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DPS | Montgomery County Department of Permitting Services

YOUR PROJECT PARTNER

Commercial Building Construction Division

Commercial Building Codes Update ER 13-24

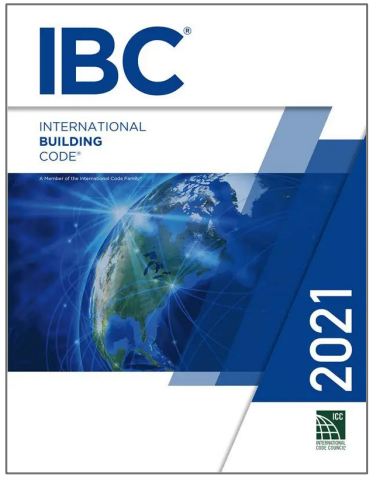
2021 IBC, IEBC, IMC & IFGC

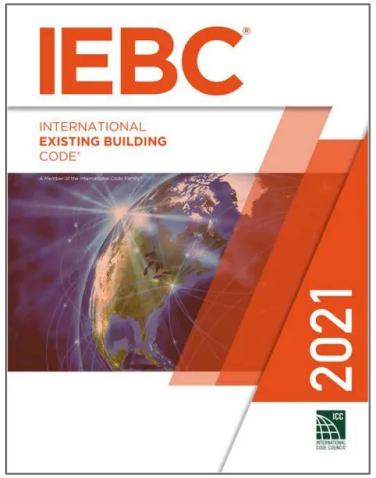
March 4, 2025

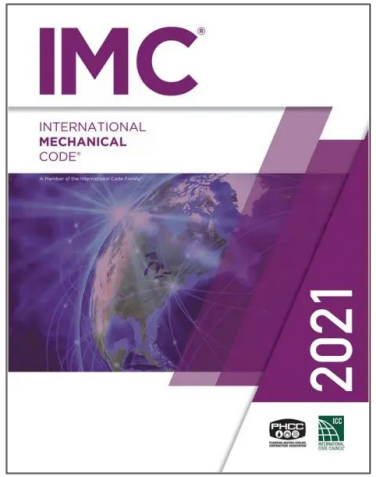
This webinar will cover significant changes to the **2021 IBC, IEBC, IMC & IFGC** within

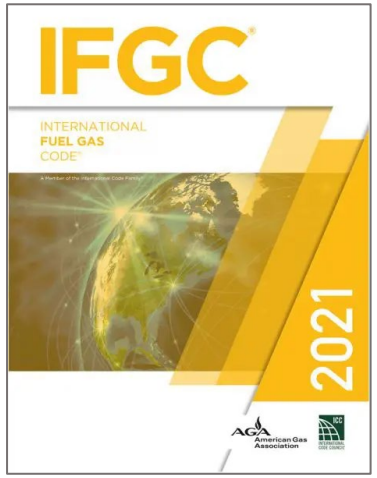
Executive Regulation 13-24

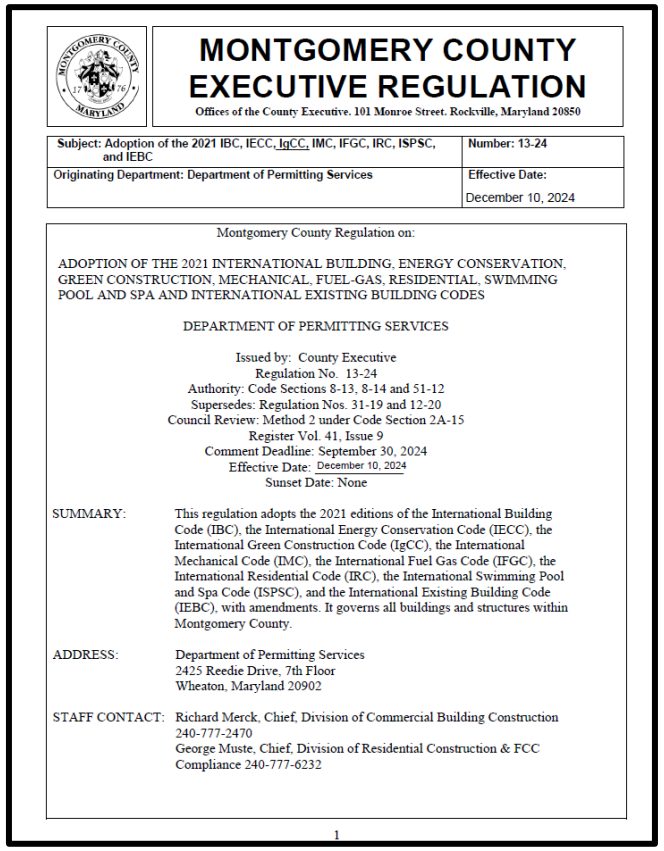
https://montgomerycountymd.gov/DPS/Resources/Files/Code%20Policies/MCER13-24.pdf











MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive, 101 Monroe Street, Rockville, Maryland 20850

Subject: Adoption of the 2021 IBC, IECC, IgCC, IMC, IFGC, IRC, ISPSC, and IEBC	Number: 13-24
Originating Department: Department of Permitting Services	Effective Date: December 10, 2024

Montgomery County Regulation on:

ADOPTION OF THE 2021 INTERNATIONAL BUILDING, ENERGY CONSERVATION, GREEN CONSTRUCTION, MECHANICAL, FUEL-GAS, RESIDENTIAL, SWIMMING POOL AND SPA AND INTERNATIONAL EXISTING BUILDING CODES

DEPARTMENT OF PERMITTING SERVICES

Issued by: County Executive
Regulation No. 13-24
Authority: Code Sections 8-13, 8-14 and 51-12
Supersedes: Regulation Nos. 31-19 and 12-20
Council Review: Method 2 under Code Section 2A-15
Register Vol. 41, Issue 9
Comment Deadline: September 30, 2024
Effective Date: December 10, 2024
Sunset Date: None

SUMMARY: This regulation adopts the 2021 editions of the International Building Code (IBC), the International Energy Conservation Code (IECC), the International Green Construction Code (IgCC), the International Mechanical Code (IMC), the International Fuel Gas Code (IFGC), the International Residential Code (IRC), the International Swimming Pool and Spa Code (ISPSC), and the International Existing Building Code (IEBC), with amendments. It governs all buildings and structures within Montgomery County.

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STAFF CONTACT: Richard Merck, Chief, Division of Commercial Building Construction 240-777-2470
George Muste, Chief, Division of Residential Construction & FCC Compliance 240-777-6232

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What do the acronyms stand for?

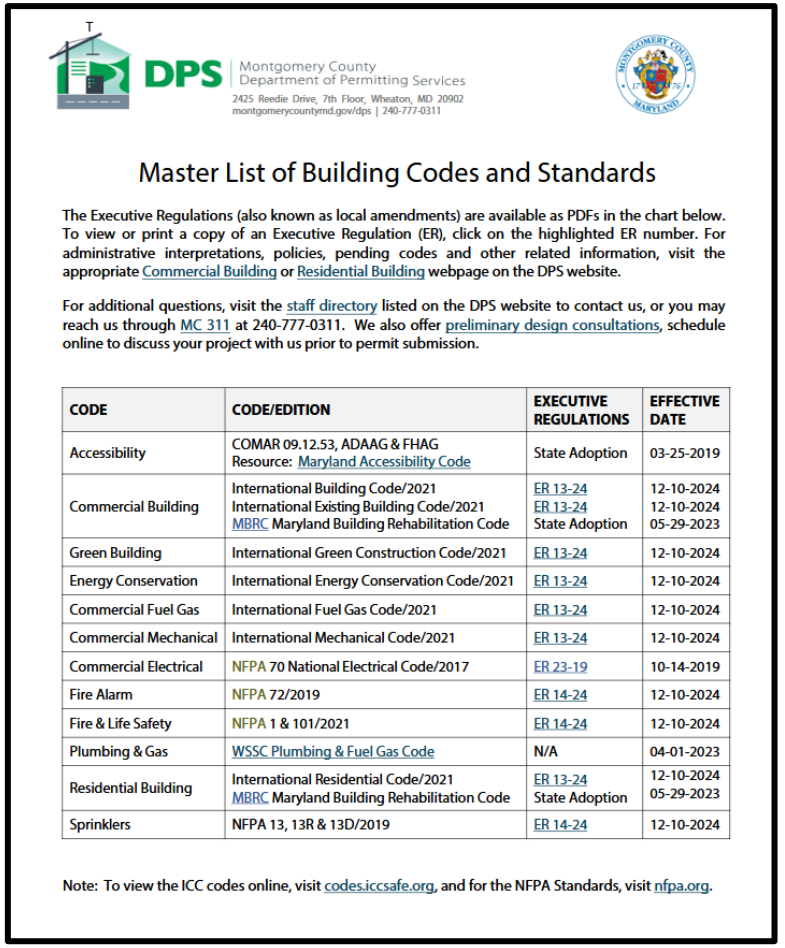
IBC	International Building Code
ICC	International Code Council
IEBC	International Existing Building Code
IFGC	International Fuel Gas Code
IMC	International Mechanical Code
MAC	Maryland Accessibility Code
MBPS	Maryland Building Performance Standards
NFPA	National Fire Protection Association

Applicable Codes

A Master List of Building Codes and Standards can be found on our website under main menu "Codes" and selecting "Building Codes"

TIP: This list includes links to our executive regulations.

https://www.montgomerycountymd.gov/DPS/Resources/Files/Code%20Policies/BuildingCodesMasterList.pdf



DPS | Montgomery County Department of Permitting Services
2425 Reedie Drive, 7th Floor, Wheaton, MD 20902
montgomerycountymd.gov/dps | 240-777-0311

Master List of Building Codes and Standards

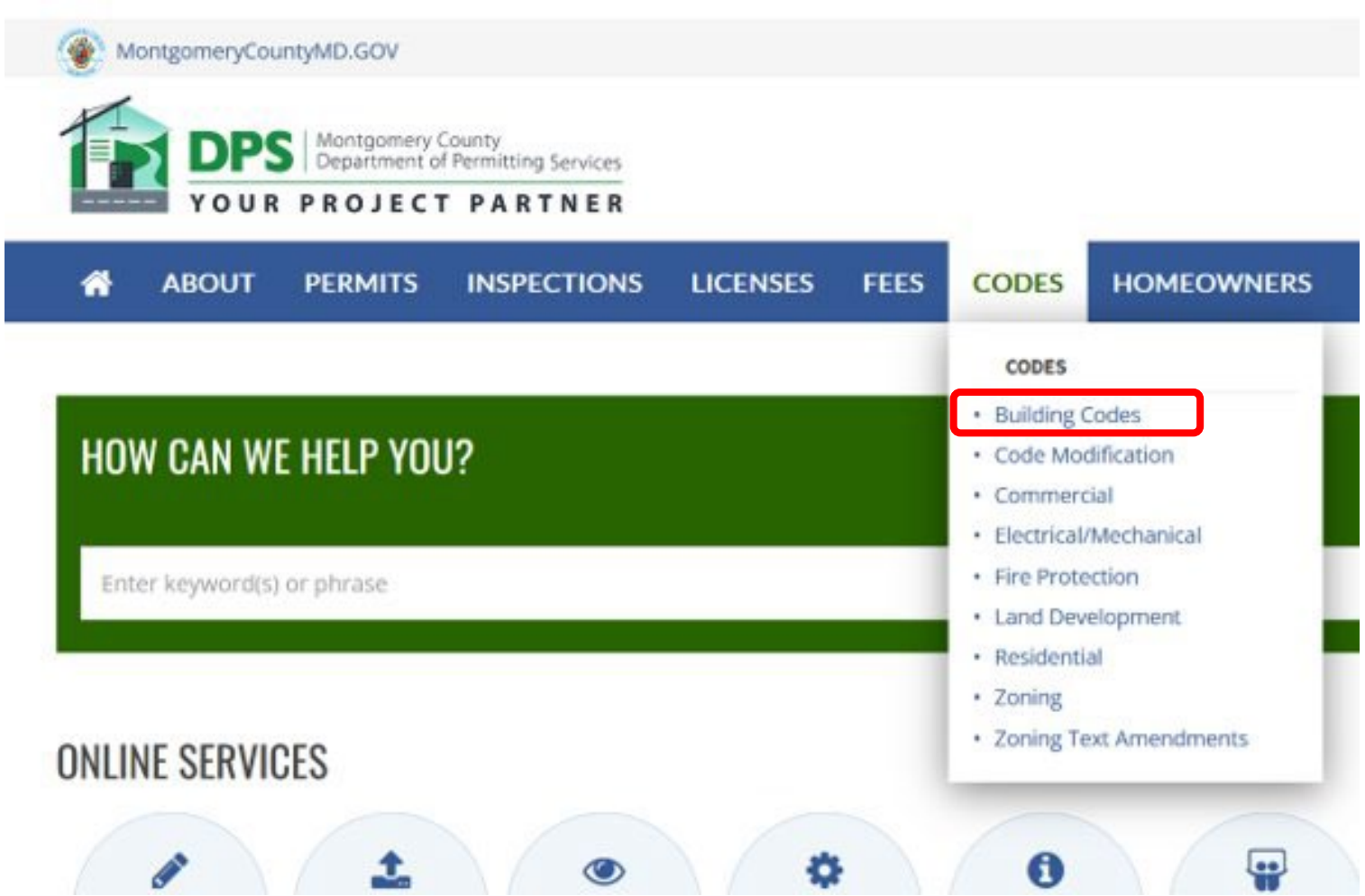
The Executive Regulations (also known as local amendments) are available as PDFs in the chart below. To view or print a copy of an Executive Regulation (ER), click on the highlighted ER number. For administrative interpretations, policies, pending codes and other related information, visit the appropriate Commercial Building or Residential Building webpage on the DPS website.

For additional questions, visit the staff directory listed on the DPS website to contact us, or you may reach us through MC 311 at 240-777-0311. We also offer preliminary design consultations, schedule online to discuss your project with us prior to permit submission.

CODE	CODE/EDITION	EXECUTIVE REGULATIONS	EFFECTIVE DATE
Accessibility	COMAR 09.12.53, ADAAG & FHAG Resource: Maryland Accessibility Code	State Adoption	03-25-2019
Commercial Building	International Building Code/2021 International Existing Building Code/2021 MBRC Maryland Building Rehabilitation Code	ER 13-24 ER 13-24 State Adoption	12-10-2024 12-10-2024 05-29-2023
Green Building	International Green Construction Code/2021	ER 13-24	12-10-2024
Energy Conservation	International Energy Conservation Code/2021	ER 13-24	12-10-2024
Commercial Fuel Gas	International Fuel Gas Code/2021	ER 13-24	12-10-2024
Commercial Mechanical	International Mechanical Code/2021	ER 13-24	12-10-2024
Commercial Electrical	NFPA 70 National Electrical Code/2017	ER 23-19	10-14-2019
Fire Alarm	NFPA 72/2019	ER 14-24	12-10-2024
Fire & Life Safety	NFPA 1 & 101/2021	ER 14-24	12-10-2024
Plumbing & Gas	WSSC Plumbing & Fuel Gas Code	N/A	04-01-2023
Residential Building	International Residential Code/2021 MBRC Maryland Building Rehabilitation Code	ER 13-24 State Adoption	12-10-2024 05-29-2023
Sprinklers	NFPA 13, 13R & 13D/2019	ER 14-24	12-10-2024

Note: To view the ICC codes online, visit codes.iccsafe.org, and for the NFPA Standards, visit nfpa.org.

Applicable Codes



GRACE Period

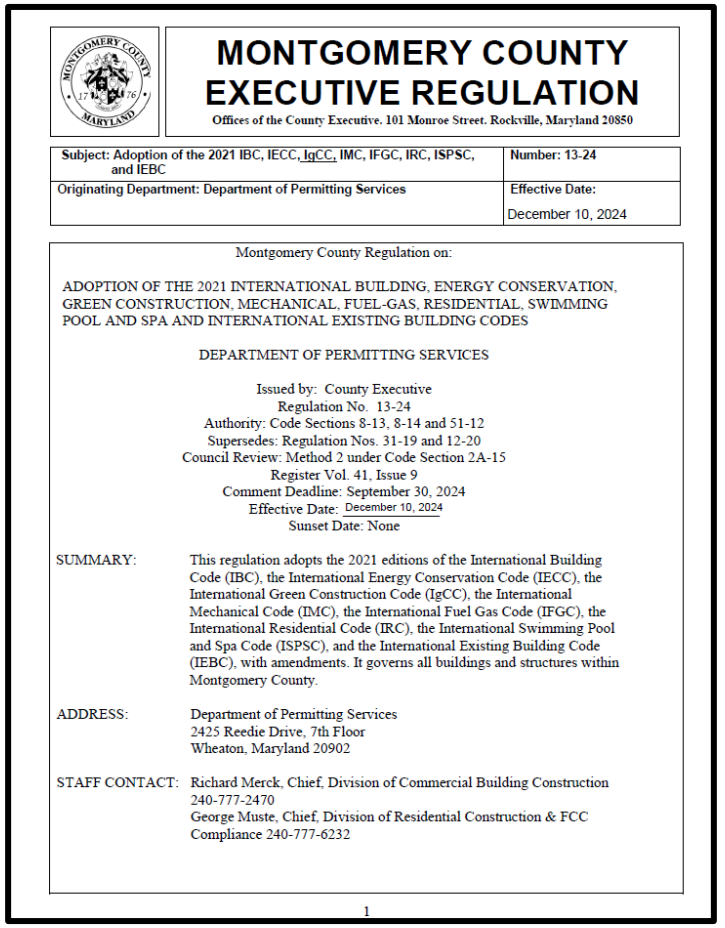
The 2021 Codes were adopted December 10, 2024.
We are currently within a grace period through March 30, 2025.
Applications received beginning Monday, March 31, 2025
must comply with the 2021 Codes.

Our **local amendments** to the building codes (the adopted ICC Codes) aim to be consistent with the Fire Codes and the State of Maryland regulations.

Maryland.gov

NFPA

ICC INTERNATIONAL CODE COUNCIL®



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Code Interpretation Policies

Code interpretation policies are sometimes created to provide a local interpretation, clarify a requirement or a term used in the code, or for requirements established in between code cycles not captured in our amendments.

Commercial Building Code Interpretation Policies can be found on our website under "**Policies and Interpretations**".

Commercial Preliminary Design Consultations

Schedule a preliminary design consultation with us online to discuss your project with staff *prior* to submission.

These are for one-hour time slots at 9AM Mondays through Thursdays and includes commercial building construction plan review, zoning and WSSC staff, as well as others depending on the agenda

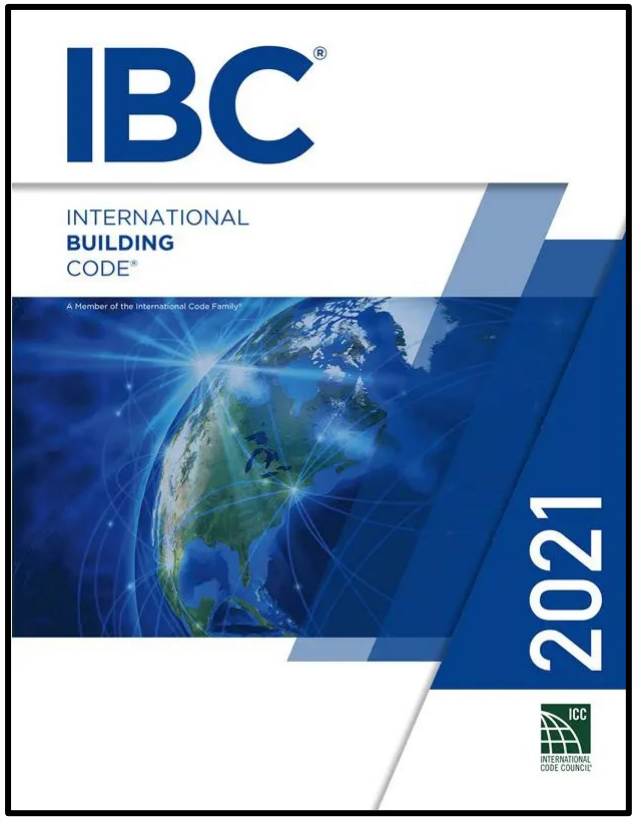
https://www.montgomerycountymd.gov/DPS/Process/director/predesign-consult.html

It is important to NOTE:

This webinar is for updates to Montgomery County local amendments to the model codes (and is not intended to cover the model code changes).

This is not intended to cover *every* change in our local amendments; however, it is intended to highlight significant or noteworthy changes.

Local Amendments to the 2021 International Building Code



101.2 Scope
[08.00.02.04]

101.2 Scope. The provisions of this code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress, and their accessory structures not more than three stories above grade plane in height, shall comply with ~~this code or~~ the International Residential Code.

The previous amendment replacing this exception has been deleted, along with the previous amendment adding an exception for existing buildings and maintenance of residential structures and premises.

101.4.7 Referenced Codes Existing Buildings
[08.00.02.07]

101.4.7 Existing buildings.

The provisions of the Maryland *Building* Rehabilitation Code shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

The "International Existing Building Code" has been replaced with "Maryland Rehabilitation Code". *Refer to Subtitle 12 DIVISION OF LABOR AND INDUSTRY 09.12.58 Maryland Building Rehabilitation Code Regulations which adopts the 2021 IEBC.*

105.2 Work Exempt From Permit Item 4 Retaining Walls
[08.00.02.11]

Item 4. Delete and replace with “Retaining walls that are not over 30 inches in retained height, unless supporting a surcharge (sloped soil, fire truck, pedestrian or vehicular traffic etc.) or impounding Class I, II or IIIA liquids, or crossing a lot line.”

This change is to simplify the height measurement; previous amendment indicated “not over 54 inches (assumed frost depth of 30 inches minimum) in height measured from the bottom of the footing to the top of the wall, or are not greater than 24 inches in retained height”.

202 DEFINITIONS Existing Buildings

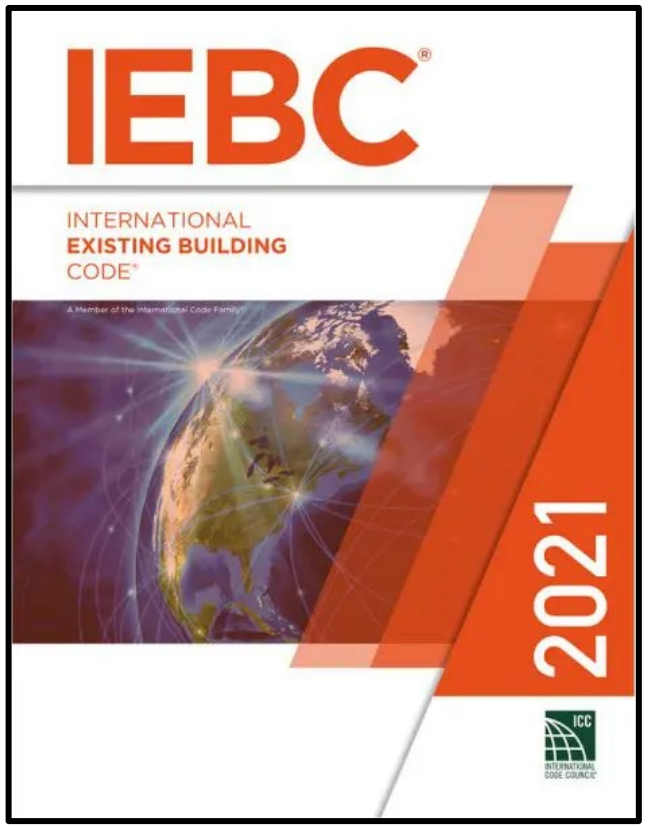
[08.00.02.18]

The previous amendment deleting and replacing the definitions for "EXISTING BUILDING" and "EXISTING STRUCTURE" has been DELETED. The model code definition for existing building is unamended.

EXISTING BUILDING. A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.

Until a building meets the definition of "existing" it is subject to the requirements of the currently adopted code. An existing building is permitted to conform to the code that it was originally built under, until it is altered.

NOTE: **This change occurs in the IBC & IEBC.**



305.2 Group E, day care facilities

[previous amendment deleted]

305.2 Group E, day care facilities.
This group includes buildings and structures or portions thereof occupied by more than five children older than $2^1/_2$ years of age who receive educational, supervision or personal care services for fewer than 24 hours per day.

The previous amendment changing 2½ to 2 has been deleted. This amendment is for consistency with the 2021 NFPA 101 Life Safety Code which has changed its educational age to 30 months.

308.5 Institutional Group I-4, day care facilities
[08.00.02.23]

308.5.1 Classification as Group E.

A child day care facility that provides care for more than five but not more than 100 children $2^1/_2$ years or less of age, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

Exception: A childcare facility may be classified as I-4 when the facility is classified as a day care under NFPA 101, as adopted by Montgomery County.

This is a Maryland Building Performance Standards amendment, which achieves the same result as previous amendment language. Note the age is no longer amended and remains at 2½.

406.2.7 Electric Vehicle Charging Stations

[08.00.02.29]

406.2.7 Electric vehicle charging stations and systems. Where provided, electric vehicle charging systems shall be installed in accordance with NFPA 70. Electric vehicle charging system equipment shall be listed and labeled in accordance with UL 2202. Electric vehicle supply equipment shall be listed and labeled in accordance with UL 2594. Accessibility to electric vehicle charging stations shall be provided in accordance with Title II and III of the Americans with Disabilities Act (ADA).

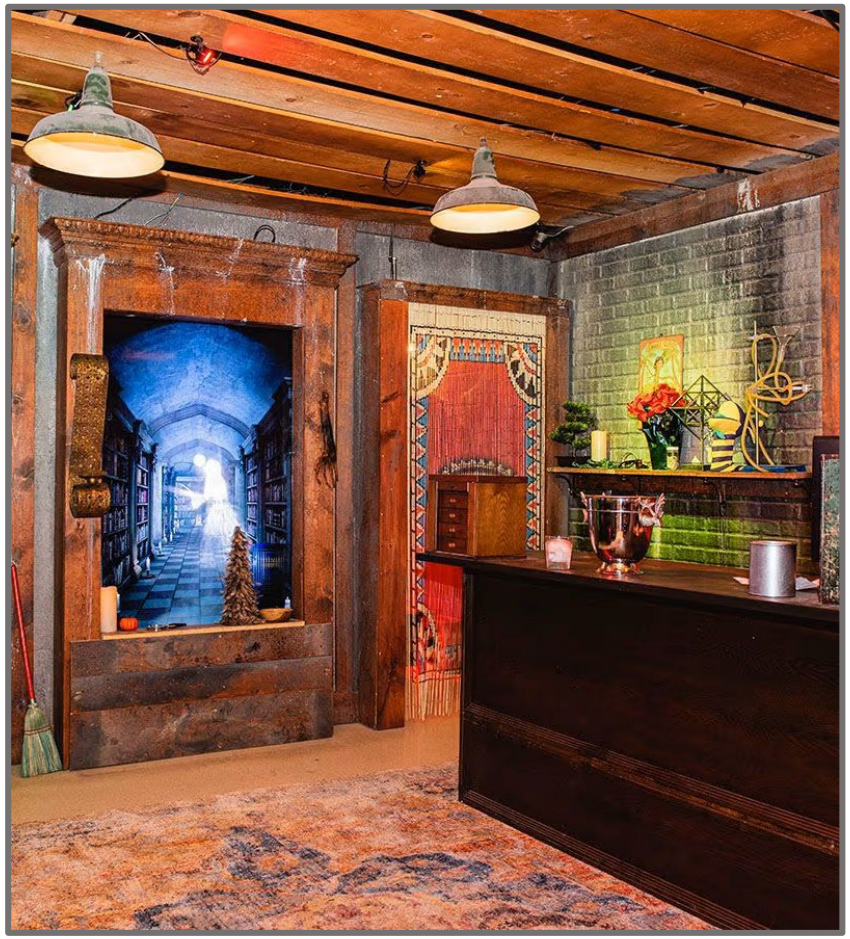
Section 1107 was replaced with Title II and III of the Americans with Disabilities Act (ADA).

411.5 Puzzle Room Exiting

[08.00.02.30]

411.5 Puzzle room exiting.
Puzzle room exiting shall comply with one of the following:
1. Exiting in accordance with Chapter 10.
2. An alternative design approved by the building official.
3. All exits and exit access doors from each puzzle room shall be open and readily available upon activation by the automatic fire alarm system, automatic sprinkler system, a manual control at a constantly attended location, and a readily accessible control located inside each puzzle room.

Item 3 was replaced to align with the Maryland Building Performance Standards.



https://theescapegame.com/dc/

420.12 Radon Control

[08.00.02.31]

Section 420.12. Radon Control. R-1 and R-2 occupancies, and I-1 assisted living housing units shall have an approved radon control system. R-3 and R-4 Use Groups shall have control features as prescribed in Appendix AF of the currently adopted International Residential Code.

New Subsection added. *The previous amendment required compliance with Appendix F of the IRC which is not appropriate for the majority of R uses built under the IBC. I-1 assisted living was included as the amendment was intended to cover residential facilities. Appendix title changed from F to AF in the 2021 IRC.*

This amendment replaces the previous amendment which was a new Section 429 in the 2018 IBC and has moved to Section 420 in the 2021 IBC.

510.2 Special Provisions

[08.00.02.34]

Section 510.2 Horizontal Building Separation Allowance. A building shall be considered as separate and distinct buildings for the purpose of determining area limitations, continuity of fire walls, limitation of number of stories and type of construction where the following conditions are met:

~~4.Interior exit stairways located within the Type IA building are permitted to be of combustible materials where the following requirements are met:~~

~~4.1.The building above the Type IA building is of Type III, IV, or V construction.~~

~~4.2.The stairway located in the Type IA building is enclosed by 3-hour fire-resistance-rated construction with opening protectives in accordance with Section 716~~

Item 4 is deleted. *Deletion of condition #4 is part of the Maryland Building Performance Standards. The remainder of the amendment remains unchanged except to renumber the conditions.* NOTE: **Exception #2 is deleted from Section 1011.7** and **Exception #3 is deleted from Section 1023.2** in coordination with this change.

903.2.1 Automatic Sprinkler Systems Group A
[08.00.02.39]

903.2.1 Group A.

An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. The following assembly occupancies shall be protected throughout by an approved supervised automatic sprinkler system:

(1) Dance halls

(2) Discotheques

(3) Nightclubs

(4) Bars

(5) Restaurants

(6) Assembly occupancies with festival seating

These specific assembly occupancies are required to be sprinklered under 2021 NFPA 101; this correlates to language in NFPA 101 12.3.5. for consistency.

903.2.10 Automatic Sprinkler Systems Group S-2 Parking Garages

[08.00.02.42]

903.2.10. Delete 903.2.10 and 903.2.10.1 and replace with the following:

903.2.10. Group S-2 parking garages. An automatic sprinkler system shall be provided throughout buildings classified as public parking garages in accordance with Section 406.4.

These locations are required to be sprinklered under 2024 NFPA 101, proposed to be adopted as part of the State Fire Prevention Code.

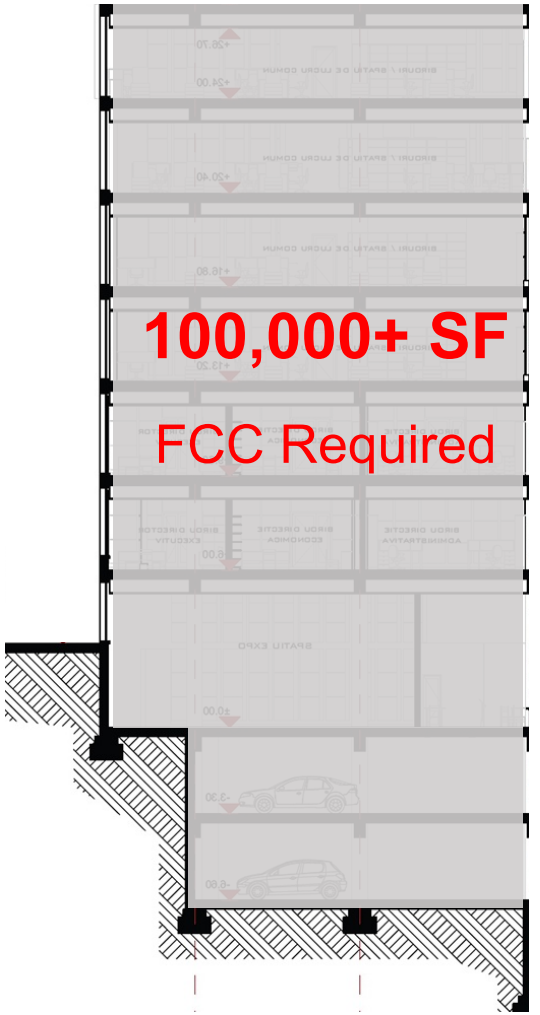
911 Fire Command Center

[08.00.02.50]

Section 911.1. General. Where required by other sections of this code, in buildings classified as high-rise buildings by this code, in new buildings where the aggregate gross floor area exceeds 100,000 square feet, a fire command center for fire department operations shall be provided and shall comply with Sections 911.1.1 through 911.1.7.

Exception: Buildings or structures, or portions thereof, used exclusively for open-air parking.

Change made for clarification and consistency with NFPA amendment; language includes exclusion for open air parking from area calculation. This is how the requirement has been applied in the past – the intent is to not include open air parking in the area calculation in determining whether a FCC is required.

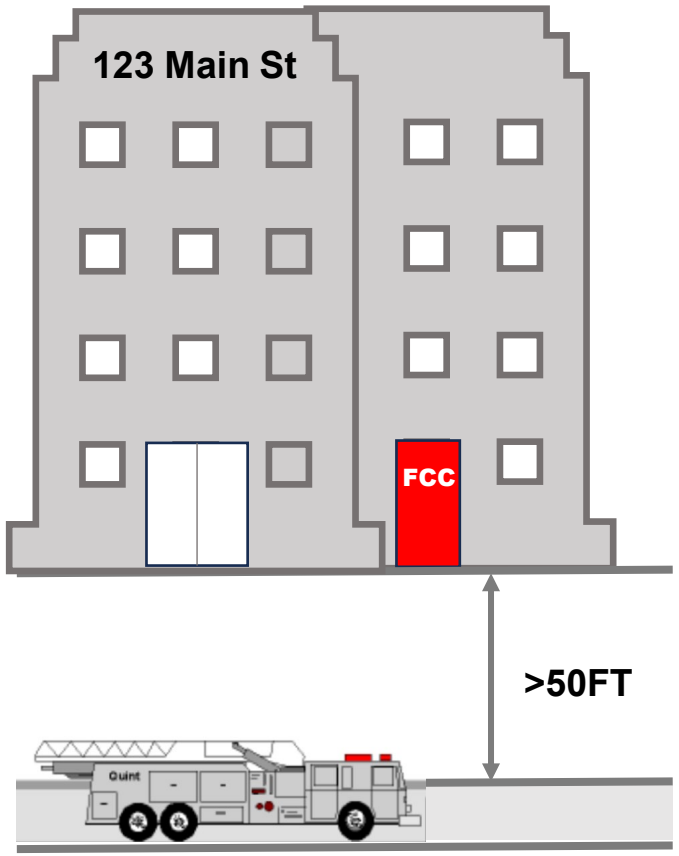


911 Fire Command Center

[08.00.02.51]

Section 911.1.1. Location and Access. The fire command center shall meet the following criteria:

1. the fire command center must have a door directly to the exterior of the building on the address side;
2. the exterior door to the fire command center shall be visible from the fire department access road on the address side;
3. the exterior door to the fire command center must be within 50 feet of a fire department access road;
4. a fire department access box must be provided within 6 feet of the exterior door to the fire command center; and
5. the exterior door to the fire command center must be identified on the exterior face as the fire command center in a manner acceptable to the fire official.



Added criterion #2 which was originally the intent of the amendment

911 Fire Command Center

[08.00.02.53]

Section 911.1.3. Size. The fire command center shall be not less than 200 square feet (19 m2) in area, with a minimum dimension of 10 feet (3048 mm). For buildings with a total building area of 1,333,333 square feet or greater, the fire command center shall be not less than 0.015% (0.00015) of the total building area, with a minimum dimension of 0.7 times the square root of the area of the fire command center.

The model code provides formulaic requirements, and the amendment completes as much of the calculation as possible for clarity. The operational needs of the fire department are not diminished by the building being abnormally large and a F-1 or S-1 Use Group.

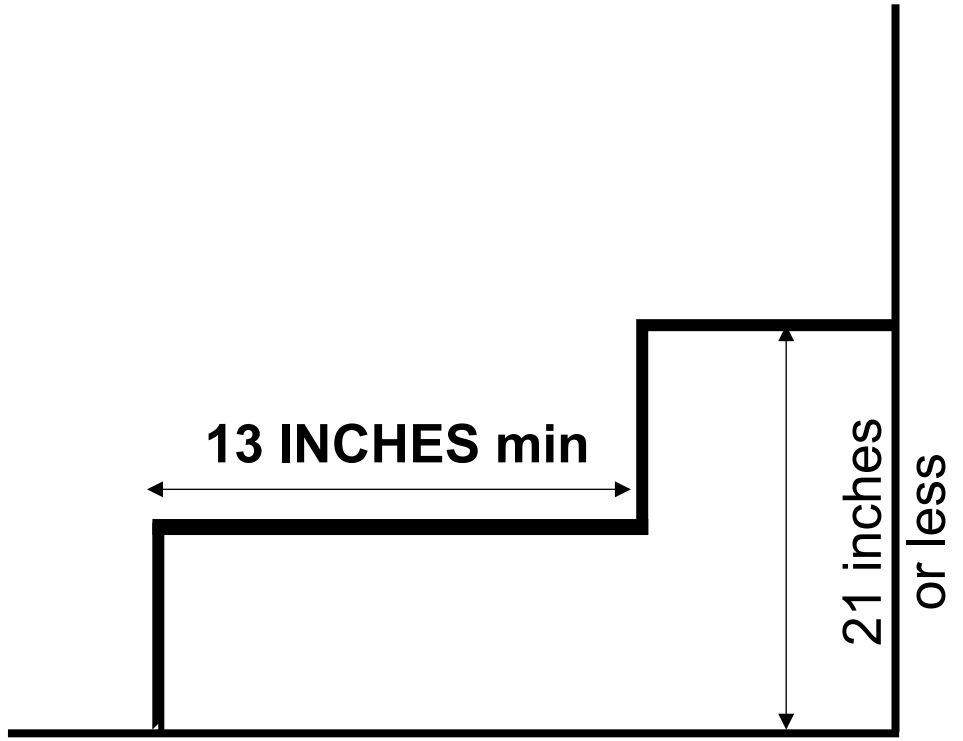
1003.5 Elevation Change

[08.00.02.58]

Exception #2:

Where a stair is used in the means of egress where the change in elevation is 21 inches or less, the tread depth of such stair shall not be less than 13 inches.

Language changed in the exception to reference the change in elevation dimension rather than the number of risers for consistency with NFPA 101. The requirement remains the same.



1005.3.1 Stairways
[08.00.02.61]

1005.3.1. Delete all of the exceptions.

This restores an amendment that had been in the ERs for many cycles but was erroneously deleted in ER 31-19 adopting the 2018 ICC codes.

1005.3.1 Stairways.

The capacity, in inches, of means of egress *stairways* shall be calculated by multiplying the *occupant load* served by such *stairways* by a *means of egress* capacity factor of 0.3 inch (7.6 mm) per occupant. Where *stairways* serve more than one *story*, only the *occupant load* of each *story* considered individually shall be used in calculating the required capacity of the *stairways* serving that *story*.

Exceptions:

1. For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress *stairways* shall be calculated by multiplying the *occupant load* served by such *stairways* by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an *emergency voice/alarm communication system* in accordance with Section 907.5.2.2.
2. Facilities with *smoke-protected assembly seating* shall be permitted to use the capacity factors in Table 1030.6.2 indicated for stepped *aisles* for *exit access* or exit *stairways* where the entire path for *means of egress* from the seating to the *exit discharge* is provided with a smoke control system complying with Section 909.
3. Facilities with *open-air assembly seating* shall be permitted to the capacity factors in Section 1030.6.3 indicated for stepped *aisles* for *exit access* or *exit stairways* where the entire path for *means of egress* from the seating to the *exit discharge* is open to the outdoors.

1010.2.7 Door Operation. Stairway Doors.

[08.00.02.65]

Exception 3. Stairway exit doors are permitted to be locked from the side opposite the egress side, provided that they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon a signal from the fire command center. In buildings without a fire command center, the signal may be given by emergency personnel from a single location inside the main entrance to the building."

Exception 6. Stairway doors complying with the stair enclosure re-entry provisions of the adopted edition of NFPA 101."

Updated the subsection number due to changes in the model code. Changed language to reflect fire command center as primary location; main entrance only when a fire command center is not provided. Added an exception to allow compliance with NFPA 101 provisions.

1015.3 Guards.

~~**Section 1015.3.** In exception #2 and #3, change "34 inches (864 mm)" to "36 inches (915 mm)". Add a seventh exception: Exception 7. In occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, interior guards must not be less than 36 inches high.~~

~~**Section 1015.4.** Delete Exception #6~~.

Amendments deleted. *Previous amendments from the 2018 IBC for height and opening limitations deleted to be consistent with residential requirements.*

1207.2 Minimum Ceiling Heights

~~**Section 1207.2.** Add an exception # 5 to read as follows:~~

~~Exception 5. Projections in ceiling height as permitted by Chapter 10.~~

Amendment deleted. *Previous amendment from the 2018 IBC was deleted. The model code already provides for this; an amendment was not necessary. Note: Section 1207 in the 2018 IBC for Interior Space Dimensions has moved to Section 1208 in the 2021 IBC.*

Note: Section 1207 in the 2018 IBC has moved to 1208 in the 2021 IBC.

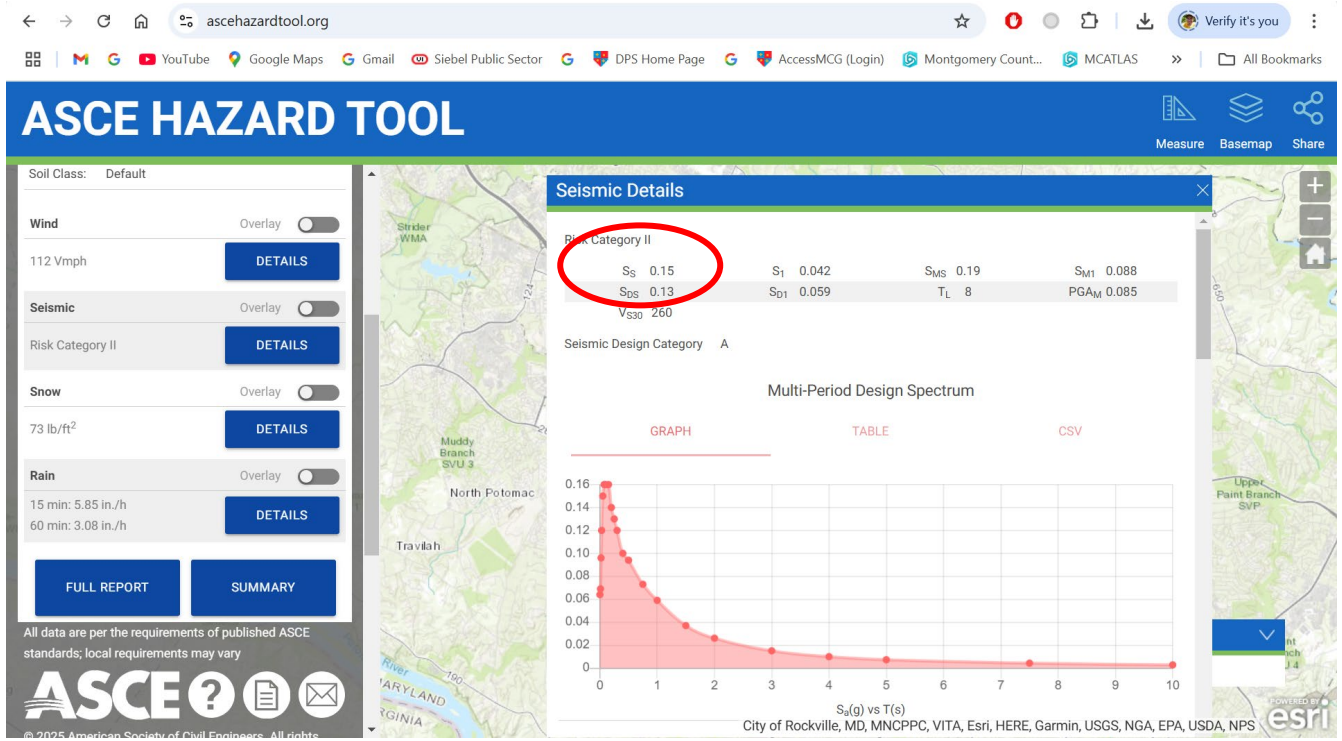
Refer to **1003.2, 2021 IBC for ceiling height requirements** and allowable projections.

1603.1.5 Earthquake Design Data

[08.00.02.75]

Section 1603.1.5. Add to Item 3. The mapped spectral response acceleration parameters for Montgomery County for short-period, Ss, and 1-second, S1, shall be 15% and 4.3%, respectively.

Changed 13.5% to 15% per latest ASCE publication.



1705.3 Concrete Construction

[08.00.02.89]

Table 1705.3. Modify Table 1705.3 as follows:

Item 4a. Add the following sentence: "Installation must be performed by an ACI or CRSI certified adhesive anchor installer".

Items 10, 12 and 13. Modify the inspection frequency from "periodic" to "continuous".

Item 13. Add the following sentence to the first column: "The strength evaluation must be demonstrated by field cured cylinders only."

Changed the Item number due to changes in the model code. Included change to frequency of inspection for Item 12.

TABLE 1705.3REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD[a]	IBC REFERENCE
1. Inspect reinforcement, including prestressing tendons, and verify placement.	—	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	—
2. Reinforcing bar welding: a. Verify weldability of reinforcing bars other than ASTM A706; b. Inspect single-pass fillet welds, maximum $^5/_{16}$"; and c. Inspect all other welds.	— — X	X X —	AWS D1.4 ACI 318: 26.6.4	—
3. Inspect anchors cast in concrete.	—	X	ACI 318: 17.8.2	—
4. Inspect anchors post-installed in hardened concrete members.[b] a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. b. Mechanical anchors and adhesive anchors not defined in 4.a. + Qualifications	X —	— X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	—
5. Verify use of required design mix.	—	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C31 ASTM C172 ACI 318: 26.5, 26.12	—
7. Inspect concrete and shotcrete placement for proper application techniques.	X	—	ACI 318: 26.5	—

1705.3 Concrete Construction

[08.00.02.89]

Table 1705.3. Modify Table 1705.3 as follows:

Item 4a. Add the following sentence: "Installation must be performed by an ACI or CRSI certified adhesive anchor installer".

Items 10, 12 and 13. Modify the inspection frequency from "periodic" to "continuous".

Item 13. Add the following sentence to the first column: "The strength evaluation must be demonstrated by field cured cylinders only."

Changed the Item number due to changes in the model code. Included change to frequency of inspection for Item 12.

TABLE 1705.3REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

8. Verify maintenance of specified curing temperature and techniques.	—	X	ACI 318: 26.5.3-26.5.5	—
9. Inspect prestressed concrete for: a. Application of prestressing forces; and b. Grouting of bonded prestressing tendons.	X X	— —	ACI 318: 26.10	—
10. Inspect erection of precast concrete members.	~~X~~	~~X~~ --	ACI 318: 26.9	—
11. For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category C, D, E or F, inspect such connections and reinforcement in the field for: a. Installation of the embedded parts b. Completion of the continuity of reinforcement across joints. c. Completion of connections in the field.	X X X	— — —	ACI 318: 26.13.1.3 ACI 550.5	—
12. Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	~~X~~	-- ~~X~~	ACI 318: 26.13.1.3	—
13. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs. + Qualifications	~~X~~	-- ~~X~~	ACI 318: 26.11.2	—
14. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 26.11.1.2(b)	—

For SI: 1 inch = 25.4 mm.

a. Where applicable, see Section 1705.13.

b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

1705.5.3 Mass Timber Construction

[08.00.02.90]

Section 1705.5.3. Mass timber construction.
Special inspections of mass timber elements in Types IV-A, IV-B, and IV-C and IV-HT construction shall be in accordance with Table 1705.5.3.

This amendment added IV-HT clarifying that special inspections will apply to Heavy Timber Construction.

Type IV-A, IV-B and IV-C relate to MASS timber and not heaving timber. Our understanding is those types are more complex than Type IV-HT; however, we want to capture type IV-HT in this provision for purposes of special inspections.

1705.5.3 Mass Timber Construction

[08.00.02.91]

Table 1705.5.3. Modify Table 1705.5.3 as follows:

Item 3. Threaded fasteners (fourth row) Adhesive anchors installed in horizontal or upwardly inclined orientation to resist sustained tension loads. Installation must be performed by a certified adhesive anchor installer.

Added requirement for qualified adhesive anchor installer.

TABLE 1705.5.3REQUIRED SPECIAL INSPECTIONS OF MASS TIMBER CONSTRUCTION

	TYPE		CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1.	Inspection of anchorage and connections of mass timber construction to timber deep foundation systems.		—	X
2.	Inspect erection of mass timber construction.		—	X
3.	Inspection of connections where installation methods are required to meet design loads.			
	Threaded fasteners	Verify use of proper installation equipment.	—	X
		Verify use of pre-drilled holes where required.	—	X
		Inspect screws, including diameter, length, head type, spacing, installation angle and depth.	—	X
		Adhesive anchors installed in horizontal or upwardly inclined orientation to resist sustained tension loads. + qualification.	X	—
	Adhesive anchors not defined in preceding cell.		—	X
	Bolted connections.		—	X
	Concealed connections.		—	X

1705.5 Wood Construction

[08.00.02.92]

***Section 1705.5.4.** Additional Special Inspection Requirements for Wood Construction. Third party inspections must be performed under Sections 1.3 and 1.7.2 of the Montgomery County Special Inspections Program Manual for:

a) Multi-family and other structures of types III, IV and V construction (except townhomes) over three stories above podium level or over four stories in height;

b) Risk Category III buildings and other structures of types III, IV and V construction whose primary occupancy is public assembly with an occupant load greater than 300; And

c) All Risk Category IV buildings of types III, IV and V construction.

**This was a previously added amendment.*

Changed the section number due to changes in the model code; content also has changes to update construction types and preauthorizes third party inspections of wood buildings qualifying for Complex Structures oversight.

1705.5 Wood Construction

[08.00.02.92]

Excerpt:
Updated Statement of Special Inspections

WOOD CONSTRUCTION Reference: IBC Section 1705.5 and the Montgomery County Special Inspections Program Manual		
	Check if Not Applicable ☐	
INSPECTION TASK	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
Special Inspections of prefabricated wood structural elements and assemblies shall be in accordance with Section 1704.2.5 as amended by the County. (The requirements of IBC Section 1704.2.5.1, as amended by the County, may apply subject to County approval).		
Special Inspection of site-built assemblies shall be in accordance with IBC Section 1705.5		
Inspect high-load diaphragms as per IBC , Section 1705.5.1		
Inspect metal-plate-connected wood trusses spanning 60 feet or greater as per IBC Section 1705.5.2		
Inspect Load Bearing Walls as follows, as applicable: 1. Wall stud species and spacing as per project specifications. 2. Placement of cripple stud blocking inside of floor system. 3. Stud drillings and penetrations (not to exceed one third of stud dimension unless otherwise is specified by the structural engineer of record). 4. Sill plate species as per project specifications.		
Inspect Wood Columns as follows, as applicable: 1. Types and placement of wood columns as per construction documents. 2. Column connection details to beams and trusses. 3. Cripple stud project requirements within the floor system for load path continuity. 4. Column base assemblies.		
Inspect Shear Wall Systems as follows, as applicable: 1. Wall stud, size and spacing. 2. Anchor bolt size, location on sill plates and strappings through floor system. 3. Placement of diagonal bracing and component shear trusses. 4. Placement of hold-down anchors and tension rods as per contract documents. 5. Shear wall sheathing type, fastener types and fastener spacing. 6. Wall blockings		

WOOD CONSTRUCTION (Continued) Reference IBC Section 1705.5 and the Montgomery County Special Inspections Program Manual		
INSPECTION TASK	**EXTENT OF SERVICE** (Continuous or Periodic)	**AGENT**
Inspect Roof Framing as follows, as applicable: 1. Placement of hurricane hangers. 2. Placement of parapet hold-down anchors. 3. Placement of permanent roof bracing. 4. Placement of gable truss bracings. 5. Inspect metal-plate-connected wood trusses.		
Inspect Steel Framing as follows, as applicable: 1. Wood to steel connections (number, size and spacing of bolts and hunger types). 2. Bracing of steel beams and columns (placement of sill plates, anchor bolt, and diagonal bracing to top of beams and blocking placement at steel beam webs).		
Inspect Floor trusses as follows, as applicable: 1. Placement of 2x6 band members at end of trusses. 2. Truss bearing width in butting and diagonal situations. 3. Inspect metal-plate-connected wood trusses.		
Other Wood Inspections as determined by the SER:		

1705.7 Driven Deep Foundations

[08.00.02.94]

Table 1705.7. Items 5, 6, & 7, modify the inspection frequency from the reference statement to “continuous”.

Clarified required frequency of inspection of steel and concrete elements in deep foundation elements.

TABLE 1705.7REQUIRED SPECIAL INSPECTIONS AND TESTS OF DRIVEN DEEP FOUNDATION ELEMENTS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. Verify element materials, sizes and lengths comply with the requirements.	X	—
2. Determine capacities of test elements and conduct additional load tests, as required.	X	—
3. Inspect driving operations and maintain complete and accurate records for each element.	X	—
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X	—
5. For steel elements, perform additional special inspections in accordance with Section 1705.2.	~~In accordance with Section 1705.2~~ X	
6. For concrete elements and concrete-filled elements, perform tests and additional special inspections in accordance with Section 1705.3.	~~In accordance with Section 1705.2~~ X	
7.For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.	~~In accordance with Statement of Special~~ X Inspections	

1705.8 Cast-In-Place Deep Foundations

[08.00.02.95]

Table 1705.8. Item 3. Modify the inspection frequency from the referenced section to “continuous”.

Clarified required frequency of inspection of concrete elements in deep foundation elements.

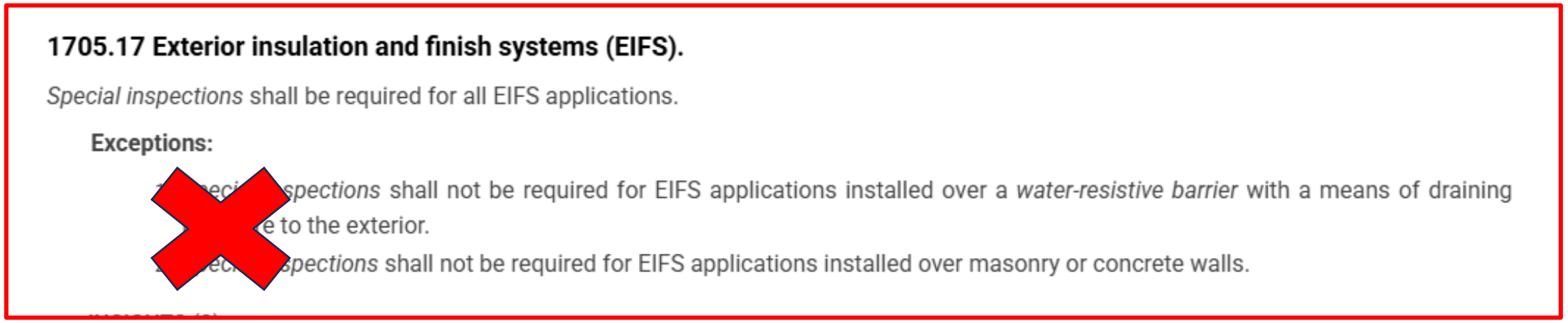
TABLE 1705.8REQUIRED SPECIAL INSPECTIONS AND TESTS OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. Inspect drilling operations and maintain complete and accurate records for each element.	X	—
2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.	X	—
3. For concrete elements, perform tests and additional *special inspections* in accordance with Section 1705.3.	~~In accordance with Section 1705.3~~ X	

1705.17 Exterior Insulation and Finish Systems (EIFS)
[08.00.02.96]

~~Table~~ Section 1705.17. Exterior insultation and finish systems (EIFS).
Special inspections shall be required for all EIFS applications.

Exceptions 1 and 2 deleted.



1705.18 Fire-resistant Joint Penetrations and Joints

[08.00.02.97]

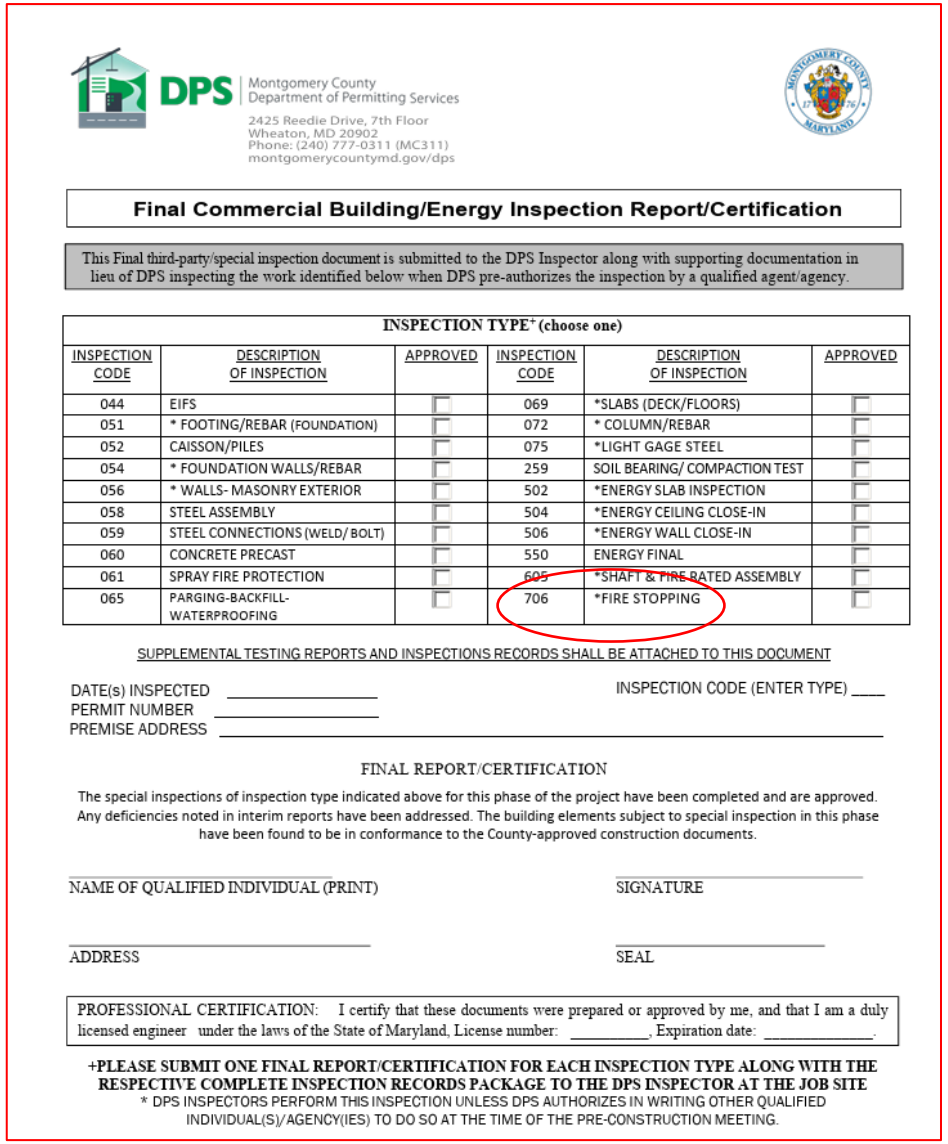
~~Table~~ Section **1705.18. Fire-resistant joint penetrations and joints.** In high-rise buildings, in buildings assigned to Risk Category III ~~or~~ IV, in fire areas containing Group R occupancies with an occupant load greater than 250, **or when required by the building official** special inspections for through-penetrations, membrane penetration firestops, fire-resistant joint systems and perimeter fire containment systems that are tested and listed in accordance with Section 714.4.1.2, 714.5.1.2, 715.3.1, and 715.4 shall be in accordance with Section 1705.18.1 or 1705.18.2.

Authorizes the building official to request 3rd party inspection on other high-rise buildings with other Risk Category, occupancy and capacity designations when deemed appropriate.

1705.18 Fire-resistant Joint Penetrations and Joints

[08.00.02.97]

Updated Final Inspection Report includes Fire Stopping



DPS Montgomery County Department of Permitting Services
2425 Reedie Drive, 7th Floor
Wheaton, MD 20902
Phone: (240) 777-0311 (MC311)
montgomerycountymd.gov/dps

Final Commercial Building/Energy Inspection Report/Certification

This Final third-party/special inspection document is submitted to the DPS Inspector along with supporting documentation in lieu of DPS inspecting the work identified below when DPS pre-authorizes the inspection by a qualified agent/agency.

INSPECTION TYPE+ (choose one)

INSPECTION CODE	DESCRIPTION OF INSPECTION	APPROVED	INSPECTION CODE	DESCRIPTION OF INSPECTION	APPROVED
044	EIFS	☐	069	*SLABS (DECK/FLOORS)	☐
051	* FOOTING/REBAR (FOUNDATION)	☐	072	* COLUMN/REBAR	☐
052	CAISSON/PILES	☐	075	*LIGHT GAGE STEEL	☐
054	* FOUNDATION WALLS/REBAR	☐	259	SOIL BEARING/ COMPACTION TEST	☐
056	* WALLS- MASONRY EXTERIOR	☐	502	*ENERGY SLAB INSPECTION	☐
058	STEEL ASSEMBLY	☐	504	*ENERGY CEILING CLOSE-IN	☐
059	STEEL CONNECTIONS (WELD/ BOLT)	☐	506	*ENERGY WALL CLOSE-IN	☐
060	CONCRETE PRECAST	☐	550	ENERGY FINAL	☐
061	SPRAY FIRE PROTECTION	☐	605	*SHAFT & FIRE RATED ASSEMBLY	☐
065	PARGING-BACKFILL-WATERPROOFING	☐	706	*FIRE STOPPING	☐

SUPPLEMENTAL TESTING REPORTS AND INSPECTIONS RECORDS SHALL BE ATTACHED TO THIS DOCUMENT

DATE(s) INSPECTED _____ INSPECTION CODE (ENTER TYPE) ____
PERMIT NUMBER _____
PREMISE ADDRESS _____

FINAL REPORT/CERTIFICATION

The special inspections of inspection type indicated above for this phase of the project have been completed and are approved. Any deficiencies noted in interim reports have been addressed. The building elements subject to special inspection in this phase have been found to be in conformance to the County-approved construction documents.

NAME OF QUALIFIED INDIVIDUAL (PRINT) _____ SIGNATURE _____

ADDRESS _____ SEAL _____

PROFESSIONAL CERTIFICATION: I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland, License number: _____, Expiration date: _____.

+PLEASE SUBMIT ONE FINAL REPORT/CERTIFICATION FOR EACH INSPECTION TYPE ALONG WITH THE RESPECTIVE COMPLETE INSPECTION RECORDS PACKAGE TO THE DPS INSPECTOR AT THE JOB SITE
* DPS INSPECTORS PERFORM THIS INSPECTION UNLESS DPS AUTHORIZES IN WRITING OTHER QUALIFIED INDIVIDUAL(S)/AGENCY(IES) TO DO SO AT THE TIME OF THE PRE-CONSTRUCTION MEETING.

1904.2 Nonstructural Concrete

[08.00.02.100]

Section 1904.2. Delete the last sentence completely and replace with: "Nonstructural concrete must have a minimum specified compressive strength, f'c of 2500 psi for Class F0; 3000 psi for Class F1; and 4500 psi for Classes F2 and F3. Nonstructural concrete must be air entrained in accordance with ACI 318."

Corrected error in last ER for concrete strength of F2 & F3 classes.

2211.1.3.3 Truss Design

[08.00.02.101]

Section 2211.1.3.3. Trust quality assurance.

Modify referenced standard, AISI S240-20 Chapter D, as follows:

1. with the exception of Sections D.4 and D.6.4.5, eliminate any reference to "Authority Having Jurisdiction" and replace with "Quality Assurance Inspector (SI);" and 2. in Section D7.2.2, after the words "the installer" add "and the Authority Having Jurisdiction."

New Amendment. *Clarified who the inspection agent is for quality assurance in the IBC referenced stanadard, AISI S240.*

3202.3.4 Pedestrian Walkways

[08.00.02.111]

Section 3202.3.4. After the words “governing authority” in the first sentence add the following “ and be installed in accordance with Section 3306”. Delete the second sentence.

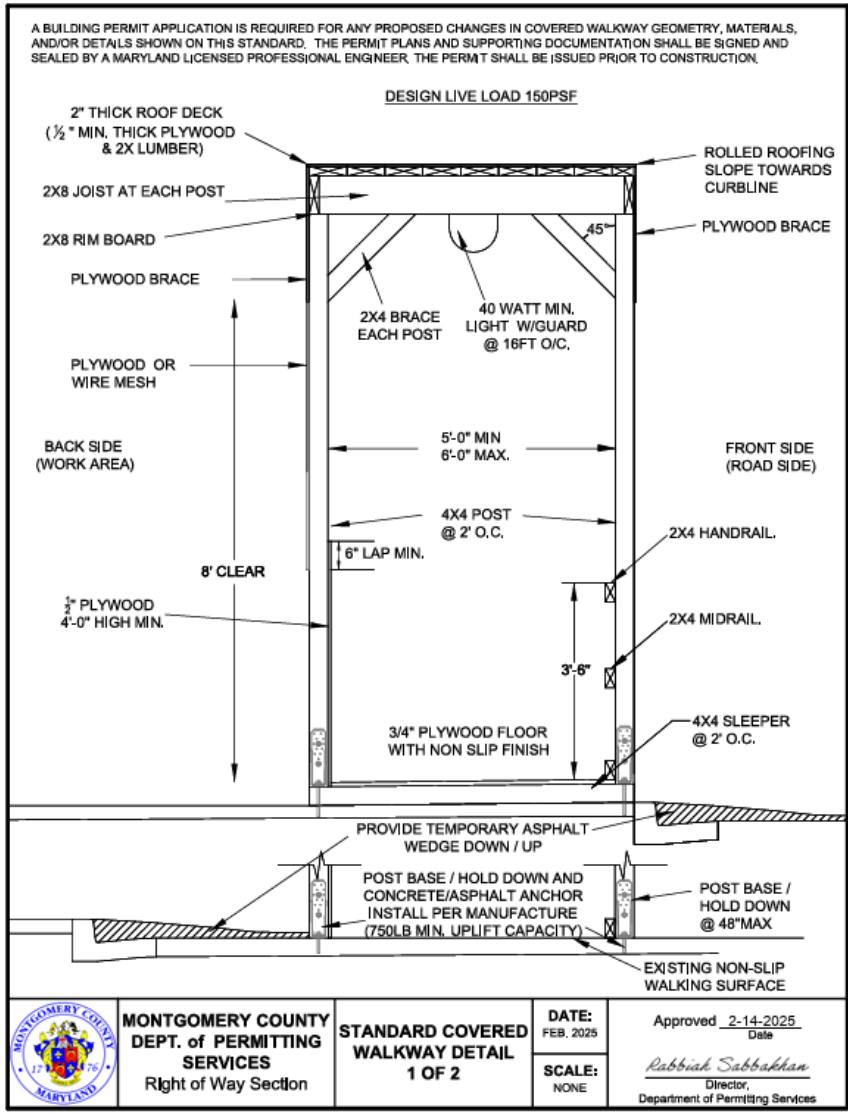
The installation of a pedestrian walkway over a public right-of-way shall be subject to the approval of the applicable governing authority and be installed in accordance with Section 3306 [Safegaurds During Construction].

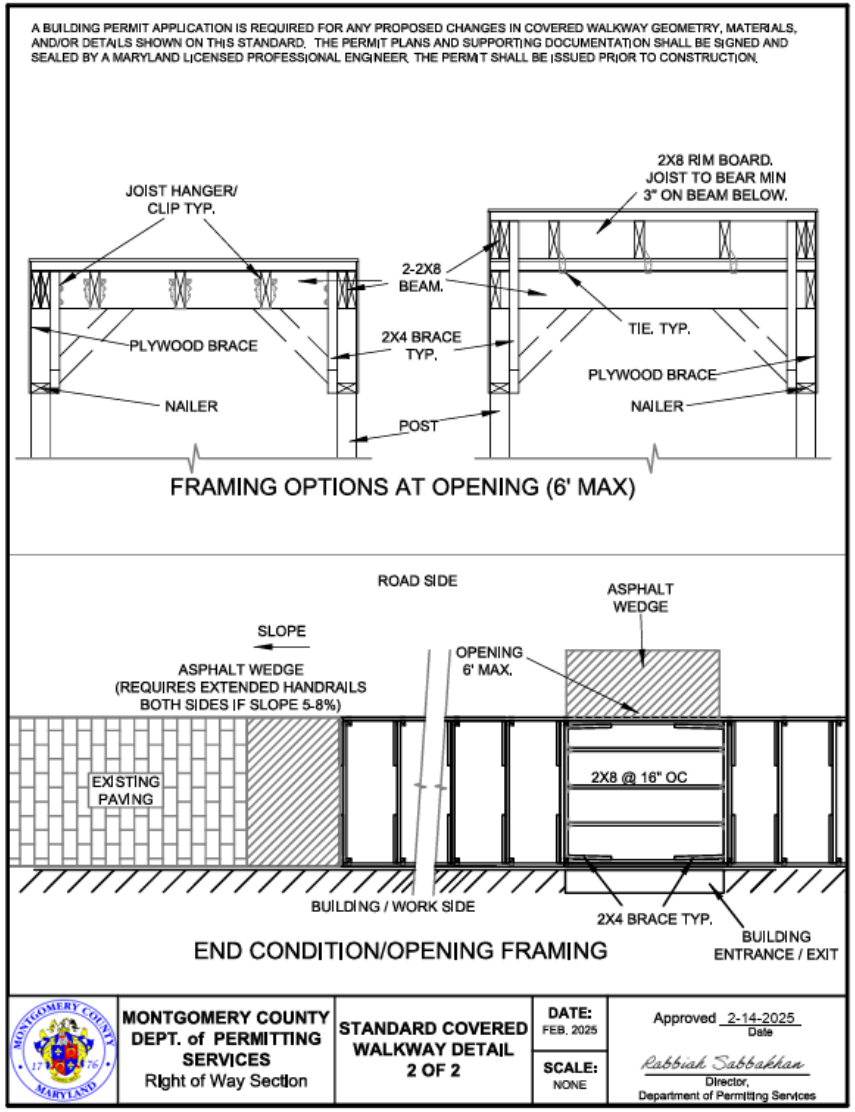
New Amendment. *Clarified design & installation requirements reference.*

3202.3.4 Pedestrian Walkways

[08.00.02.111]

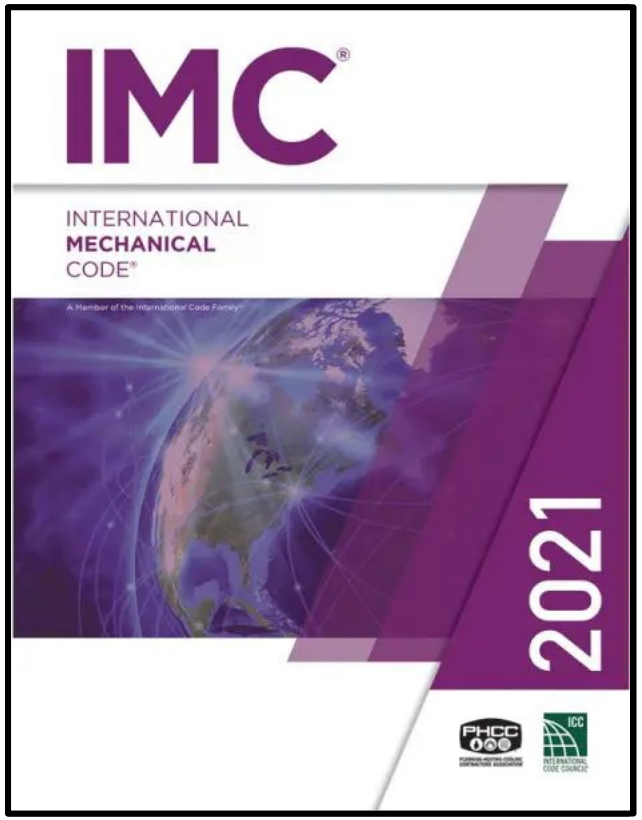
Published Standards for Covered Walkways in the Right-of-way.





Local Amendments and Significant Changes to the
2021 International Mechanical Code

*Tip: Jump to **page 52** in ER 13-24 for the IMC amendments.*



304.12 Supports and Anchorage

[08.00.02.168]

304.12 Supports and Anchorage. All appliances located on roofs must rest on a manufacturer's standard perimeter support, self-flashing roof curb, framed steel support, or 4 inch x 4 inch pressure-treated lumber as a minimum. The appliances must be securely affixed in an approved manner to resist vibration and wind loads and must follow the manufacturers installation recommendations.

This amendment was previously found under Section 302.6 and has been moved to 304.12. The language has been updated to include manufacturer's requirements.

403.2 Outdoor Air Required

[08.00.02.171]

403.2 Outdoor Air Required

The minimum outdoor airflow rate shall be determined in accordance with Section 403.3.

The exception has been deleted. *The exception conflicts with the energy code and adds unnecessary complexity to the review requiring third party approval and testing.*

403.1 Ventilation Systems

403.1 Ventilation System. Mechanical Ventilation shall be provided by a method of supply air and return or exhaust air except that mechanical ventilation air requirements for Group R-2, R-3, and R-4 occupied spaces shall be provided by an exhaust system, supply system or combination thereof.

This change brings the ventilation air requirement for 4 story commercial townhomes in line with the those of 3 story townhomes found in the IRC.

505.7 Domestic Cooking Exhaust Equipment
[08.00.02.172]

505.7 Independent exhaust systems for domestic kitchens located in multistory structures.

Shaft enclosures not exceeding 5 stories in height in fully sprinklered Group R occupancies penetrated by individual kitchen exhaust ducts serving a single tenant kitchen shall have a minimum thickness of 26 gauge and a listed fire damper must be installed at the shaft penetration.

This is a new section added.

603.18.3 Registers, grilles and diffusers.

[08.00.02.175]

Section 603.18.3. Air Device Support.

Air devices in suspended ceilings must be directly supported by the building structure from opposite corners. If wires are used for support, the minimum wire size shall be equal to the wire supporting the suspended grid

This is a new section added. *This new requirement protects fire department personnel from being struck by unexpectedly swinging diffusers that are pulled down during overhaul operations.*

607.5.5 Duct and Transfer Openings.
[08.00.02.176]

607.5.5 Shaft Enclosures.

Exception 2. In buildings, other than Group H occupancies, equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, smoke dampers are not required where kitchen, clothes dryer, bathroom and toilet room exhaust openings with steel exhaust subducts, having a wall thickness of not less than 0.0187 inch (0.4712 mm), extend not less than 22 inches (559 mm) vertically and the exhaust fan at the upper terminus is powered continuously in accordance with the provisions of Section 909.11 of the International Building Code, and maintains airflow upward to the outdoors.

This has been updated for clarification, and consistency with IBC 717.5.3 Exception 2.

.

1109 Refrigerant Pipe Installation

1109.2.5 Refrigerant pipe shafts. Refrigerant piping that penetrates two or more floor/ceiling assemblies shall be enclosed in a fire-resistance-rated shaft enclosure. The fire- resistance-rated shaft enclosure shall comply with Section 713 of the International Building Code.
Exceptions:

1. Systems using R-718 refrigerant (water).
2. Piping in a direct system using Group A1 refrigerant where the refrigerant quantity does not exceed the limits of Table 1103.1 for the smallest occupied space through which the piping passes.
3. Piping located on the exterior of the building where vented to the outdoors.

.

1109 Refrigerant Pipe Installation

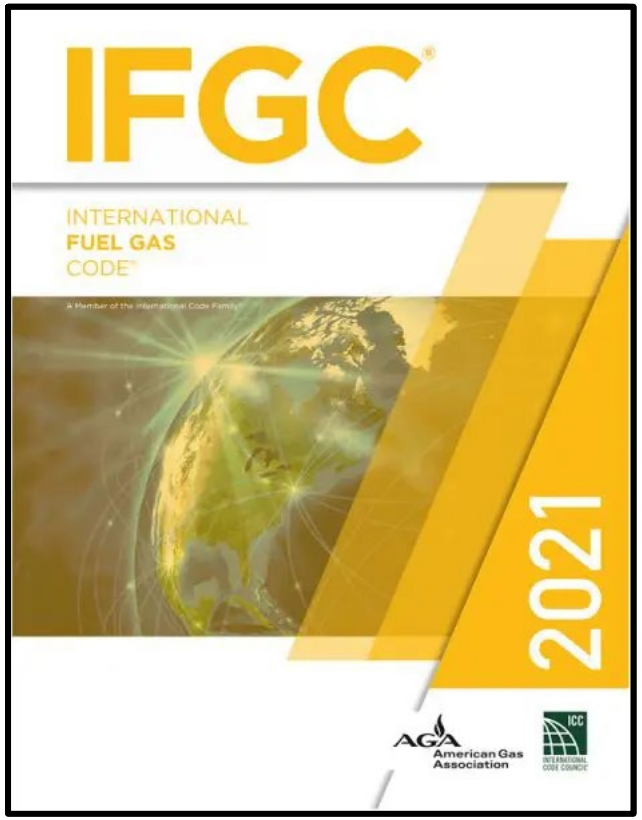
1109.3.2 Shaft ventilation. Refrigerant pipe shafts with systems using Group A2L or B2L refrigerant shall be naturally or mechanically ventilated. The shaft ventilation exhaust outlet shall comply with Section 501.3.1. Naturally ventilated shafts shall have a pipe, duct or conduit not less than 4 inches (102 mm) in diameter that connects to the lowest point of the shaft and extends to the outdoors. The pipe, duct or conduit shall be level or pitched downward to the outdoors. Mechanically ventilated shafts shall have a minimum airflow velocity in accordance with Table 1109.3.2. The mechanical ventilation shall be continuously operated or activated by a refrigerant detector. Systems utilizing a refrigerant detector shall activate the mechanical ventilation at a maximum refrigerant concentration of 25 percent of the lower flammable limit of the refrigerant. The detector, or a sampling tube that draws air to the detector, shall be located in an area where refrigerant from a leak will concentrate. The shaft shall not be required to be ventilated for double-wall refrigerant pipe where the interstitial space of the double-wall pipe is vented to the outdoors.

NOTE: Several Previous IMC Amendments Deleted

Several previous amendments have been deleted where deemed unnecessary or repetitive with NFPA, compliance with all applicable NFPA standards is mandatory.

Local Amendments to the
2021 International Fuel Gas Code

*Tip: Jump to **page 54** in ER 13-24 for the IMC amendments.*



102.2 1 Existing Installations Existing Buildings

[previous amendment deleted]

102.2.1 Existing Buildings

Additions, alterations, renovations or repairs related to building or structural issues shall be regulated by the International Existing Building Code.

The previous amendment was no longer needed as the model code provides the correct reference to the IEBC. The model code for this section is no longer amended.

Questions & Answers

Upcoming Webinars

Fire Safety Code ER 14-24
Tuesday, March 11, 2025

2021 Commercial Energy & Green Codes
Tuesday, March 18, 2025

Thank You for your attendance.

Please feel free to contact us should you need any further assistance. Our **staff directory** can be found on our website.

https://www.montgomerycountymd.gov/DPS/contact.html

Montgomery County
Department of Permitting Services

DPS | YOUR PROJECT PARTNER