2021 Code Implementation
Electrical

Department of
Licenses and Inspections
CITY OF PHILADELPHIA

Agenda

- Implementation
- Understanding Applicability of the NEC
- Changes to the 2021
- What’s Coming in L&I

SUBMIT YOUR QUESTIONS/ CONCERNS TO Q&A

Department of
Licenses and Inspections
CITY OF PHILADELPHIA

Code Adoption

2021 I-Codes Adopted By the State

(Est Sept 2025)

6-month transition

Mandatory application of I-Codes

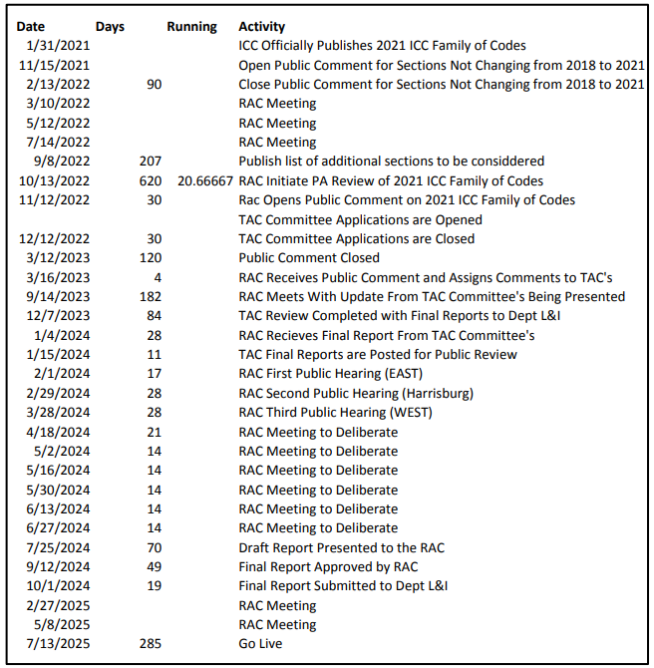
(Est March 2026)

- **Applications filed may apply the 2018 or I-Codes.**

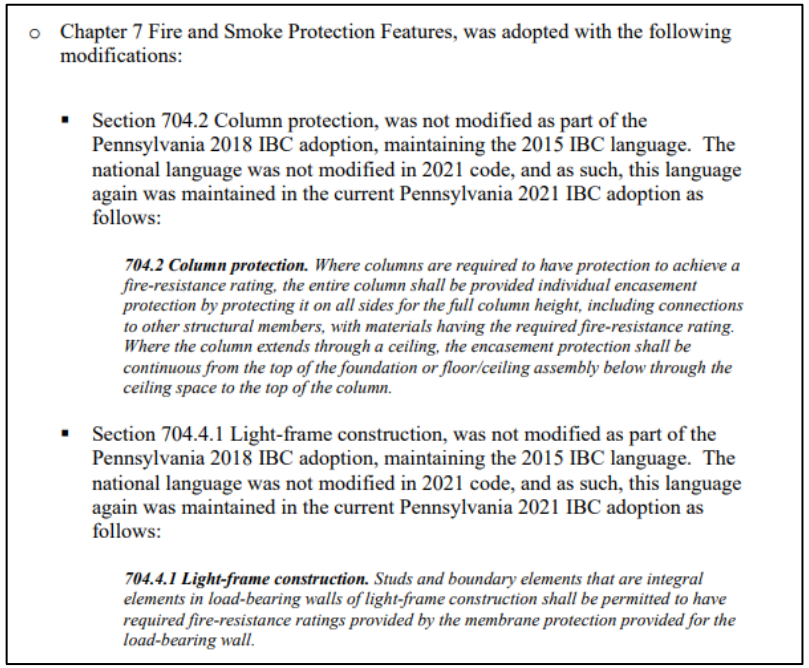
Pa Uniform Construction Code (UCC)

- Building Code governing design, construction, alteration, and maintenance of buildings throughout Pennsylvania.
- Established and amended under the Pa Construction Code Act (PCCA).
- Current regulation requires adoption of triennial International Codes 4.5 years after publication.
  - Code is further modified by Pa laws and by Review & Advisory Council Review/ Recommendation Process.
  - Philadelphia was permitted early adoption of 2018 commercial codes and hasn't experienced full effect of 3-year adoption cycle.
- Code may be further modified by local jurisdiction if changes meet or exceed PA UCC provisions.
  - Reviewed, approved and posted by Pa DLI
  - Requires City Ordinance
  - Certain sections cannot be changed through this municipal change process (i.e. Provision adopted through legislation, accessibility, elevator/boilers)

Pa Uniform Construction Code (UCC)



Date	Days	Running	Activity
1/31/2021			ICC Officially Publishes 2021 ICC Family of Codes
11/15/2021			Open Public Comment for Sections Not Changing from 2018 to 2021
2/13/2022	90		Close Public Comment for Sections Not Changing from 2018 to 2021
3/10/2022			RAC Meeting
5/12/2022			RAC Meeting
7/14/2022			RAC Meeting
9/8/2022	207		Publish list of additional sections to be considdered
10/13/2022	620	20.66667	RAC Initiate PA Review of 2021 ICC Family of Codes
11/12/2022	30		Rac Opens Public Comment on 2021 ICC Family of Codes
			TAC Committee Applications are Opened
12/12/2022	30		TAC Committee Applications are Closed
3/12/2023	120		Public Comment Closed
3/16/2023	4		RAC Receives Public Comment and Assigns Comments to TAC's
9/14/2023	182		RAC Meets With Update From TAC Committee's Being Presented
12/7/2023	84		TAC Review Completed with Final Reports to Dept L&I
1/4/2024	28		RAC Recieves Final Report From TAC Committee's
1/15/2024	11		TAC Final Reports are Posted for Public Review
2/1/2024	17		RAC First Public Hearing (EAST)
2/29/2024	28		RAC Second Public Hearing (Harrisburg)
3/28/2024	28		RAC Third Public Hearing (WEST)
4/18/2024	21		RAC Meeting to Deliberate
5/2/2024	14		RAC Meeting to Deliberate
5/16/2024	14		RAC Meeting to Deliberate
5/30/2024	14		RAC Meeting to Deliberate
6/13/2024	14		RAC Meeting to Deliberate
6/27/2024	14		RAC Meeting to Deliberate
7/25/2024	70		Draft Report Presented to the RAC
9/12/2024	49		Final Report Approved by RAC
10/1/2024	19		Final Report Submitted to Dept L&I
2/27/2025			RAC Meeting
5/8/2025			RAC Meeting
7/13/2025	285		Go Live



- Chapter 7 Fire and Smoke Protection Features, was adopted with the following modifications:
  - Section 704.2 Column protection, was not modified as part of the Pennsylvania 2018 IBC adoption, maintaining the 2015 IBC language. The national language was not modified in 2021 code, and as such, this language again was maintained in the current Pennsylvania 2021 IBC adoption as follows:

    704.2 Column protection. *Where columns are required to have protection to achieve a fire-resistance rating, the entire column shall be provided individual encasement protection by protecting it on all sides for the full column height, including connections to other structural members, with materials having the required fire-resistance rating. Where the column extends through a ceiling, the encasement protection shall be continuous from the top of the foundation or floor/ceiling assembly below through the ceiling space to the top of the column.*
  - Section 704.4.1 Light-frame construction, was not modified as part of the Pennsylvania 2018 IBC adoption, maintaining the 2015 IBC language. The national language was not modified in 2021 code, and as such, this language again was maintained in the current Pennsylvania 2021 IBC adoption as follows:

    704.4.1 Light-frame construction. *Studs and boundary elements that are integral elements in load-bearing walls of light-frame construction shall be permitted to have required fire-resistance ratings provided by the membrane protection provided for the load-bearing wall.*

Review & Advisory Council Site

includes complete info on regulatory process, including minutes of meetings.

Full Adoption Timeline

2024 adoption timeline will be posted here, with public comment period of unchanged sections in 2025.

Final Report

View full report of amendments to the 2021 I-Codes to be adopted through PA DLI regulation.

Implementation

- Once State adopts the 2021 I-Codes, a Code Bulletin will be published regarding implementation.
- Anticipate State adoption in Sept 2025 but this is wholly dependent on their timeline.
- For larger projects, the Building Permit controls expiration.
    - An Electrical Permit will remain active as long as the Building Permit remains active.
    - See Code Bulletin A-2001: Construction Permit Expiration for Projects
- Permit Application Extensions - will only authorize one extension for RFI. More stringent rules on pick-up.

Guidance Documents

Assistance in Understanding Changes

- Publish list of changes, by Code, as they will be applied in Philadelphia.

Department of Licenses and Inspections
CITY OF PHILADELPHIA

Reference Code(s):
International Building Code

FAQ:
What are the significant changes between the 2018 and 2021 Building Code?

This document includes a summary of significant changes to the Building Code (IBC) and includes the PA Uniform Construction Advisory Council (RAC) Report Amendments. This document a information for the identified code changes

Disclaimer: This document shall be utilized as guidance professional is responsible for reviewing the provisions of the I associated reference Standards, and the directives of the PA D and Industry. The Department of Licenses and Inspections decision in response to a formal application for a const preliminary review.

Summary of changes between the 2018 and 2021 International
(Items marked with an asterisk (*) are identified as major code change

Administration

Chapter 2:

- Definition- Atrium
- Definition- Change of Occupancy *
- Definition- Impact Protective System
- Definition- Mass Timber *
- Definition- Nailable Substrate
- Definition- Penthouse
- Definition- Puzzle Room *
- Definition- Structural Members

Building Planning

Chapters 3 through 6:

- Section 306.2- Group F-1 Occupancy Classification

PB_020_FAQ

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Return Home

Reference Code(s):
International Building Code

Summary of Changes between the 2018 and 2021 Building Code

Administration

Chapter 2 (Definitions)

- **Definition of "Atrium"** has been simplified by the elimination of some previous language to clearly define vertical enclosures and the number of stories connected by an atrium.

[BG] ATRIUM. A vertical space that is closed at the top, connecting two or more stories in Group I-2 and I-3 occupancies or three or more stories in all other occupancies.

- **Definition of "Change of Occupancy"** narrows the scope of a change of occupancy where no classification change takes place.

[A] CHANGE OF OCCUPANCY. Either of the following shall be considered as a change of occupancy where this code requires a greater degree of safety, accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.
2. Any change in the purpose of, or a change in the level of activity within, a building or structure.

- **NEW Definition of "Impact Protective System"** has been added for assemblies that are designed to withstand windborne debris.

[BS] IMPACT PROTECTIVE SYSTEM. Construction that has been shown by testing to withstand the impact of test missiles and that is applied, attached or locked over exterior glazing.

- **Definition of "Mass Timber"** has been amended to specifically define mass timber as representative of both the large wood building elements historically recognized as Heavy Timber (now Type IV-HT) constructions and the three new construction types of IV-A, IV-B and IV-C.

[BG] MASS TIMBER. Structural elements of Type IV construction primarily of solid, built-up, panelized or engineered wood products that meet minimum cross-section dimensions of Type IV construction.

[BF] NONCOMBUSTIBLE PROTECTION (FOR MASS TIMBER). Noncombustible material, in accordance with Section 703.6, designed to increase the fire-resistance rating and delay the combustion of mass timber.

- **Definition of "Nailable Substrate"** has been amended to clarify what materials should be expected to provide withdrawal resistance for roof or wall cladding assemblies.

[BF] NAILABLE SUBSTRATE. A product or material such as framing, sheathing or furring, composed of wood, wood-based materials or other materials providing equivalent fastener withdrawal resistance.

PB_020_FAQ Page 6 of 54

Future Information Sessions

2021 Code Questions

Answers to your questions

- Request that L&I issue an interpretation on a specific code section. This form, linked in our newsletter, can also be used for 2021 code issues / concerns.
- Look out for future newsletters or trainings for public response.

Note: Continue to use www.phila.gov/get-help for direct responses to code questions.

Code Corner

2021 I-Code transition materials

Beginning in January 2026, all new permit applications must conform to the 2021 I-Codes. This page includes forms and documents to prepare for the transition.

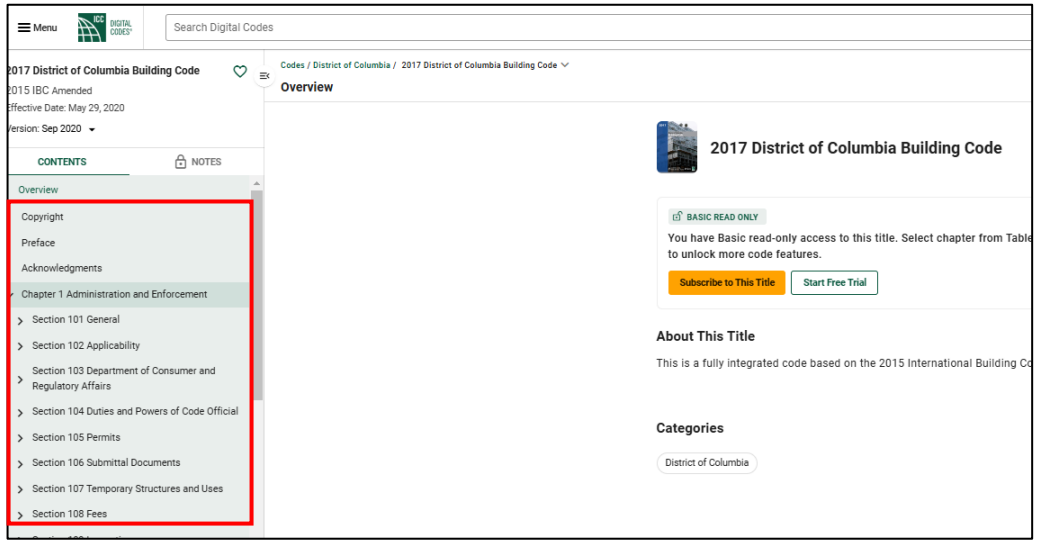
Filter documents by title or description

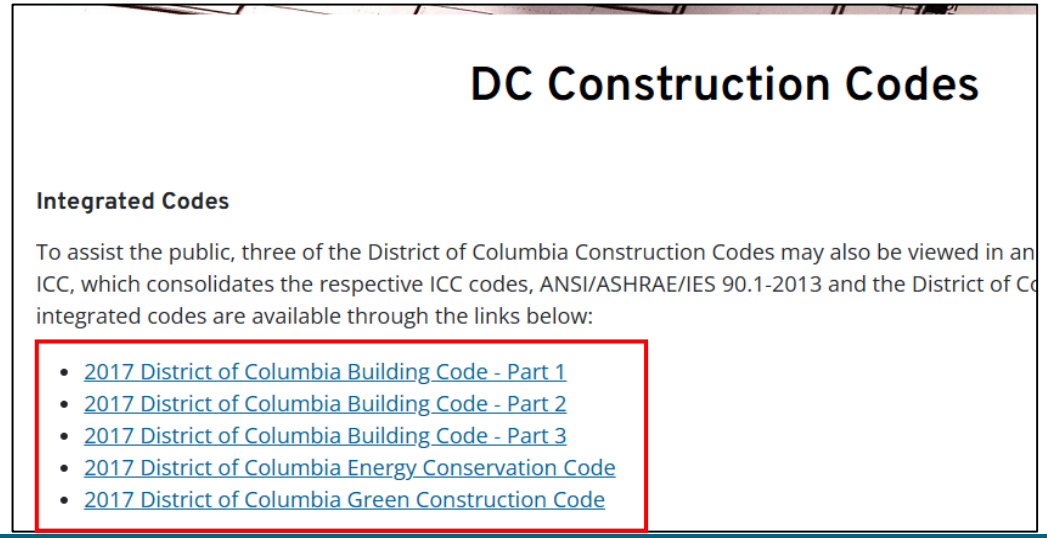
Name	Description	Released	Format
2021 I-Code- Q&A	Questions and answers regarding the 2021 I-Code transition.	January 24, 2025	PDF
2021 ICC Code Adoption Final Report	This report is issued by the Pennsylvania Department of Labor and Industry Review and Advisory Council for modifications to the 2021 I-Codes, to be adopted throughout PA as part of the Uniform Construction Code.	September 20, 2024	PDF
2021 IPC Changed Sections	This document lists sections that were changed under the 2021 International Plumbing Code.	September 20, 2024	PDF
2018 Philadelphia Plumbing Code Changes	This document provides guidance that highlights the impacts of the 2021 changes and proposed local changes to the 2018 Philadelphia Plumbing Code.	September 20, 2024	PDF
Proposed Phila Changes to the 2021 IPC Provisions	This document provides recommendations by the Plumbing Advisory Board (PAB) to better accommodate local conditions. This document excludes those changes already adopted by ordinance.	September 20, 2024	PDF
2021 I-Code changes webinar slides	These slides provide an overview of the timeline, what to expect in the coming year, and examples of significant changes from the 2021 I-Code adoption.	December 18, 2024	PDF

Published Consolidated Code

Electronic Access to Consolidated Codes

- All Building Construction and Occupancy Sub-Codes, except Admin Code, will be published to ICC's website.
- Free access to read-only version. Paid subscription provides additional functionality.
- An integrated PDF of each code will be available on L&I website.
- Integrated codes will be published as completed by ICC. Very limited pool will be available by July 13.
- Public can continue to access free versions of I-Codes and the Philadelphia Code, which identifies all local and state changes to I-Codes.





Applicability of NEC under the UCC

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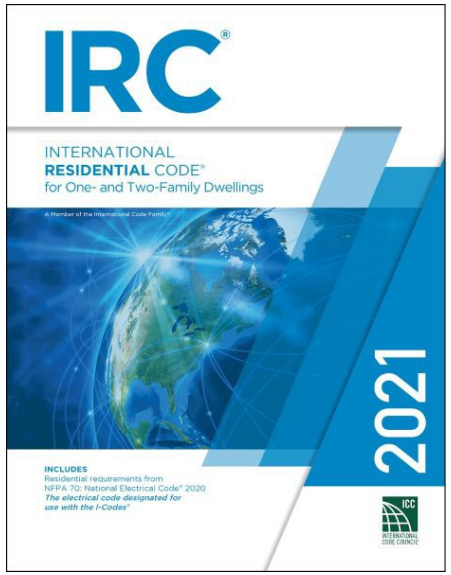
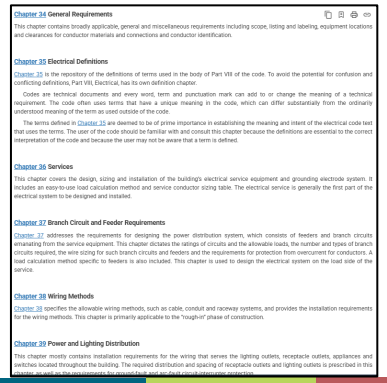
What Code Applies to Electrical Work



Part 8- Electrical



Chapter 34 General Requirements

This chapter contains broadly applicable, general and miscellaneous requirements including scope, listing and labeling, equipment locations and clearances for conductor materials and connections and conductor identification.

Chapter 35 Electrical Definitions

Chapter 35 is the repository of the definitions of terms used in the body of Part VIII of the code. To avoid the potential for confusion and conflicting definitions, Part VIII, Electrical, has its own definition chapter.

Codes are technical documents and every word, term and punctuation mark can add to or change the meaning of a technical requirement. The code often uses terms that have a unique meaning in the code, which can differ substantially from the ordinarily understood meaning of the term as used outside of the code.

The terms defined in Chapter 35 are deemed to be of prime importance in establishing the meaning and intent of the electrical code text that uses the terms. The user of the code should be familiar with and consult this chapter because the definitions are essential to the correct interpretation of the code and because the user may not be aware that a term is defined.

Chapter 36 Services

This chapter covers the design, sizing and installation of the building's electrical service equipment and grounding electrode system. It includes an easy-to-use load calculation method and service conductor sizing table. The electrical service is generally the first part of the electrical system to be designed and installed.

Chapter 37 Branch Circuit and Feeder Requirements

Chapter 37 addresses the requirements for designing the power distribution system, which consists of feeders and branch circuits emanating from the service equipment. This chapter dictates the ratings of circuits and the allowable loads, the number and types of branch circuits required, the wire sizing for such branch circuits and feeders and the requirements for protection from overcurrent for conductors. A load calculation method specific to feeders is also included. This chapter is used to design the electrical system on the load side of the service.

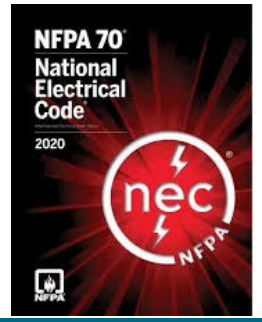
Chapter 38 Wiring Methods

Chapter 38 specifies the allowable wiring methods, such as cable, conduit and raceway systems, and provides the installation requirements for the wiring methods. This chapter is primarily applicable to the "rough-in" phase of construction.

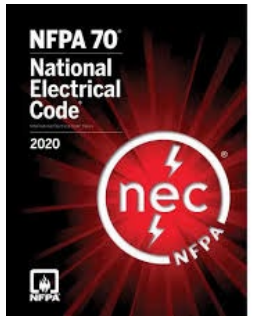
Chapter 39 Power and Lighting Distribution

This chapter mostly contains installation requirements for the wiring that serves the lighting outlets, receptacle outlets, appliances and switches located throughout the building. The required distribution and spacing of receptacle outlets and lighting outlets is prescribed in this

Ch 27 references NEC , with minimal supplemental provisions



NEC, as referenced in the IEBC



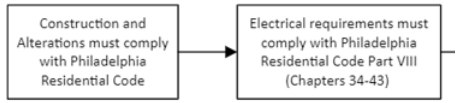
What Code Applies to Electrical Work?

Residential Buildings- Repairs, Alterations, and New Construction

For the purpose of this document, a residential building is a detached one- and two-family dwelling or a townhouse not more than three stories in height.

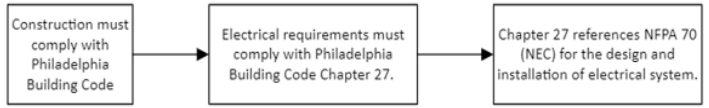
All electrical work relating to a residential building and its accessory structures is governed by Part VIII of the Philadelphia Residential Code. These chapters are produced and copyrighted by NFPA and based on the referenced edition of NFPA 70 (NEC).

An alteration or repair is required to meet the provisions of the Residential Code for new materials; however, the remainder of the building is not required to comply with current standards unless explicitly stated.



Non-Residential Buildings- New Construction

All new work on a building (and accessory structures) that is not classified as residential is governed by the Philadelphia Building Code. Chapter 27 of the Building Code references NFPA 70 (NEC) for the design, construction, and installation of electrical systems, equipment, and components.

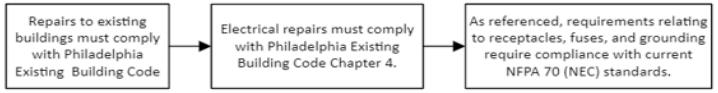


Non-Residential Buildings- Repairs, Alterations, Additions, and Change in Occupancy

The provisions of the Existing Building Code apply to an existing building, as stated in Chapter 27 of the Building Code. New work must comply with the provisions of the Building Code but repairs and required upgrades to buildings undergoing alteration or change in occupancy are governed by the provisions of the Existing Building Code. The Existing Building Code recognizes the challenges associated with upgrading older buildings and takes the intent and extent of work into account.

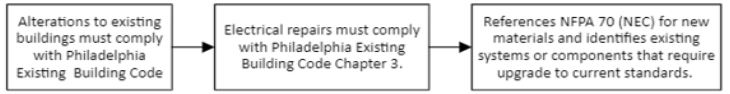
Repairs

A repair is non-elective work that is necessary to maintain a system in safe condition or to correct damage, which may include the replacement of systems or components. Repairs may be made using like materials unless otherwise stated and the remainder of the building is not required to be upgraded.



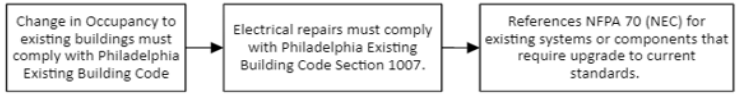
Alterations

An alteration is any elective renovation that is not classified as a repair. The necessity, and not the extent of work, is the distinguishing factor. Upgrades to the building may be required based on the extent of the work. The Existing Building Code offers multiple paths of compliance and enables the building owner and design professional to select the method that is best suited to their project.



Change in Occupancy Classification

The Existing Building Code includes requirements for buildings or spaces undergoing a change in occupancy that apply even if no work is proposed.



Why Is This Important?

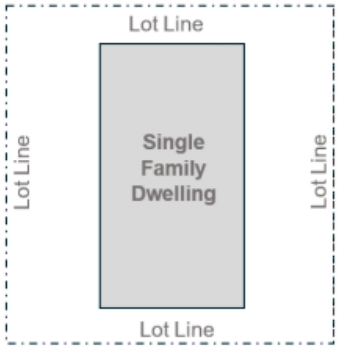
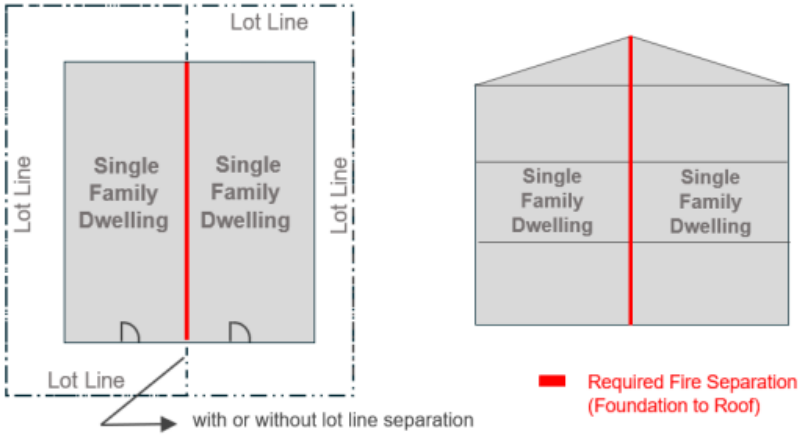
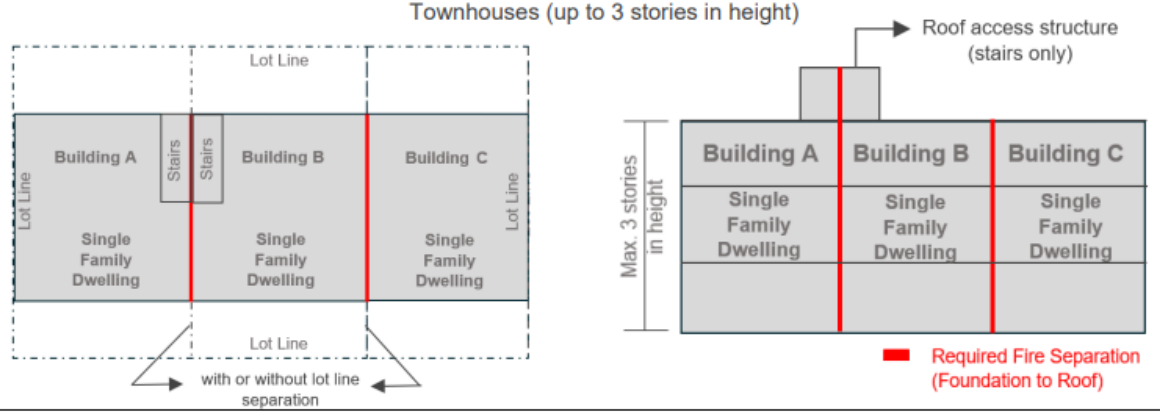
There are electrical code amendments to the PA UCC that apply to the dwellings regulated under the Residential Code that **DO NOT** apply to buildings regulated under the Building (AKA Commercial) Code:

-Emergency Disconnect

-Receptacles for Islands and Peninsular Countertops

-Foyer Receptacles

What Building Code applies to my residential project?

Code	Use and Number of Stories
Residential Code The provisions of the Residential Code apply to one of the following: • Detached one-family dwelling • Detached two-family dwellings with separate means of egress • Townhouses Additional Codes/Standards include: • Plumbing Code	Detached one-family dwelling (up to 3 stories in height)  Two-family dwellings (up to 3 stories in height) *Each dwelling has a separate means of egress.*  Townhouses (up to 3 stories in height) 

Building Code

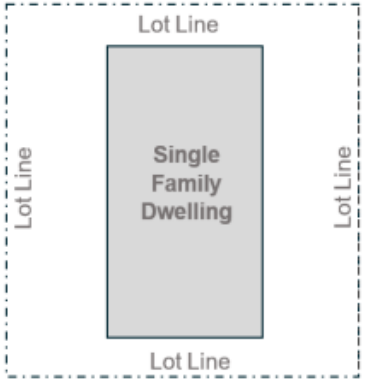
The provisions of the Building Code apply to all other buildings or structures that do not comply with the Residential Code provisions.

Additional Codes/Standards include:

- Existing Building Code
- Plumbing Code
- NFPA Standards
- Mechanical Code
- Energy Code
- Accessibility Standard

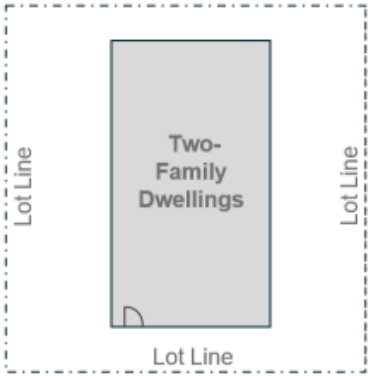
Detached/semi-detached/attached one-family dwelling

(4 or more stories in height)



Two-family dwellings

(all others not meeting scope of the Residential Code)



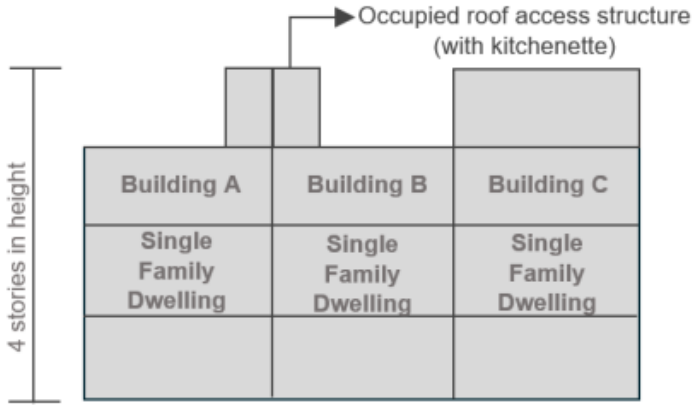
Mixed-use building

(i.e. business on first floor and dwelling unit on upper floors)

Multi-family dwelling

(3 or more dwellings)

Townhomes (4 or more stories in height)



Top Changes

(Source: NEC 2020 Analysis of Changes, ICC Significant Changes to IRC)

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Emergency Disconnects

*An **emergency disconnecting means** (which could include the service disconnecting means) for a one-or two-family dwelling is now required to be installed and located on the outside of the structure.*

230.85 Emergency Disconnects.

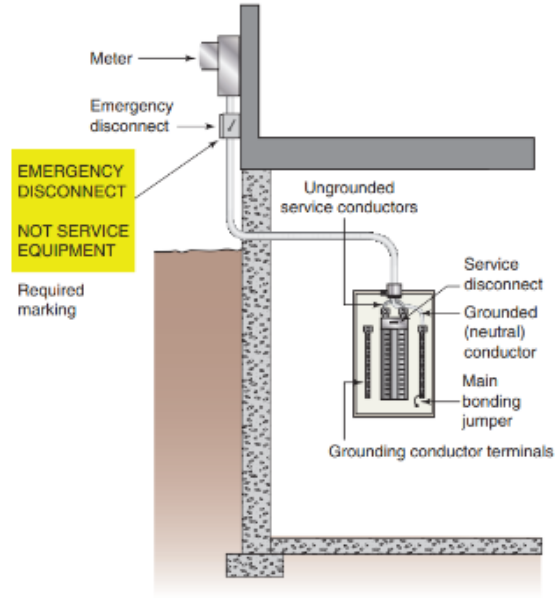
For one- and two-family dwelling units, all service conductors shall terminate in disconnecting means having a short-circuit current rating equal to or greater than the available fault current, installed in a readily accessible outdoor location. If more than one disconnect is provided, they shall be grouped. Each disconnect shall be one of the following:

(1) Service disconnects marked as follows: EMERGENCY DISCONNECT, SERVICE DISCONNECT

(2) Meter disconnects installed per 230.82(3) and marked as follows: EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE EQUIPMENT

(3) Other listed disconnect switches or circuit breakers on the supply side of each service disconnect that are suitable for use as service equipment and marked as follows: EMERGENCY DISCONNECT, NOT SERVICE EQUIPMENT

Markings shall comply with 110.21(B).



Emergency disconnect required at a readily accessible outdoor location.

IRC: E3601.8

E3601.8 Emergency disconnects. For one- and two-family detached dwelling units, all service conductors shall terminate in disconnecting means having a short-circuit current rating equal to or greater than the available fault current, installed in a readily accessible outdoor location. If more than one disconnect is provided, they shall be grouped. Each disconnect shall be one of the following:

1. Service disconnects marked as follows: EMERGENCY DISCONNECT, SERVICE DISCONNECT.

2. Meter disconnect switches that have a short-circuit current rating equal to or greater than the available fault current and all metal housings and service enclosures are grounded in accordance with Section E3908.7 and bonded in accordance with Section 3609. A meter disconnect switch shall be capable of interrupting the load served and shall be marked as follows: EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE EQUIPMENT.

3. Other listed disconnect switches or circuit breakers on the supply side of each service disconnect that are suitable for use as service equipment and marked as follows: EMERGENCY DISCONNECT, NOT SERVICE EQUIPMENT.
Markings shall comply with Section E3404.12. [230.82 (3), 230.85]

The Residential Code has been amended under the PA UCC to only require for one and two family detached dwellings.

In Philadelphia, this means that this requirement shall not apply to rowhomes or townhouses up to 3 stories in height.

It will be required for completely detached buildings, twin homes, duplexes, and rowhomes more than 3 stories in height.

Guidance on applicability based on building type alterations will follow.

Surge Protection

230.67 (E-3606.5)

New requirement has been added to require surge protection on all services at dwelling units.

This new SPD requirement aligns with the recognized need for surge protection to protect sensitive electronics systems found in most appliances and equipment used in today's modern dwelling units.

230.67 Surge Protection.

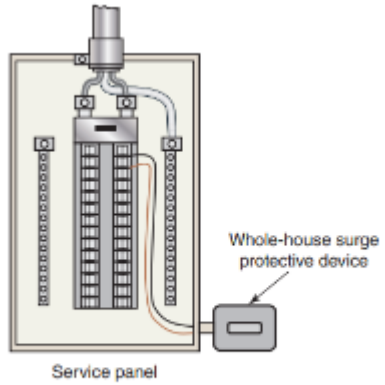
(A) Surge-Protective Device. All services supplying dwelling units shall be provided with a surge-protective device (SPD).

(B) Location. The SPD shall be an integral part of the service equipment or shall be located immediately adjacent thereto.

Exception: *The SPD shall not be required to be located in the service equipment as required in (B) if located at each next level distribution equipment downstream toward the load.*

(C) Type. The SPD shall be a Type 1 or Type 2 SPD.

(D) Replacement. Where service equipment is replaced, all of the requirements of this section shall apply.



Surge protective device required for service of dwelling unit.

Bathroom Branch Circuits

210.11 (E3703.4)

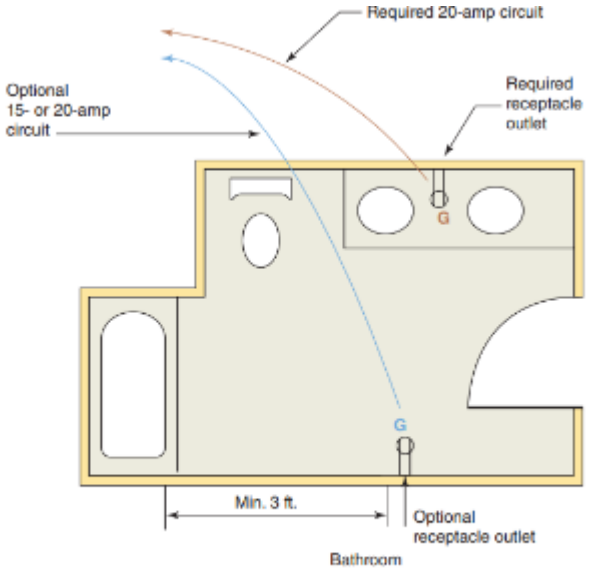
Clarifies that only the required bathroom receptacle outlets or those serving a countertop need to be on the dedicated 20-amp bathroom circuit. The 20-amp circuit is intended to serve the required receptacle outlet within 36 inches of the lavatory basin in accordance with Section E3901.6. If servicing a single bathroom, other bathroom receptacle outlets are permitted but not required to be on the same circuit.

210.11 Branch Circuits Required

(C) Dwelling Units.

(3) Bathroom Branch Circuits. In addition to the number of branch circuits required by other parts of this section, ~~at least~~ one or more 120-volt, 20-ampere branch circuit shall be provided to supply the bathroom(s) receptacle outlet(s) required by 210.52(D) and any countertop and similar work surface receptacle outlets. Such circuits shall have no other outlets.

Exception: *Where the 20-ampere circuit supplies a single bathroom, outlets for other equipment within the same bathroom shall be permitted to be supplied in accordance with 210.23(A)(1) and (A)(2).*



20-amp branch circuit provided to supply receptacle outlets serving bathroom countertop.

Garage Branch Circuits

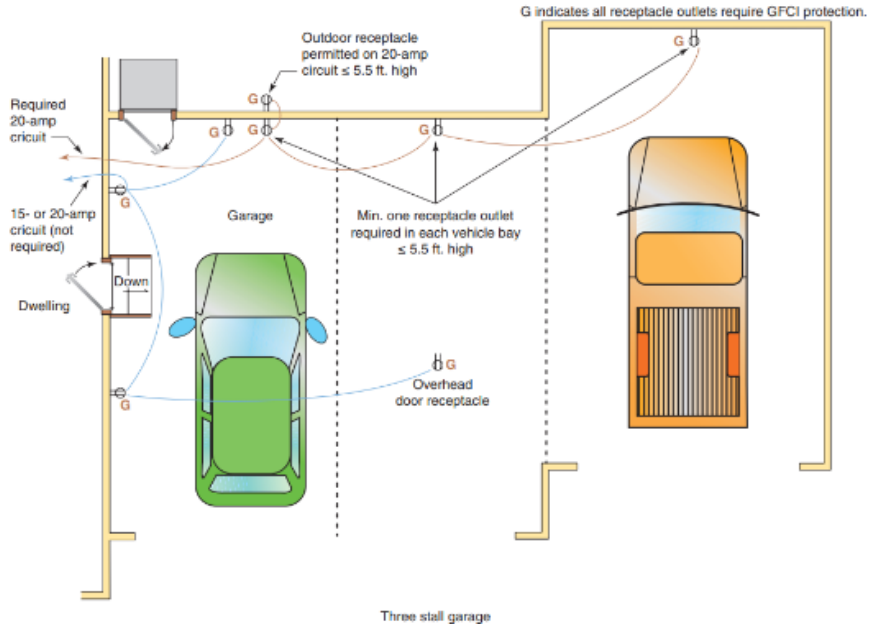
210.11 (E3703.5)

The new language in the 2021 code specifies that only the required receptacle outlets need to be supplied by this dedicated 20-amp circuit. Section E3109.9 requires a receptacle outlet in each vehicle bay and not greater than 5 feet 6 inches above the floor. Section E3703.5 now permits optional receptacle outlets in the garage, for example the outlet serving the garage door opener, to be on a general purpose 15- or 20-amp circuit.

210.11 Branch Circuits Required

(C) Dwelling Units.

(4) Garage Branch Circuits. In addition to the number of branch circuits required by other parts of this section, at least one 120-volt, 20-ampere branch circuit shall be installed to supply receptacle outlets ~~in~~ required by 210.52(G)(1) for attached garages and in detached garages with electric power. This circuit shall have no other outlets. *Exception: This circuit shall be permitted to supply readily accessible outdoor receptacle outlets.*



Receptacles for Island and Peninsular Countertops 210.52(C)(2)

The number of receptacle outlets required for peninsular and island countertops in kitchens is determined by the area of the countertop surface.

210.52 Dwelling Unit Receptacle Outlets.

(C) Countertops and Work Surfaces. In kitchens, pantries, breakfast rooms, dining rooms, and similar areas of dwelling units, receptacle outlets for countertop and work surfaces that are 300 mm (12 in.) or wider shall be installed in accordance with 210.52(C)(1) through ~~(C)(5)~~ (C)(3) and shall not be considered as the receptacle outlets required by 210.52(A).

For the purposes of this section, where using multioutlet assemblies, each 300 mm (12 in.) of multioutlet assembly containing two or more receptacles installed in individual or continuous lengths shall be considered to be one receptacle outlet.

(1) Wall Spaces ~~Countertop and Work Surface~~. ~~A receptacle outlet shall be installed at each wall countertop and work surface that is 300 mm (12 in.) or wider.~~ Receptacle outlets shall be installed so that no point along the wall line is more than 600 mm (24 in.) measured horizontally from a receptacle outlet in that space.

Exception: *Receptacle outlets shall not be required on a wall directly behind a range, counter-mounted cooking unit, or sink in the installation described in Figure 210.52(C)(1).*

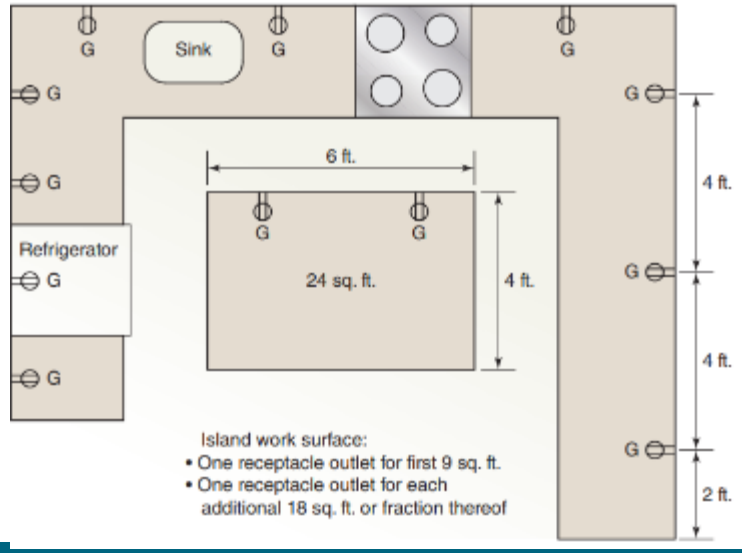
(2) Island and Peninsular Countertops and Work Surfaces Spaces. Receptacle outlets shall be installed in accordance with 210.52(C)(2)(a) and (C)(2)(b).

(a) At least one receptacle shall be provided for the first 0.84 m^2 (9 ft^2), or fraction thereof, of the countertop or work surface. A receptacle outlet shall be provided for every additional 1.7 m^2 (18 ft^2), or fraction thereof, of the countertop or work surface ~~installed at each island countertop space with a long dimension of 600 mm (24 in.) or greater and a short dimension of 300 mm (12 in.) or greater~~.

(b) At least one receptacle outlet shall be located within 600 mm (2 ft) of the outer end of a peninsular countertop or work surface. Additional required receptacle outlets shall be permitted to be located as determined by the installer, designer, or building owner. The location of the receptacle outlets shall be in accordance with 210.52(C)(3). A peninsular countertop shall be measured from the connected perpendicular wall.

~~(3) Peninsular Countertop Spaces. At least one~~

Total Square Footage of Countertop	Minimum Number of Receptacle Outlets
8 sq. ft.	1
9 sq. ft.	1
More than 9 sq. ft. up to 27 sq. ft. [9 sq. ft. + 18 sq. ft. = 27 sq. ft.]	2
28 sq. ft. [first 9 sq. ft. (one), additional 18 sq. ft. (one) and addition fraction there of (1 sq. ft.) (one)]	3
48 sq. ft. [48 sq. ft. - 9 sq. ft. = 39 sq. ft.] [39 sq. ft. - 18 sq. ft. = 2.17 sq. ft.]	4



R-E3901.4.2

E3901.4.2 Island countertop spaces. At least one receptacle outlet shall be installed at each island countertop space with a long dimension of 24 inches (610 mm) or greater and a short dimension of 12 inches (305 mm) or greater. [210.52(C)(2)]

The Residential Code has been amended under the PA UCC to retain the 2018 language for island countertop spaces.

Only one outlet will be required for islands in single-family dwellings up to 3 stories in height.

Kitchens in single-family dwellings more than 3 stories, duplexes, and multi-family dwellings must comply with the new requirement in NEC-20.

Foyer Receptacles

210.52(H)

Foyers that are not part of a hallway in accordance with Section E3901.10 and that have an area that is greater than 60 square feet (5.57 m^2) shall have a receptacle(s) located in each wall space that is 3 feet (914 mm) or more in width. Doorways, door-side windows that extend to the floor, and similar openings shall not be considered as wall space.

R-E3901.11 Foyers. Foyers that are not part of a hallway in accordance with Section E3901.10 and that have an area that is greater than 60 ft2 (5.57 m2) shall have a receptacle(s) located in each wall space that is 6 feet (1829 mm) or more in width, but a minimum of one receptacle. Doorways, door-side windows that extend to the floor, and similar openings shall not be considered as wall space. [210.52(H)]

Carryover Provision/ No Change

The Residential Code has been amended under the PA UCC to retain the 2015 language. Foyers require a min of 1 receptacle and a receptacle on each wall that is 6' or more in width.

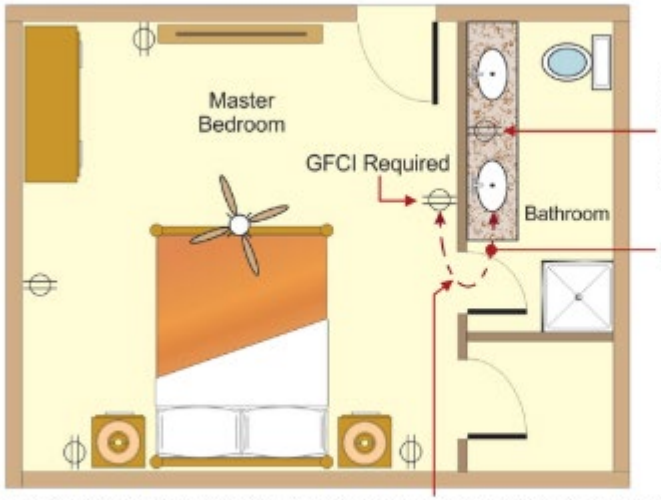
Buildings that are not regulated under the IRC require a receptacle for every wall 3' or more, with no minimum.

GFCI Protection- Measurement

- *Revision removes "door" and "doorway" as items the supply cord of an appliance connected to the receptacle must not pass through in order to satisfy measurement requirements for GFCI protection.*

Informational Note No. 1: See 215.9 for ground-fault circuit-interrupter protection for personnel on feeders.
Informational Note No. 2: See 422.5(A) for GFCI requirements for appliances.
Informational Note No. 3: See 555.9 for GFCI requirements for boat hoists.
Informational Note No. 4: Additional GFCI requirements for specific circuits and equipment are contained in Chapters 4, 5, and 6.
For the purposes of this section, when determining the distance from receptacles the distance shall be measured as the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or the shortest path without passing through a ~~door, doorway, or~~ window.

210.8 Measurements for GFCI Protection



When determining if GFCI protection for personnel is required and a measurement is involved, the distance from a receptacle is required to be measured as the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or the shortest path without passing through a ~~door, doorway, or~~ window *[210.8]*

GFCI Protection for Dwelling Units

210.8(A), R-E3902

- *Ground-fault circuit-interrupter (GFCI) protection is required for up to 250-volt receptacles in the areas previously identified as requiring GFCI protection for 125-volt receptacles. The 20-amp limitation has been removed. This includes:*

  - *Bathrooms, Garages and Accessory Buildings, Outdoors, Crawl Spaces, Basements, Kitchens, Sinks, Boathouses, Bathtubs and Shower Stalls, Laundry Areas, Indoor Damp and Wet Locations*

- *The requirement for GFCI protection in unfinished basement areas has been expanded to include all basement areas.*

- *Damp or wet indoor areas not included in other code sections are also required to have GFCI protection. This will require interpretation and guidance.*

GFCI Protection for Dwellings

210.8 (A), R-E3902

- *Ground-fault circuit-interrupter (GFCI) protection is required for up to 250-volt receptacles in dwellings in the areas previously identified as requiring GFCI protection for 125-volt receptacles. The 20-amp limitation has been removed. This includes:*

  - *Bathrooms, Garages and Accessory Buildings, Outdoors, Crawl Spaces, Basements, Kitchens, Sinks, Boathouses, Bathtubs and Shower Stalls, Laundry Areas, Indoor Damp and Wet Locations*

- *The requirement for GFCI protection in unfinished basement areas has been expanded to include all basement areas.*

- *Damp or wet indoor areas not included in other code sections are also required to have GFCI protection. This will require interpretation and guidance.*

GFCI Protection

210.8, R-E3902

210.8(A)(5)

GFCI Protection in Dwelling Unit Basements

210.8(A)(5) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units, Basement

210.8(A)(11)

GFCI Protection at Indoor Damp and Wet Locations of Dwelling Units

210.8(A)(11) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units, Indoor damp and wet locations

GFCI Protection-Outdoor Outlets

All outdoor outlets for dwellings, not just receptacles, require GFCI protection (with exceptions).

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through ~~(E)~~(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See NEC for remainder of Code text)

(F) Outdoor Outlets. All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel.

Exception: *Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).*

210.8(F)

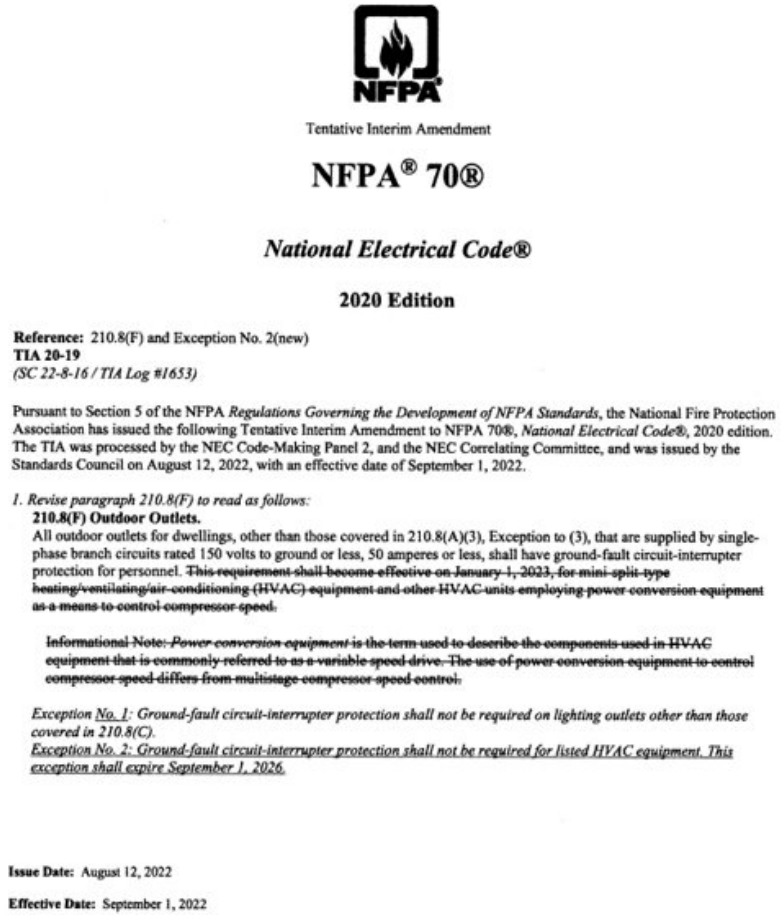
GFCI Protection in Outdoor Outlets

GFCI Protection- HVAC Incompatibility

HVAC equipment, particularly those with variable speed compressors or power conversion equipment, experienced frequent tripping of GFCI breakers, making the equipment effectively inoperable.

NFPA Issued Temporary Interim Amendment (TIA) 20-19 postponing the enforcement of the GFCI requirement for HVAC equipment until September 1, 2026. This is to allow time for manufacturers and standards orgs to address compatibility issues.

L&I will extend this TIA to buildings regulated by the Residential Code.



Tentative Interim Amendment

NFPA® 70®

National Electrical Code®

2020 Edition

Reference: 210.8(F) and Exception No. 2(new)
TIA 20-19
(SC 22-8-16 / TIA Log #1653)

Pursuant to Section 5 of the NFPA *Regulations Governing the Development of NFPA Standards*, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 70®, *National Electrical Code®*, 2020 edition. The TIA was processed by the NEC Code-Making Panel 2, and the NEC Correlating Committee, and was issued by the Standards Council on August 12, 2022, with an effective date of September 1, 2022.

1. Revise paragraph 210.8(F) to read as follows:

210.8(F) Outdoor Outlets.

All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel. ~~This requirement shall become effective on January 1, 2023, for mini-split-type heating/ventilating/air-conditioning (HVAC) equipment and other HVAC units employing power conversion equipment as a means to control compressor speed.~~

~~Informational Note: *Power conversion equipment* is the term used to describe the components used in HVAC equipment that is commonly referred to as a variable speed drive. The use of power conversion equipment to control compressor speed differs from multistage compressor speed control.~~

Exception No. 1: Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).
Exception No. 2: Ground-fault circuit-interrupter protection shall not be required for listed HVAC equipment. This exception shall expire September 1, 2026.

Issue Date: August 12, 2022

Effective Date: September 1, 2022

Tamper-Resistant Receptacles

Added: garages/structures accessory to dwellings, multi-family common areas, hotel/motel guest common areas, assisted living facilities.

CODE LANGUAGE

406.12 Tamper-Resistant Receptacles.

All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles in the areas specified in 406.12(1) through ~~(7)~~ (8) shall be listed tamper-resistant receptacles.

(1) Dwelling units, ~~in all areas~~ including attached and detached garages and accessory buildings to dwelling units, and common areas of multifamily dwellings specified in 210.52 and 550.13
(2) Guest rooms and guest suites of hotels, ~~and~~ motels, and their common areas
(3) Child care facilities
(4) Preschools and elementary education facilities
(5) Business offices, corridors, waiting rooms and the like in clinics, medical and dental offices, and outpatient facilities
(6) Subset of assembly occupancies described in 518.2 to include places of waiting awaiting transportation, gymnasiums, skating rinks, and auditoriums
(7) ~~Dormitories~~ Dormitory units
(8) Assisted living facilities

Informational Note No. 1: This requirement would include receptacles identified as 5-15, 5-20, 6-15, and 6-20 in ANSI/NEMA WD 6-2016, Wiring Devices — Dimensional Specifications.

Informational Note No. 2: Assisted living facilities are Institutional Use Group I-1 per IBC 2015.

Exception to (1), (2), (3), (4), (5), (6), ~~and~~ (7) and (8): Receptacles in the following locations shall not be required to be tamper resistant:

(1) Receptacles located more than 1.7 m (5 1⁄2 ft) above the floor
(2) Receptacles that are part of a luminaire or appliance
(3) A single receptacle, or a duplex receptacle for two appliances, located within the dedicated space for each appliance that, in normal use, is not easily moved from one place to another and that is cord-and-plug-connected in accordance with 400.10(A)(6), (A)(7), or (A)(8)
(4) Nongrounding receptacles used for replacements as permitted in 406.4(D)(2)(a)

406.12
Tamper-Resistant Receptacles

Residential Lighting Control- Energy Code

R404.1 (N1104.1); R404.2 (N1104.2); R404.3 (N1104.3)

High-efficacy lighting: Section 404.1 Increases requirement for high-efficacy lighting fixtures (excluding kitchen appliances) from 90 to 100%.

Exterior lighting power: Section 404.1.1 adds requirements for exterior lighting serving multi-family buildings three stories or less. The exterior lighting loads are subject to the limits as commercial buildings when connected to building electrical panel. Requirements are set forth in Section C405.5.

Interior Lighting Controls: Section 404.2 adds requirements for dimmers, occupant sensors, or other controls for permanent lighting fixtures with exclusions for bathrooms, hallways, and security lighting. This is aligned with existing provisions for commercial lighting controls

Exterior Lighting Controls. Section 404.3 introduces daylighting controls for residential buildings. Code Proposal RE149-19 proponent states the increase in construction cost is minimal. PA UCC Action: The RAC voted to retain 2018 language and exclude all new lighting provisions of Section R404. The definition of high-efficacy will be updated under the PA UCC.

These provisions were amended out of the Pa UCC; however, a Phila ordinance was introduced is to adopt as per the 2021 IECC/ IRC. This impacts on residential, including multi-family, up to 3 stories in height.

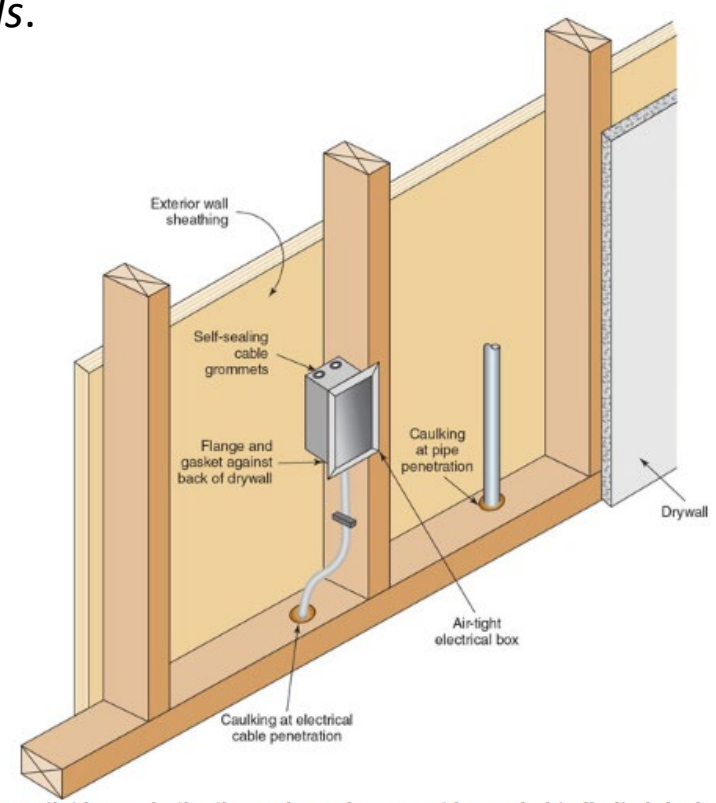
Air-Sealed Electrical Boxes- Energy Code

Electrical and communication outlet boxes installed in the building thermal envelope must be sealed, tested and marked for compliance with the referenced standards.

Alternative materials may be submitted to the BBS for consideration.

N1102.4.6 (R402.4.6) Electrical and communication outlet boxes (air-sealed boxes).

Electrical and communication outlet boxes installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. Electrical and communication outlet boxes shall be tested in accordance with NEMA OS 4, *Requirements for Air-Sealed Boxes for Electrical and Communication Applications*, and shall have an air leakage rate of not greater than 2.0 cubic feet per minute (0.944 L/s) at a pressure differential of 1.57 psf (75 Pa). Electrical and communication outlet boxes shall be marked "NEMA OS 4" or "OS 4" in accordance with NEMA OS 4. Electrical and communication outlet boxes shall be installed per the manufacturer's instructions and with any supplied components required to achieve compliance with NEMA OS 4.



Electrical and communication outlet boxes in the thermal envelope must be sealed to limit air leakage.

Resources

L&I:

Submit topics of concern through our recommendations form.

Submit questions on current codes/ processes through www.phila.gov/li/get-help.

Track legislative changes and content updates through our newsletter.

Attend future info sessions.

ICC

www.iccsafe.org
Access public information, become a member, or subscribe to digital codes.

What's Coming

- Web User Interface Upgrade- Fall 2025
- Automatic Resolution of Certain Holds- Fall 2025
- License Withholding for Unpaid LVNs/ SVNS: July 2025
  - Permits are next phase
  - See Contractor Look Up for outstanding fines
- GC can add subs to trade permits. Will still require electrical contractor approval. Winter 2026
- Contractor can view any violations from eCLIPSE Home Page.
- New EV Cert Requirements

EV Certification

A new law requires that all electrical contractors installing, upgrading, or repairing electric vehicle chargers hold a valid certification through the **Electric Vehicle Infrastructure Training Program (EVITP).**

About EVITP

EVITP is a 20-hour training course focused on the proper installation of electric vehicle supply equipment. The course is available both online and in person to qualified electricians.

Licensing and Permitting Timeline

- **March 2026:** Electrical contractors may begin amending their licenses to add EVITP certification.
- **July 2026:** Electrical permits for EV charger installation or repair will only be issued to contractors whose licenses include a valid EVITP certification - or an approved equivalent.

Equivalent Training Programs

The law permits certification through alternative training programs, provided they are pre-approved by the Department's Training Division. For details about the approval criteria for equivalent training programs, visit the website.

Department of
Licenses and Inspections
CITY OF PHILADELPHIA