
Sec. 4-3-31. Applicability; adoption of residential code; amendments.

- (a) This section is applicable to all structures within the City described herein as one-and two-family dwellings and townhouses not more than three (3) stories in height.
- (b) There is hereby adopted the *International Residential Code*, 2015 2021 edition (as published by the International Code Council), excluding Part VIII Electrical (Chapters 34-43), and including Appendices A-J, copies of which shall be maintained by the Building Official, with the following amendments:

R101.1 Title. Insert "City of Amarillo".

[Amend] Section R102.4 as follows

R102.4 Referenced codes and standards. The codes, when specifically adopted, and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference made to NFPA 70 or the Electrical Code shall mean the Electrical Code as adopted.

[Insert]

R103.1 Creation of enforcement agency. The City of Amarillo Department of Building Safety is hereby created and the official in charge thereof shall be known as the Building Official.

[Delete] to align with the Municipal code

~~*R104.10.1 Flood hazard areas.* The *building official* shall not grant modifications to any provisions required in flood hazard areas as established by Table R301.2 unless a determination has been made that:~~

- ~~1. There is good and sufficient cause showing that the unique characteristics of the size, configuration or topography of the site render the elevation standards of Section R322 inappropriate.~~
- ~~2. Failure to grant the modification would result in exceptional hardship by rendering the lot undevelopable.~~
- ~~3. The granting of modification will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.~~
- ~~4. The modification is the minimum necessary to afford relief, considering the flood hazard.~~
- ~~5. Written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation and stating that construction below the design flood elevation increases risks to life and property, has been submitted to the applicant.~~

R104.12 Contractor Registration. The Building Official shall receive applications from and register contractors according to the rules adopted by the City in Chapter 4-1 of the Amarillo Municipal Code.

R105.1 Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit prior to start of demolition or construction activity.

Building permits issued to either registered contractors, or Homeowners. Building permits for construction of, alterations of, or additions to buildings and structures shall only be issued to either:

1. A residential building contractor registered in accordance with Chapter 4-1 of the Amarillo Municipal Code, or

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2. A Homeowner, for work to be done on his property, when the Homeowner is acting as his own building contractor.

[Amend] Section R105.2 #5 to read as follows

R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Building:

1. One-story detached *accessory structures* used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet (18.58 m²).
2. Fences not over 8 feet (2438mm) high.
3. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge.
4. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18,927L) and the ratio of height to diameter or width does not exceed 2 to 1.
5. ~~Sidewalks and~~ Driveways located within private property lot lines.
6. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
7. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
8. Swings and other playground equipment.
9. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
10. Decks not exceeding 200 square feet (18.58m²) in area, that are not more than 30 inches (762 mm) above *grade* at any point, are not attached to a *dwelling* and do not serve the exit door required by Section R311.4.

[Delete] Addressed in municipal Code

~~R105.3.1.1 Determination of substantially improved or substantially damaged existing buildings in flood hazard areas. For applications for reconstruction, rehabilitation, addition, alteration, repair or other improvement of existing buildings or structures located in a flood hazard area as established by Table R301.2, the building official shall examine or cause to be examined the construction documents and shall make a determination with regard to the value of the proposed work. For buildings that have sustained damage of any origin, the value of the proposed work shall include the cost to repair the building or structure to its predamaged condition. If the building official finds that the value of proposed work equals or exceeds 50 percent of the market value of the building or structure before the damage has occurred or the improvement is started, the proposed work is a substantial improvement or repair of substantial damage and the building official shall require existing portions of the entire building or structure to meet the requirements of Section R322. For the purpose of this determination, a substantial improvement shall mean any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. Where the building or structure has sustained substantial damage, repairs necessary to restore the building or structure to its predamaged condition shall be considered substantial improvements regardless of the actual repair work performed. The term shall not include either of the following:~~

- ~~1. Improvements to a building or structure that are required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to ensure safe living conditions.~~

~~2. Any alteration of a historic building or structure, provided that the alteration will not preclude the continued designation as a historic building or structure. For the purposes of this exclusion, a historic building shall be any of the following:~~

~~2.1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places.~~

~~2.2. Determined by the Secretary of the US Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district.~~

~~2.3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.~~

[Delete]

~~R106.1.4 Information for construction in flood hazard areas. For buildings and structures located in whole or in part in flood hazard areas as established by Table R301.2, construction documents shall include:~~

~~1. Delineation of flood hazard areas, floodway boundaries and flood zones and the design flood elevation, as appropriate.~~

~~2. The elevation of the proposed lowest floor, including basement, in areas of shallow flooding (AO Zones), the height of the proposed lowest floor, including basement, above the highest adjacent grade.~~

~~3. The elevation of the bottom of the lowest horizontal structural member in coastal high-hazard areas (V Zone) and in Coastal A Zones where such zones are delineated on flood hazard maps identified in Table R301.2 or otherwise delineated by the jurisdiction.~~

~~4. If design flood elevations are not included on the community's Flood Insurance Rate Map (FIRM), the building official and the applicant shall obtain and reasonably utilize any design flood elevation and floodway data available from other sources.~~

[Strike] from ordinance to align with State HB 852

~~108.3 Building permit valuations. Building permit valuation shall include total value of the work for which a permit is being issued, such as electrical, gas, mechanical, plumbing equipment and other permanent systems, including materials and labor. Final building permit valuation shall be set by the building official in accordance with the most current Building Valuation Data as published by the International Code Council or approved statements sufficient to clearly document all construction costs.~~

~~R108.5 Refunds. Fee refunds shall be made in accordance with Chapter 4-1 of the Municipal Code.~~

[Amend]

~~R108.2 R109.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule of fees in Chapter 4-1 of the Amarillo Municipal Code.~~

[Delete]

~~R109.3 Permit valuations.- Delete entire section in line with State of Texas H.B. 852~~

[Amend]

~~R112 Board of Appeals. Construction Advisory and Appeals Board. Commission See, Chapter 2-6, of the Amarillo Municipal Code.~~

[Add] [Amend]

R202 Townhouse. A single-family dwelling unit constructed in a group of three or more attached units separated by property lines in which each unit extends from foundation to roof and with a yard or public way on at least two sides.

[Amend] [Add]

R302.1 Exterior walls.

6. Zero lot line structures platted in accordance with the City of Amarillo Zoning Ordinance. The following specific provisions shall apply:
 - 6.1 Exterior wall finish shall be brick veneer, masonry units or other approved materials.
 - 6.2 Soffit material shall be of approved material.
 - 6.3 Roof ventilation openings not permitted underside of soffit.
 - 6.4 Plumbing cleanout allowed when required.
 - 6.5 Allowance of openings constructed of masonry unit glass: single opening maximum 9 square feet or up to three (3) openings; each a maximum of 4 square feet, spaced minimum 24 inches apart.
7. Open non-combustible carport structures may be constructed when also approved within adopted ordinances.

[Amend] Table R301.2.(1)

Table R301.2.(1) amended as follows: Delete Manual J design criteria from table and footnote N

TABLE R301.2 (1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load	Wind Design				Seismic Design Category	Subject To Damage From			Winter Design Temp	Ice Barrier Underlayment Required	Flood Hazard	Air Freezing Index	Mean Annual Temp
	Speed	Topographic effects	Special wind debris zone	Wind-borne debris zone		Weathering	Frost line depth	Termite					
20 psf	115 mph	NO	NO	NO	B	Moderate	18"	Moderate to heavy	20°	NO	AMC 4-8	311	57.2°

[Amend] R302.5.1 to read as follows

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1-3/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1-3/8 inches (35 mm) thick, or 20-minute fire-rated doors. ~~Doors shall be self-latching and equipped with a self-closing or automatic closing device.~~

[Amend] Section R303.3 to read as follows

R303.3 Bathrooms. Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 M²), one-half of which shall be openable.

Exception: The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be determined in accordance with Section M1505.

Exhaust air from the space shall be exhausted directly to the outdoors. Spaces containing only a water closet or water closet and a lavatory may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

[Add] Section R306.5 to read as follows

R306.5 Walls containing Drain, waste, or vent piping shall be constructed with a minimum of 2x6 framing members.

[Amend] Section R310.1 to read as follows

R310.1 *Exception.* Storm shelters and basements used only to house mechanical equipment and not exceeding total floor area of ~~200-~~ 400 square feet (37.16m²).

[Delete] to align with State Law

R313. *Automatic Fire Sprinkler Systems.* Delete entire Section.

[Amend] Section 315.2.2 to delete exception 3

R315.2.2 *Alterations, repairs and additions.* Where *alterations*, repairs or *additions* requiring a permit occur, or where one or more sleeping rooms are added or created in existing *dwelling units*, the individual *dwelling unit* shall be equipped with carbon monoxide alarms located as required for new dwellings.

Exceptions:

1. Work involving the exterior surfaces of *dwelling units*, such as the addition of a porch or deck, are exempt from the requirements of this section.
2. Installation, alteration or repairs of plumbing systems when all such work occurs on the exterior of *dwelling units*, such as water or sewer lines, or lawn irrigation systems are exempt from the requirements of this section.

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

[Amend] to read as follows

R315.3 *Carbon monoxide alarms.* Carbon monoxide alarms in *dwelling units* shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning *appliance* is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom. Approved alarms shall be installed in accordance with manufacturers' installation instructions or located on the wall or ceiling at a height **no less than** 42 inches above floor, avoiding locations near heating/cooling vents or areas which provide turbulent airflow, and minimum 36 inches away from openings to areas of high humidity. Avoid installing CO alarms in kitchens or above fuel-burning appliances.

[Amend] To read as follows

R319 *Address identification.* Buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102mm) in height with a stroke width of not less than 0.5 inch (12.7mm). Where required by the ~~building code~~ official, address identification shall be provided in additional approved locations facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

[Strike] [Delete] strike from this ord. and delete from code

Section R322 Flood resistant construction

~~*R322.1 General.* Buildings and structures constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24. The City Engineer is designated as the Floodplain Manager. The Floodplain Manager is responsible for determining base flood elevation and associated permitting requirements. Any references within Section 322 Flood-Resistant Construction to the *building official* will have similar meaning as to the Floodplain Manager.~~

[Strike] [Delete]

~~*R322.2 Flood hazard areas (including A Zones).* All areas that have been determined to be prone to flooding but not subject to high-velocity wave action shall be designated as flood hazard areas. Flood hazard areas that have been delineated as subject to wave heights between 1 1/2 feet (457 mm) and 3 feet (914 mm) shall be designated as Coastal A Zones. All building and structures constructed in whole or in part in flood hazard areas shall be designed and constructed in accordance with Sections R322.2.1 through R322.2.3~~

[Add] [Amend]

R322 Flood hazard areas elevation certificate required.

One and two family dwellings located in a flood zone/area must have a finish floor elevation certificate; the certificate/documentation shall be sealed by a State of Texas licensed Engineer.

[Amend]

R401.2 Requirements. Foundation construction shall be capable of accommodating all loads according to Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Gravel fill used as footings for wood and precast concrete foundations shall comply with Section R403. Concrete foundations will be designed by registered design professional licensed in the State of Texas or constructed in compliance with the ~~2015~~ 2017 Panhandle Residential Foundation Manual.

R405.1 Concrete or masonry foundations. Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend at least 1 foot (305 mm) beyond the outside edge of the footing and 6 inches (152 mm) above the top of the footing and be covered with an *approved* filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper. Perforated drains shall be surrounded with an *approved* filter membrane or the filter membrane shall cover the washed gravel or crushed rock covering the drain. Drainage tiles or perforated pipe shall be placed on a minimum of 2 inches (51mm) of washed gravel or crushed rock at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches (152 mm) of the same material.

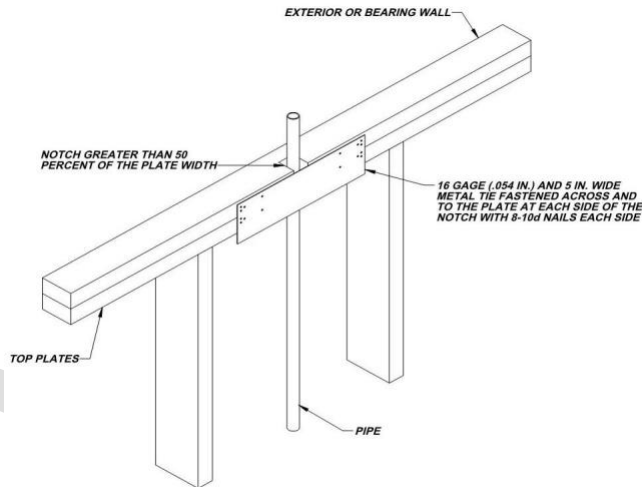
Exception: A drainage system is not required when the foundation is installed on well-drained ground or sand-gravel mixture soils according to the Unified Soil Classification System, Group I Soils, as detailed in Table R405.1 or constructed in accordance with the ~~2012~~ 2017 Panhandle Residential Foundation Manual.

[Add] [Amend]

R602.6.1 Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 Ga) and 1 ½ inches (38 mm) 5 inches (127 mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) ~~nails having a minimum length of 1½ inches (38 mm) or eight (#10) wood screws having a minimum length of not less than 1½ inch (38 mm)~~ at each side or equivalent as approved by the Code Official. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening. See figure R602.6.1. *{Remainder unchanged}*

[Add] [Amend]

**Figure 602.6.1
TOP PLATE FRAMING TO ACCOMMODATE PIPING**



R905.7.1 Deck requirements. Wood shingles shall be used only on solid sheathing.

R905.8.1 Deck requirements. Wood shakes shall be used only on solid sheathing.

908.1 General. Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9, including but not limited to decking, flashing, and ventilation.

Table R905.8.5 amended as follows:

TABLE R905.8.5 WOOD SHAKE MATERIAL REQUIREMENTS

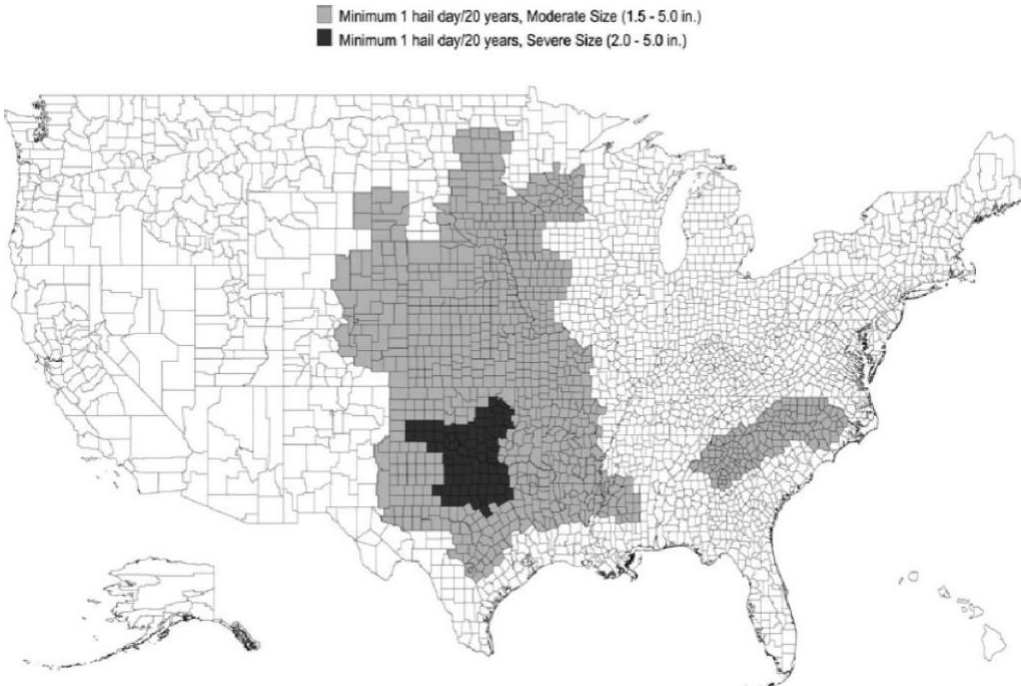
MATERIAL	MINIMUM GRADES	APPLICABLE GRADING RULES
Wood shakes of naturally durable wood	1	Cedar Shake and Shingle Bureau

Taper sawn shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Preservative-treated shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Fire-retardant-treated shakes of naturally durable wood	1	Cedar Shake and Shingle Bureau
Preservative-treated taper sawn shakes of Southern pine treated in accordance with AWP Standard U1 (Commodity Specification A, Use Category 3B and section 5.6)	1 or 2	Forest Products Laboratory of the Texas Forest Services

R908.3.1.1. A roof re-cover shall not be permitted where any of the following conditions occur:

1. Where the existing roof or roof covering is water-soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
2. Where the existing roof covering is wood, slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.
4. For asphalt shingles, when the building is located in an area subject to moderate or severe hail exposure according to Figure R908.3.1.1.

908.3.1.1 HAIL EXPOSURE FIGURE MAP



[Add] [Amend]

R908.1 General. Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9, including but not limited to decking, flashing, and ventilation.

[Strike] [Delete]

Chapter 11 of the IRC 2021 in its entirety. Refer to IECC 2015

N1102.1 (R402.1) General (Prescriptive). The building thermal envelope shall meet the requirements of N1102.1.1 through N1102.1.4 as amended until December 31, 2017. Effective January 1, 2018 Table N1102.1.2 and Table N1102.1.4 will be in effect as printed in 2015 IRC.

TABLE N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

Climate Zone	Fenestration U-Factor	Skylight ^b U-Factor	Glazed Fenestration SHGC ^{b,e}	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab ⁴ R-Value & Depth	Crawl Space ^e WALL R-Value
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13+ ^{5h}	8/13	19	5/13 ^f	0	5/13
4 except Marine	0.35	0.55	0.40	40	15 or 13+ ^{1h}	8/13	19	10/13	5, 12 in.	10/13
5 and Marine 4	0.32	0.55	NR	49	20 or 13+ ^{5h}	13/17	30 ^e	15/19	10, 2 ft	15/19
6	0.32	0.55	NR	49	20+5 or 13 40 10 ^h	15/20	30 ^e	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20+5 or 13+10 ^h	19/21	38 ^e	15/19	10, 4 ft	15/19

Footnotes shall remain unchanged.

TABLE N1102.1.4 (R402.1.4) EQUIVALENT U-FACTORS^a

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^b	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	0.50	0.75	0.035	0.084	0.197	0.064	0.360	0.477

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(Supp. No. 72)

2	0.40	0.65	0.030	0.084	0.165	0.064	0.360	0.477
3	0.35	0.55	0.030	0.060	0.098	0.047	0.091e	0.136
4 except Marine	0.35	0.55	0.026 0.028	0.060 0.070	0.098	0.047	0.059	0.065
5 and Marine 4	0.32	0.55	0.026	0.060	0.082	0.033	0.059	0.055
6	0.32	0.55	0.026	0.045	0.060	0.033	0.050	0.055
7 and 8	0.32	0.55	0.026	0.045	0.057	0.028	0.050	0.055

Footnotes shall remain unchanged.

N1102.2.1 (R402.2.1) Ceilings with attic spaces. Where Section N1102.1.1 would require 40 in the ceiling, R-30 shall be deemed to satisfy the requirement for R-40 wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the U-factor alternative approach in Section N1102.1.3 and the total UA alternative in Section N1102.1.4.

N1103.3.3 (R403.3.3) Duct Testing (Mandatory). Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. — Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
2. — Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.

Exception: A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.

Duct testing to be done by a company/person who is certified by a recognized accreditation organization and their equipment be recertified on an annual basis. Contractors who choose not to attain the required certification or use the proper testing tools will be required to engage the services of a certified tester.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

[Amend] to read as follows

M1305.1.2 Appliances in attics. Attics containing appliances shall be provided . {Bulk of paragraph unchanged} . . . side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest appliance. As a minimum, for access to the attic space, provide one of the following: In new construction, access is required to be provided by one of the following methods.

1. A permanent stair.
2. 1. A pull-down stair with a minimum 300 lb. (136 kg) capacity.
3. 2. An access door from an upper floor level.

Exceptions:

1. The passageway and level service space are not required where the appliance can be serviced and removed through the required opening.
2. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length. ~~the passageway shall be not more than 50 feet (15 250 mm) long.~~

[Amend] to read as follows

M1305.1.2.1 Electrical requirements. A luminaire controlled by a switch located at the required passageway opening with additional luminaires placed every 20' and a receptacle outlet shall be installed at or near the appliance location in accordance with Chapter 39. Exposed lamps shall be protected from damage by location or lamp guards.

M1402.4 *Total Electric Heating*. Primary central heating and cooling forced air systems utilizing only electric heat shall utilize heat pumps.

[Amend] to add exception

M1411.3.1.1 Water-level monitoring devices. *{Existing text to remain}*

Exception: Install a tee fitting so a water level detection device will not restrict the flow of water and still shut down the unit if a stoppage occurs.

[Strike] from ordinance

~~M1411.4 *Condensate Pumps*. Condensate pumps located in uninhabitable space, such as attics and crawl spaces, shall be connected to the appliance or equipment served such that when the pump fails, the appliance or equipment will be prevented from operating. Pumps shall be installed in accordance with the manufacturer's instructions and shall not prevent the operation of fuel-fired appliances.~~

M1411.5 *Auxiliary drain pan*. Category IV condensing appliances shall have an auxiliary drain pan where damage to any building component will occur as a result of stoppage in the condensate drainage system or failure of a condensate pump. These pans shall be installed in accordance with the applicable provisions of section M1411.3.1 item (1.) and be provided under condensate pumps.

[Amend]

M1503.6 Makeup air required. Where one or more gas, liquid or solid fuel-burning appliance that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air barrier, each exhaust system capable of exhausting in excess of 400 cubic feet per minute (0.19 m³/s) shall be mechanically or passively provided with makeup air at a rate approximately equal to the difference between exhaust air rate and 400 cubic feet per minute. Such makeup air systems shall be equipped with not fewer than one damper complying with Section M1503.6.2.

Exception: Makeup air is not required for exhaust systems installed for the exclusive purpose of space cooling and intended to be operated only when windows or other air inlets are open. Where all appliances in the house are of sealed combustion, power-vent, unvented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute (0.28 m³/s) without providing makeup air. Exhaust hood systems

capable of exhausting in excess of 600 cubic feet per minute (0.28 m³/s) shall be provided with a makeup air at a rate approximately to the difference between the exhaust air rate and 600 cubic feet per minute.

[Amend]

M2005.2 Prohibited locations. Fuel-fired water heaters shall not be installed in a room used as a storage closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that combustion air will not be taken from the living space. Access to such enclosure may be from the bedroom or bathroom when through a solid door, weather-stripped in accordance with the exterior door air leakage requirements of the International Energy Conservation Code. Installation of direct-vent water heaters within an enclosure is not required.

[Amend]

G2415.12 (404.12) Minimum burial depth. Underground piping systems shall be installed a minimum depth of ~~12 inches (305 mm)~~ 18 inches (457 mm) below grade to top of pipe, ~~except as provided for in Section G2415.12.1.~~

[Delete]

G2415.12.1 (404.12.1) Individual Outdoor Appliances; *{Delete in its entirety}*

[Amend]

G2417.1 (406.1) General. Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections 2417.1.1 through 2417.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the Code Official when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

[Amend]

G2417.1.2 (406.1.2) Repairs and additions. In the event repairs or additions are made after the pressure test, the affected piping shall be tested.

~~Minor repairs and additions are not required to be pressure tested provided that the work is inspected and connection are tested with a noncorrosive leak detecting fluid or other approved leak detecting methods.~~

[Amend]

G2417.4.2 (406.4.2) Test duration. The test duration shall be held for a length of time satisfactory to the Building Official, but in no case for be not less than ten (10) fifteen (15) minutes but not longer than sixty (60) minutes. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the Building Official, but in no case for less than thirty (30) minutes.

[Add] Section G2420.1.4 to read as follows

G2420.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case 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 piping, 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 piping.

[Amend]

G2445.2 (621.2) Prohibited use. One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit.

Exception: Existing approved unvented room heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the Building Official unless an unsafe condition is determined to exist as described in International Fuel Gas Code Section 108.7 of the Fuel Gas Code.

[Amend]

G2448.1.1 (624.1.1) Installation requirements. The requirements for water heaters relative to sizing, relief valves, drain pans and scald protection shall be in accordance with this code or per Code Official.

[Strike]

~~P2503.6 Shower liner test. Where shower floors and receptors are made watertight by the application of materials required by Section P2709.2, the completed liner installation shall be tested prior to the installation of the shower floor covering. The pipe from the shower drain shall be plugged watertight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches (51mm) measured at the threshold. Where a threshold of not less than 2 inches (51mm) in height does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches (51mm) in depth measured at the threshold. The water shall be retained for a test period of not less than 15 minutes and there shall not be evidence of leakage.~~

[Amend]

~~2503.5.1 Rough Plumbing. DWV systems shall be tested on completion of the rough piping installation by water, by air for piping systems other than plastic, or by a vacuum of air for plastic piping systems, without evidence of leakage. The test shall be applied to the drainage system in its entirety or in sections after rough-in piping has been installed, as follows:~~

- ~~1. Water test. Each section shall be filled with water to a point not less than 10 5 feet (3048 1524 MM) above the highest fitting connection in that section, or to the highest point in the completed system. Water shall be held in the section under test for a period of 15 minutes. The system shall prove leak free by visual inspection.~~
- ~~2. Air test. The portion under test shall be maintained at a gauge pressure of 5 pounds per square inch (psi) (34 kPa) or 210 inches of mercury column (34 kPa). This pressure shall be held without the introduction of additional air for a period 15 minutes.~~
- ~~3. Vacuum test. The portion under test shall be evacuated of air by a vacuum type pump to achieve a uniform gauge pressure of -5 pounds per square inch or a negative 10 inches of mercury column (-34 kPa). This pressure shall be held without removal of additional air for a period of 15 minutes.~~

[Amend]

P2603.3 Protection against corrosion. Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to

prevent direct contact, the sheathing shall have a thickness of not less than 0.008 inch (8 mil) (0.203 mm) and the sheathing shall be made of approved material plastic. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.

[Amend]

P2603.5.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be a minimum of 12 inches (305 mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 12 inches (305 mm) below grade or per code official.

[Amend] to read as follows

Section P2801.6.1 Pan size and drain. The pan shall be not less than 1½ inches (38 mm) in depth and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe having a diameter of not less than ¾ inch (19 mm). Piping for safety pan drains shall be of those materials listed in Table P2906.5. Multiple pan drains may terminate to a single discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions. *{Existing text unchanged}*

[Amend]

Section P2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination valve shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap ~~located in the same room as the water heater.~~
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.
5. Discharge to the floor, to the pan serving the water heater or storage tank, to a waste receptor or an approved location or to the outdoors.

{Remainder of text unchanged}

Local Amendments:

1. Use of flexible copper on discharge piping serving a pressure-relief valve, temperature-relief valve or combination valve is prohibited.
2. When a water heater is located in the interior of a building/residence with no method to drain the pan according to this code, a water alarm and/or automatic shut-off device shall be installed.
3. If the discharge piping serving a pressure-relief valve, temperature-relief valve or combination valve is unable to be discharged to the outside according to this code, alternate discharge means or methods may be approved by the Code Official on a case by case basis.

[Add] [Amend]

P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

[Strike] from ordinance only

P3002.1 Piping within buildings. Drain, waste and vent (DWV) piping in buildings shall be as shown in Tables P3002.1(1) and P3002.1(2) except that galvanized wrought-iron or galvanized steel pipe shall not be used underground and shall be maintained not less than 6 inches (152 mm) above ground. Allowance shall be made for the thermal expansion and contraction of plastic piping.

TABLE P3002.1(1) ABOVE-GROUND DRAINAGE AND VENT PIPE

PIPE	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
Cast iron pipe	ASTM A 74; CISPI 301; ASTM A 888
Copper or copper alloy pipe	ASTM B 42; ASTM B 302
Copper or copper alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Galvanized steel pipe	ASTM A 53
Polyolefin pipe	CSA B181.3
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, or composite wall	ASTM D 2665; ASTM F 891; CSA B181.2; ASTM F 1488
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, or composite wall	ASTM D 2949; ASTM F 1488
Stainless steel drainage systems, Types 304 and 316L	ASME A 112.3.1

TABLE P3002.1(2) UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

PIPE	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488; CSA B181.1
Cast iron pipe	ASTM A 74; CISPI 301; ASTM A 888
Copper or copper alloy tubing (Type K, L, M or DWV)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 306
Polyolefin pipe	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, or composite wall	ASTM D 2665; ASTM F 891; ASTM F 1488; CSA B181.2
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, or composite wall	ASTM D 2949; ASTM F 1488
Stainless steel drainage systems, Type 316L	ASME A 112.3.1

[Strike] from ordinance only

~~P3002.2 Building sewer. Building sewer piping shall be as shown in Table P3002.2. Forced main sewer piping shall conform to one of the standards for ABS plastic pipe, copper or copper alloy tubing, PVC plastic pipe or pressure-rated pipe listed in Table P3002.2.~~

TABLE P3002.2 BUILDING SEWER PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with a solid, or composite wall	ASTM D 2661; ASTM F 628; ASTM F 1488
Cast iron pipe	ASTM A 74; ASTM A 888; CISPI 301
Acrylonitrile butadiene styrene (ABS) plastic pipe in sewer and drain diameters, including SDR 42 (PS 20), PS35, SDR 35 (PS 45), PS50, PS100, PS140, SDR 23.5 (PS 150) and PS200; with a solid, or composite wall	ASTM F 1488; ASTM D 2751
Polyvinyl chloride (PVC) plastic pipe in sewer and drain diameters, including PS 25, SDR 41 (PS 28), PS 35, SDR 35 (PS 46), PS 50, PS 100, SDR 26 (PS 115), PS140 and PS 200; with a solid, or composite wall	ASTM F 891; ASTM F 1488; ASTM D 3034; CSA B182.2; CSA B182.4
Concrete pipe	ASTM C 14; ASTM C 76; CSA A257.1M; CSA A257.2M
Copper or copper alloy tubing (Type K or L)	ASTM B 75; ASTM B 88; ASTM B 251
Polyethylene (PE) plastic pipe (SDR PR)	ASTM F 714
Polyolefin pipe	ASTM F 1412; CSA B181.3
Polyvinyl chloride (PVC) plastic pipe in IPS diameters, including schedule 40, DR 22 (PS 200) and DR 24 (PS 140); with solid, or composite wall	ASTM D 2665; ASTM D 2949; ASTM D 3034; ASTM F 1412; CSA B182.2; CSA B182.4
Polyvinyl chloride (PVC) plastic pipe with a 3.25 inch O.D. and a solid, or composite wall	ASTM D 2949, ASTM F 1488
Stainless steel drainage systems, Types 304 and 316L	ASME A 112.3.1
Vitrified clay pipe	ASTM C 425; ASTM C 700

[Amend]

~~P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent cement joints shall be permitted above or below ground.~~

~~Exception: A primer is not required where both of the following conditions apply:~~

- ~~1. The solvent cement used is third-party certified as conforming to ASTM D 2564~~
- ~~2. The solvent cement is used only for joining PVC drain, waste, and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inches (102mm) in diameter.~~

Part VIII - ELECTRICAL Delete in its entirety, S.B. 365 Sec. 214.213 (adoption 2020 NEC w/amendments)

(Ord. No. 6575, § 3, 12-18-2001; Ord. No. 6878, § 8, 12-13-2005; Ord. No. 6880, §§ 1, 3, 12-20-2005; Ord. No. 7101, § 1, 5-20-2008; Ord. No. 7351, §§ 1, 2, 9-4-2012; Ord. No. 7413, § 1, 7-2-2013; Ord. No. 7420, § 3, 8-6-2013; Ord. No. 7489, § 1, 9-23-2014; Ord. No. 7509, §§ 1, 2, 3-3-2015)

Secs. 4-3-32—4-3-40. Reserved.

Editor's note(s)—Ord. No. 6880, § 2, adopted December 20, 2005, deleted in its entirety § 4-3-32, which pertained to adoption of 2000 International Residential Code appendices and derived from Ord. No. 6575, adopted December 18, 2001.

DRAFT