

840.1 Scope
840.2 Definitions
840.3 Other Articles
(A) Hazardous (Classified) Locations
(B) Equipment in Other Space Used for Environmental Air
(C) Output Circuits
840.21 Access to Electrical Equipment Behind Panels Designed to Allow Access
840.24 Mechanical Execution of Work
840.25 Abandoned Cables
840.26 Spread of Fire or Products of Combustion

II. Cables Outside and Entering Buildings

840.44 Overhead Optical Fiber Cables
(A) On Poles and In-Span
(B) Above Roofs
840.47 Underground Optical Fiber Cables Entering Buildings
(A) Class 1 or Non-Power-Limited Fire Alarm Circuits
(B) Direct-Buried Cables and Raceways
(C) Mechanical Protection
840.48 Unlisted Cables and Raceways Entering Buildings

III. Protection

840.90 Protective Devices
840.93 Grounding or Interruption
(A) Non-Current-Carrying Metallic Members of Optical Fiber Cables

(B) Communications Cables
(C) Coaxial Cables

IV. Grounding Methods

840.100 ONT and Optical Fiber Cable Grounding
840.101 Premises Circuits Not Leaving the Building
(A) Coaxial Cable Shield Grounding

(B) Communications Circuit Grounding
(C) ONT Grounding
840.103 Equipment Grounding
840.106 Grounding and Bonding at Mobile Homes
(A) Grounding
(B) Bonding
V. Installation Methods Within Buildings
840.110 Raceways for Premises-Powered Broadband Communications Optical Fiber Cables
840.113 Installation Past the ONT
(A) Premises Communications Circuits
(B) Premises Community Antenna Television (CATV) Circuits
840.133 Installation of Optical Fibers and Electrical Conductors Associated with Premises-Powered Broadband Communications Systems
840.154 Applications of Listed Optical Fiber Cables and Raceways
VI. Listing Requirements
840.170 Equipment and Cables
(A) Optical Network Terminal
(B) Optical Fiber Cables
(C) Premises Communications Circuits
(D) Premises Community Antenna Television (CATV) Circuits