

2021 IRC SIGNIFICANT CHANGES

2021 IRC

- **Section R310.3, R310.4 Area Wells for Emergency Escape and Rescue Openings - The provisions for window wells and area wells serving emergency escape and rescue openings have been merged into one section for area wells. The code now provides requirements for when steps are provided.**

Section R310.4.2.2 Steps. Steps shall have an inside width of at least 12 inches, a minimum tread depth of 5 inches and a maximum riser height of 18 inches for the full height of the area well.

- **Section 310.7.1 Existing Emergency Escape and Rescue Openings – Opening dimensions have been reduced for emergency escape and rescue openings for a basement remodel, basement addition, and change of occupancy.**

Section R310.7 Alterations or Repairs of Existing Basements. New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1. Other than new sleeping rooms, where existing basements undergo alterations or repairs, an emergency escape and rescue opening is not required.

Exception: An operable window complying with Section 310.7.1 shall be acceptable as an emergency escape and rescue opening.

Section R310.7.1 Existing emergency escape and rescue openings. Where a change of occupancy would require an emergency escape and rescue opening in accordance with Section 310.1, operable windows serving as the emergency escape and rescue opening shall comply with the following:

1. An existing operable window shall provide a minimum net clear opening of 4 square feet with a minimum net clear opening height of 22 inches and a minimum clear opening width of 20 inches.
 2. A replacement window where such window complies with both of the following:
 - 2.1. The replacement window meets the size requirements in Item 1.
 - 2.2. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
- **Section R311.7.7 Stairway Walking Surface – A new exception allows steeper slopes for exterior landings that also serve to drain surface water away from the building.**

Section R311.7.7 Stairway Walking Surface. The walking surface of treads and landings of stairways shall be sloped not steeper than 1 unit vertical in 48 units horizontal (2 percent slope).

Exception: Where the surface of a landing is required elsewhere in the code to drain surface water, the walking surface of the landing shall be sloped not steeper than 1 unit vertical in 20 units horizontal (5 percent slope) in the direction of travel.

- **Section R314.3 Smoke Alarm Locations – A new location requirement for smoke alarms addresses high ceilings adjacent to hallways serving bedrooms.**

Section R314.3 Smoke Alarm Locations. (Required new location) Smoke alarms shall be installed in the following locations:

5. In the hallway and in the room open to the hallway in dwelling units where the ceiling height of a room open to a hallway serving bedrooms exceeds that of the hallway by 24 inches or more.

- **Section R315.2.2 Carbon Monoxide Alarms – Repairs to an existing fuel fire mechanical system now trigger the retroactive requirements for carbon monoxide alarms.**

Section R315.2.2 Carbon Monoxide Alarms Alterations, Repairs, and Additions. (New Exception Added). Where alterations, repairs, or additions requiring a permit occur, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.

Exception:

3. Installation, alteration, or repairs of mechanical systems that are not fuel fired.

- **Section R406.2 Concrete and Masonry Foundation Waterproofing – Six mil polyvinyl chloride and polyethylene fabrics are removed from the list of approved waterproofing materials.**
- **Section R506.2.3 Vapor Retarder – Thicker vapor retarders are now required below slabs-on-grade.**

Section R506.2.3 Vapor Retarder. A minimum of 10 mil (0.010 inch) vapor retarder conforming to ASTM E1745 Class A requirements with joints lapped not less than 6 inches shall be placed between the concrete floor slab and the base course or the prepared subgrade where the base course does not exist.

- **Section R507.10 Exterior Guards – Specific requirements for deck guards were added.**

Section R507.10 Exterior Guards. Guards shall be constructed to meet the requirements of Section R301.5 and R312.

Section R507.10.1 Support of Guards. Where guards are supported on deck framing, guard loads shall be transferred to the deck framing with a continuous load path to the deck joists.

Section R507.10.1.1 Guards Supported by Side of Deck Framing. Where guards are connected to the interior or exterior side of a deck joist or beam, the joist or beam shall be connected to the adjacent joists to prevent rotation of the joist or beam. Connections relying only on fasteners in end grain withdrawal are not permitted.

Section R507.10.1.2 Guards Supported on Top of Deck Framing. Where guards are mounted on top of the decking, the guards shall be connected to the deck framing or blocking and installed in accordance with manufacturer's instructions to transfer the guard loads to the adjacent joists.

Section R507.10.2 Wood Posts at Deck Guards. Where 4-inch by 4-inch wood posts support guard loads applied to the top of the guard, such posts shall not be notched at the connection to the supporting structure.

Section R507.10.3 Plastic Composite Guards. Plastic composite guards shall comply with the provisions of Section R507.2.2.

Section R507.10.4 Other Guards. Other guards shall be in accordance with either manufacturer's instructions or engineering principles.

- **Section G2439.5 Makeup Air for Clothes Dryer Exhaust. The requirement for a transfer opening for supplying makeup air to a closet designed for a gas dryer has been moved into a separate section.**

Section G2439.5 Makeup Air. Installations exhausting more than 200 cfm shall be provided with makeup air.

Section G2439.5.1 Closet Installation. Where a closet is designed for the installation of a clothes dryer, an opening having an area of not less than 100 square inches for makeup air shall be provided in the closet enclosure, or makeup air shall be provided by other approved means.

- **Section R2905.3 Hot Water Supply to Fixtures. The code now limits the length of hot water piping serving fixtures.**

Section P2905.3 Hot Water Supply to Fixtures. The developed length of hot water piping, from the source of the hot water to the fixtures that require hot water, shall not exceed 100 feet. Water heaters and recirculating system piping shall be considered to be sources of hot water.

- **Section E3601.8 Emergency Disconnects – An emergency service disconnect is required in a readily accessible outdoor location.**

Section E3601.8 Emergency Disconnect. 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 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 E3609. 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 (NFPA 70 Articles 230.82(3), 230.85)

- **Section AF104 Radon Testing – Procedures for radon testing are added to Appendix F.**

2021 IBC SIGNIFICANT CHANGES

2021 IBC

- **Section 506.3 Frontage Increase - The methodology for calculating allowable area increase for frontage has been simplified through the use of a tabular format.**

Section 506.3.2 Minimum Frontage Distance. To qualify for an area factor increase based on frontage, the public way or open space adjacent to the building perimeter shall have a minimum distance (W) of 20 feet measured at right angles from the building face to any of the following:

1. The closest interior lot line.
2. The entire width of a street, alley, or public way.
3. The exterior face of an adjacent building on the same property.

The frontage increase shall be based on the smallest public way or open space that is 20 feet or greater, and the percentage of building perimeter having a minimum 20 feet public way or open space.

Section 506.3.3 Amount of Increase. The area factor increase based on frontage shall be determined in accordance with Table 506.3.3.

Table 506.3.3 Frontage Increase Factor

PERCENTAGE OF BUILDING PERIMETER	OPEN SPACE (feet)			
	0 to less than 20	20 to less than 25	25 to less than 30	30 or greater
0 to less than 25	0	0	0	0
25 to less than 30	0	0.17	0.21	0.25
50 to less than 75	0	0.33	0.42	0.50
75 to 100	0	0.50	0.63	0.75

Note: Interpolation is permitted.

Section 506.3.3.1 Section 507 Buildings. Where a building meets the requirements of Section 507 (Unlimited Area Buildings), as applicable, except for compliance with the minimum 60-foot public way or yard requirement, the area factor increase based on frontage shall be determined in accordance with Table 506.3.3.1.

Table 506.3.3.1 Section 507 Buildings

PERCENTAGE OF BUILDING PERIMETER	OPEN SPACE (feet)					
	30 to less than 35	35 to less than 40	40 to less than 45	45 to less than 50	50 to less than 55	55 to less than 60
0 to less than 25	0	0	0	0	0	0
25 to less than 30	0.29	0.33	0.38	0.42	0.46	0.5
50 to less than 75	0.58	0.67	0.75	0.83	0.92	1.0
75 to 100	0.88	1.00	1.13	1.25	1.38	1.5

Note: Interpolation is permitted.

- **Section 707.5 Continuity (Fire Barriers) – Fire barriers creating an exit passageway may now terminate at a fire-resistance-rated top (lid) instead of continuing to the underside of the roof slab above.**

Section 707.5 Continuity. (Exception 3 Added.) Fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab, or deck above and shall be securely attached thereto. Such fire barriers shall be continuous through concealed space, such as space above a suspended ceiling. Joints and voids at intersections shall comply with Section 707.8 and 707.9.

Exceptions:

3. An exit passageway enclosure required by Section 1024.3 that does not extend to the underside of the roof sheathing, slab, or deck above shall be enclosed at the top with construction of the same fire-resistance rating as required for the exit passageway.

- **Section 708 Fire Partitions – Additional locations where fire partitions are required were added. (6, 7, and 8 were added.)**

Section 708.1 General. The following wall assemblies shall comply with this section:

6. Walls separating ambulatory care facilities from adjacent spaces, corridors, or tenant as required by Section 422.2.
7. Walls separating dwelling units and sleeping units in Groups R-1 and R-2 in accordance with Sections 907.2.8.1 and 907.2.9.1.
8. Vestibules in accordance with Section 1028.2.

- **Section 903.3.1.2 NFPA 13R Sprinkler Systems – Maximum allowable building height in which a NFPA 13R system is permitted has been reduced.**

Section 903.3.1.2 NFPA 13R Sprinkler Systems. Automatic sprinkler systems in Group R occupancies shall be permitted to be installed throughout in accordance with NFPA 13R where the Group R occupancy meets all of the following conditions:

1. Four stories or fewer above grade plane.
2. The floor level of the highest story is 30 feet or less above the lowest level of fire department vehicle access.
3. The floor level of the lowest story is 30 feet or less below the lowest level of fire department vehicle access.

The number of stories of Group R occupancies constructed in accordance with Sections 510.2 and 510.4 shall be measured from grade plane.

- **Section 1008.2.1 Illumination Level Under Normal Power – Minimum illumination levels have been increased along exit access stairways and exit stairways from one footcandle to 10 footcandles.**

Section 1008.2.1 Illumination Level Under Normal Power. The means of egress illumination level shall be not less than 1 footcandle at the walking surface. Along exit access stairways, exit stairways, and at the required landings, the illumination level shall not be less than 10 footcandles at the walking surface when the stairway is in use.

- **Section 1009.6.3 Areas of Refuge, Size and Section 3008.6.4 Elevator Lobby Size – Minimum required size of the clear floor space for a wheelchair has been increased to 30 inches in width by 52 inches in length.**

Section 1009.6.3 Areas of Refuge Size. Each area of refuge shall be sized to accommodate one wheelchair space of 30 inches by 52 inches for each 200 occupants or portion thereof, based on the occupant load of the area of refuge and areas served by the area of refuge. Such wheelchair spaces shall not reduce the means of egress minimum width or required capacity. Access to any of the required wheelchair spaces in an area of refuge shall not be obstructed by more than one adjoining wheelchair space.

Section 3008.6.4 Elevator Lobby Size. Each occupant evacuation elevator lobby shall have minimum floor area as follows:

1. The occupant evacuation elevator lobby floor area shall accommodate, at 3 square feet per person, not less than 25% of the occupant load of the floor area served by the lobby.
2. The occupant evacuation elevator lobby floor area shall accommodate one wheelchair space of 30 inches by 52 inches for each 50 persons, or portion thereof, of the occupant load of the floor area served by the lobby.

- **Section 1010.1.1 Size of Doors – Maximum width for a swinging door in no longer regulated and reduced door sizes are permitted per the addition of Exception 11 where serving single-user showers, saunas, and toilet compartments as well as dressing, fitting, and changing rooms.**

Section 1010.1.1 Size of Doors. “The maximum width of a swinging door leaf shall be 48 inches nominal” has been removed from this Section.

Exceptions:

11. Doors serving non-accessible single-user shower or sauna compartments, toilet stalls or dressing, fitting or changing rooms shall have a minimum clear opening width of 20 inches.

- **Section 1104.4 Multistory Buildings and Facilities – Added Exception 1.5 to clarify that an accessible route is required to stories or mezzanines in structures with four or more dwelling units regardless of aggregate area.**

Section 1104.4 Multistory Buildings and Facilities. At least one accessible route shall connect each accessible story, mezzanine and occupied roofs in multilevel buildings and facilities.

Exceptions:

An accessible route is not required to stories, mezzanines, and occupied roofs that have an aggregate area of not more than 3,000 square feet and are located above and below accessible levels. This exception shall not apply to:

- 1.5 Structures with four or more dwelling units.

- **Section 1105.1.1 Automatic Doors – In certain occupancies, the accessible public entrances of buildings with larger occupant loads must now be provided with an automatic door.**

Section 1105.1.1 Automatic Doors. In facilities with the occupancies and building occupant loads indicated in Table 1105.1.1, public entrances that are required to be accessible shall have one door be either a full power-operated door or a low-energy power-operated door. Where the public

entrance includes a vestibule, at least one door into and one door out of the vestibule shall meet the requirements of this section.

TABLE 1105.1.1 PUBLIC ENTRANCE WITH POWER-OPERATED DOOR

OCCUPANCY	BUILDING OCCUPANT LOAD GREATER THAN
A-1, A-2, A-3, A-4	300
B, M, R-1	500

Note: In mixed-use facilities where the total sum of the building occupant load is greater than those listed, the most restrictive building occupant load shall apply.

- **Section 1107.2 Electrical Vehicle Charging Stations – Scoping provisions have been provided to make electrical vehicle charging stations accessible.**

Section 1107.2 Electrical Vehicle Charging Stations. Electrical charging stations shall comply with Sections 1107.2.1 and 1107.2.2.

Exception: Electrical vehicle charging stations provided to serve Group R-2, R-3, and R-4 occupancies are not required to comply with this section.

Section 1107.2.1 Number of Accessible Vehicle Spaces. Not less than 5% of vehicle spaces on the site served by electrical vehicle charging systems, but not fewer than one for each type of electric vehicle charging system, shall be accessible.

Section 1107.2.2 Vehicle space size. Accessible vehicle spaces shall comply with the requirements for a van accessible parking space that is 132 inches minimum in width with an adjoining access aisle that is 60 inches minimum in width.

- **Section 1210.3 Restroom Privacy – A screening element at the entry to public restrooms is now required.**

Section 1210.3 Privacy. Public restrooms shall be visually screened from outside entry or exit doorways to ensure user privacy within the restroom. This provision shall also apply where mirrors would compromise personal privacy. Privacy at water closets and urinals shall be provided in accordance with Sections 1210.3.1 and 1210.3.2.

Exception: Visual screening shall not be required for single occupant toilet rooms with a lockable door.

2018 IMC SIGNIFICANT CHANGES

- **Section 504.4** (*addition*) Clothes dryer exhaust ducts shall be sealed in accordance with Section 603.9.
- **Section 504.4.1** (*addition*) The passageway of dryer exhaust duct terminals shall be undiminished in size and shall provide an open area of not less than 12.5 square inches.
- **Section 505.2** (*addition*) Domestic Cooking Exhaust. Where domestic cooking exhaust equipment is provided, it shall comply with the following as applicable:
 1. The fan for overhead range hoods and downdraft exhaust equipment not integral with the cooking appliance shall be listed and labeled in accordance with UL 507.
 2. Overhead range hoods and downdraft exhaust equipment with integral fans shall comply with UL 507.
 3. Domestic cooking appliances with integral downdraft exhaust equipment shall be listed and labeled in accordance with UL 858 or ANSI Z21.1.
 4. Microwave ovens with integral exhaust for installation over the cooking surface shall be listed and labeled in accordance with UL 923.
- **Section 507.2.6 Exception 2** (*addition*) Type I hoods listed and labeled for clearances less than 18 inches in accordance with UL 710 shall be installed with the clearances specified such listings.
- **Section 510.8** (*addition*) Ducts conveying combustible dust as part of a dust collection system shall be equipped with cleanouts that are provided with approved access, pre-designed to be disassembled for cleaning or engineered for automatic cleanouts. Where provided, cleanouts shall be located at the base of each vertical duct riser and at intervals not exceeding 20 feet in horizontal sections of duct.
- **Section 603.8.2** (*addition*) Ducts shall be sealed, secured, and tested prior to concrete encasement or direct burial. Ducts shall be leak tested as required by Section C403 of the International Energy Conservation Code.
- **Section 604.11 Exception** (*addition*) A vapor retarder is not required for spray polyurethane foam insulation having a water vapor permeance of not greater than 3 perms per inch at the installed thickness.
- **Section 607.3.1** (*addition*).....Only ceiling radiation dampers labeled for use in dynamic systems shall be installed in heating, ventilation and air-conditioning systems designed to operate with fans on during a fire.....
- **Section 607.6.2 Exceptions** (*addition*) Under requirement 2 for membrane penetrations, the following Exceptions were added.
 2. A listed ceiling radiation damper installed at the ceiling line where a duct penetrates the ceiling of a fire-resistance rated floor/ceiling or roof/ceiling assembly.
Exceptions:
 1. A fire-resistance rated assembly tested in accordance with ASTM E119 or UL 263 showing that ceiling radiation dampers are not required in order to maintain the fire-resistance rating of the assembly.
 2. Where exhaust duct or outdoor air duct penetrations are protected in accordance with Section 714.5.1.2 of the International Building Code, are located within the cavity of a wall and do not pass through another dwelling unit or tenant space.

3. Where duct and air transfer openings are protected with a duct outlet penetration system tested as part of a fire-resistance-rated assembly in accordance with ASTM E119 or UL 263.

2021 IMC SIGNIFICANT CHANGES

- **Section 307.2.1.1** (*addition*) Condensate drains shall not directly connect to any plumbing drain, waste or vent pipe. Condensate drains shall not discharge into a plumbing fixture other than a floor sink, floor drain, trench drain, mop sink, hub drain, standpipe, utility sink or laundry sink. Condensate drain connections to a lavatory wye branch tailpiece or to a bathtub overflow pipe shall not be considered as discharging to a plumbing fixture. Except where discharging to grade outdoors, the point of discharge of condensate drains shall be located within the same occupancy, tenant space or dwelling unit as the source of the condensate.
- **Section 403.3.2.1** (*addition*) Exception added for outdoor air for dwelling units.
 - **Exception:**
 2. The minimum mechanical ventilation rate determined in accordance with Equation 4-9 shall be reduced by 30 percent provided that both of the following conditions apply:
 - 2.1 A ducted system supplies ventilation air directly to each bedroom and to one or more of the following rooms:
 - 2.1.1 Living room.
 - 2.1.2 Dining room.
 - 2.1.3 Kitchen.
 - 2.2 The whole-house ventilation system is a balanced ventilation system.
- **Section 504.4.1** (*addition*) Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. Where the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet in any direction from openings into buildings, including openings into ventilated soffits.
- **Section 504.6** (*addition*) Domestic booster fans shall not be installed in dryer exhaust systems.
- **Section 601.5 Exception 2** (*addition*) Exception to return air openings addition –
 - **Exception:**
 2. Taking return air from a kitchen is not prohibited in a dwelling unit where the kitchen and living spaces are in a single room and the cooking appliance is electric and located not less than 5 feet in any direction from the return air intake opening.
- **Section 607.4** (*reorganized and addition*) Where space constraints or physical barriers restrict access to a damper for periodic inspection and testing, the damper shall be a single- or multi-blade damper and shall comply with the remote inspection requirements of NFPA 80 or NFPA 105.
- **Section 607.5.5** (*amended Exception 1.1*)
 - **Exception:**
 - 1.1 Steel exhaust subducts having a wall thickness of not less than 0.0187 inch extend not less than 22 inches vertically in exhaust shafts and an exhaust fan is installed at the upper terminus of the shaft that is powered continuously, in accordance with Section 909.11 of the International Building Code, so as to maintain a continuous airflow upward to the outdoors.

- **Section 1105.9** (*addition*) Machinery rooms larger than 1,000 square feet shall have not less than two exits or exit access doorways. Where two exit access doorways are required, one such doorway is permitted to be served by a fixed ladder or an alternating tread device. Exit access doorways shall be separated by a horizontal dimension of the room. All portions of machinery rooms shall be within 150 feet of an exit or exit access doorway. An increase in exit access travel distance is permitted in accordance with Section 1017.1 of the IBC. Exit and exit access doorways shall swing in the direction of egress travel and shall be equipped with panic hardware, regardless of the occupant load served. Exit and exit access doorways shall be tight fitting and self-closing.
- **Sections 1107, 1108, 1109, and 1110** for Refrigerant Piping have been reorganized and amended. Please refer to the IMC for the requirements.

2021 PLUMBING CODE SIGNIFICANT CHANGES

Plumbing-related code changes and code amendments related to (P) plumbing code, (M) mechanical code, (G) Fuel Gas Code, and (E) energy code

(M) 1305.1.2 Appliances in attics. Attics containing appliances shall be provided with an opening and a clear unobstructed passageway large enough to allow removal of the largest appliance, but not less than ~~30~~ **60** inches high and ~~22~~ **36** inches wide and . . . {bulk of paragraph unchanged} . . . side of the appliance. The clear access opening dimensions shall be a minimum of ~~20~~ **22** inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest appliance.

(M) 1305.1.2 Appliances under floors. Underfloor spaces containing appliances shall be provided with an opening and a clear unobstructed passageway large enough to allow removal of the largest appliance, but not less than ~~30~~ **60** inches high and ~~22~~ **36** inches wide and . . . {bulk of paragraph unchanged} . . . side of the appliance. The clear access opening dimensions shall be a minimum of ~~20~~ **22** inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest appliance.

(G) 409.1.4 Termination of CSST valves. Shutoff *valves* installed with corrugated stainless steel (CSST) *pipng systems* shall be supported with an approved termination fitting in accordance with manufacturer's installation requirements. In the absence of specific provisions, the Building Official may approve an equivalent support, suitable for the size of the *valves*, of adequate strength and quality, and located not greater than 12-inches from the center of the *valve*. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's *pipng*, fittings, and *valves* between anchors. All *valves* and supports shall be designed and installed so they will not be disengaged by movement of the supporting *pipng*.

(G) 409.5.1 Located within the same room. The shutoff valve...{bulk of paragraph unchanged}... in accordance with the appliance manufacturer's instructions. A secondary shutoff valve must be installed outside of the fireplace and located within 3 feet (914 mm) of the firebox if the appliance shutoff is located within the firebox.

(P) 2603.5.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of **12** inches (304 mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of **12** inches (304 mm) below grade.

(P) 2801.6.1 Pan size and drain. Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation and an automatic shut-off triggered by a sensor or other approved device shall be installed.

(P) 2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

Discharge to the floor, to the pan serving the water heater or storage tank, to a waste receptor, to the outdoors or to an approved location.

Exception: Replacement of existing water heaters shall not trigger the requirement to add or modify existing discharge piping unless such piping was never code compliant as determined by the code authority.

[remainder unchanged]

(P) 306.2.4 Plastic sewer and DWV piping installation. Plastic sewer and DWV piping installed underground shall be installed in accordance with the manufacturer's installation instructions. The piping shall be bedded in 4 inches of granular fill or fine rock aggregate not exceeding .75 inches in diameter and then backfilled compacting the side fill in 6-inch layers on each side of the piping. The compaction shall be to minimum of 85 percent standard proctor density and extend to a minimum of 6 inches above the top of the pipe.

(P) 312.1.1 Test gauges. Gauges used for testing shall not be dilapidated as determined by the Code Official.

(P) 413.4 Required location for floor drains ~~Public laundries and central washing facilities.~~ Floor drains shall be installed in the following areas:

1. In public laundries and in the central washing facilities of multiple family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet of not less than 3 inches (76 mm) in diameter.
2. Commercial kitchens. In lieu of floor drains in commercial kitchens, the Code Official may accept floor sinks.
3. Public restrooms.

Section 703.6; Delete "Combined sanitary and storm public sewer" in its entirety

(Reason: Combining sanitary sewer and storm drains is not an accepted practice in this region)

(E) C404.10 Water heating equipment location. Water heaters with *combustion equipment* shall be located in a space with the following characteristics:

1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.
2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.
3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.

Exceptions:

1. Instantaneous water heaters located within 10 feet of the point of use.
2. Water heaters with an input capacity of more than 300,000 Btu/h.

3.

(E) C405.5.3 Gas lighting. Gas fired lighting appliances are not permitted.

(E) R403.5.2 Hot water pipe insulation.

All hot water piping regardless of location shall be insulated to a thickness of minimum R-3 unless completely encapsulated by insulation which serves the cavity or space.

(E) R501.9. Replacement of electric equipment. *Combustion equipment* shall not be permitted to be installed to replace electric equipment, unless an Energy Audit is performed in accordance with R501.7 and at least one efficiency measure identified in the audit is completed.

(E) R501.10. Electrification retrofit bid. Where a gas-fired warm-air furnace is replaced with a gas-fired warm-air furnace, or when a unitary air conditioner or condensing unit serving a heated space is replaced with another unitary air conditioner or condensing unit, an *Electrification Retrofit Bid* shall be obtained and submitted.

2021 PLUMBING CODE SIGNIFICANT CHANGES

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(G) 409.5.1 Located within the same room. The shutoff valve...{bulk of paragraph unchanged}... in accordance with the appliance manufacturer's instructions. A secondary shutoff valve must be installed outside of the fireplace and located within 3 feet (914 mm) of the firebox if the appliance shutoff is located within the firebox.

(P) 2603.5.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of **12** inches (304 mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of **12** inches (304 mm) below grade.

(P) 2801.6.1 Pan size and drain. Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation and an automatic shut-off triggered by a sensor or other approved device shall be installed.

(P) 2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

Discharge to the floor, to the pan serving the water heater or storage tank, to a waste receptor, to the outdoors or to an approved location.

Exception: Replacement of existing water heaters shall not trigger the requirement to add or modify existing discharge piping unless such piping was never code compliant as determined by the code authority.

[remainder unchanged]

(P) 306.2.4 Plastic sewer and DWV piping installation. Plastic sewer and DWV piping installed underground shall be installed in accordance with the manufacturer's installation instructions. The piping shall be bedded in 4 inches of granular fill or fine rock aggregate not exceeding .75 inches in diameter and then backfilled compacting the side fill in 6-inch layers on each side of the piping. The compaction shall be to minimum of 85 percent standard proctor density and extend to a minimum of 6 inches above the top of the pipe.

(P) 312.1.1 Test gauges. Gauges used for testing shall not be dilapidated as determined by the Code Official.

(P) 413.4 Required location for floor drains ~~Public laundries and central washing facilities.~~ Floor drains shall be installed in the following areas:

1. In public laundries and in the central washing facilities of multiple family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet of not less than 3 inches (76 mm) in diameter.
2. Commercial kitchens. In lieu of floor drains in commercial kitchens, the Code Official may accept floor sinks.
3. Public restrooms.

Section 703.6; Delete "Combined sanitary and storm public sewer" in its entirety

(Reason: Combining sanitary sewer and storm drains is not an accepted practice in this region)

(E) C404.10 Water heating equipment location. Water heaters with *combustion equipment* shall be located in a space with the following characteristics:

1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.
2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.
3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.

Exceptions:

1. Instantaneous water heaters located within 10 feet of the point of use.
2. Water heaters with an input capacity of more than 300,000 Btu/h.

3.

(E) C405.5.3 Gas lighting. Gas fired lighting appliances are not permitted.

(E) R403.5.2 Hot water pipe insulation.

All hot water piping regardless of location shall be insulated to a thickness of minimum R-3 unless completely encapsulated by insulation which serves the cavity or space.

(E) R501.9. Replacement of electric equipment. *Combustion equipment* shall not be permitted to be installed to replace electric equipment, unless an Energy Audit is performed in accordance with R501.7 and at least one efficiency measure identified in the audit is completed.

(E) R501.10. Electrification retrofit bid. Where a gas-fired warm-air furnace is replaced with a gas-fired warm-air furnace, or when a unitary air conditioner or condensing unit serving a heated space is replaced with another unitary air conditioner or condensing unit, an *Electrification Retrofit Bid* shall be obtained and submitted.



2020 NEC Significant Changes

<https://www.eaton.com/content/dam/eaton/products/residential/electrical-safety/electrical-safety-national-electrical-code-2020-br1610048en.pdf>