

International Residential Code — Chapter 9: Roof Assemblies

Sections applicable to an asphalt shingle roof replacement on a one- or two-family dwelling | Belton, Missouri

What this document is. A legible transcription of the IRC Chapter 9 text that applies to a tear-off and re-roof with asphalt shingles, taken from the UpCodes viewer screenshots (files 1–26.png, 2021 IRC) saved in this folder. Wording, section numbering, tables and exceptions are reproduced as in the code. The viewer's "INSIGHTS" and "ES" tags are omitted.

Edition. The screenshots show the 2021 IRC. The City of Belton has adopted the **2018 IRC** with local amendments (Belton Unified Development Code Sec. 10-5). Every section reproduced here was checked against the 2018 text on 2026-09-05 and is identical in both editions (the 2021 changes to Chapter 9 concern solar shingles and rooftop solar panels, which are not included here).

What was left out. Sections for clay/concrete tile, metal roof shingles, mineral-surfaced roll roofing, slate, wood shingles and shakes, built-up, metal panel, modified bitumen, single-ply, spray foam, liquid-applied and photovoltaic roofing (R905.3 through R905.17), roof insulation (R906), rooftop solar (R907), roof drains/scuppers (R903.4), coping (R903.3), and re-cover over wood shakes (R908.4). In Tables R905.1.1(2) and R905.1.1(3) only the asphalt-shingle row is reproduced; the omitted rows cover the other roof coverings. Table R905.1.1(1), Table R905.2.4.1 and Table R905.2.8.2 are reproduced in full.

Local values. Belton's amended climatic design criteria (Table R301.2(1)) are quoted in the Appendix from the City's own "Ice and Water Shield Requirement" letter. Boxes marked **Belton** in the body are notes, not code text.

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User note — About this chapter: Chapter 9 addresses the design and construction of roof assemblies. A roof assembly includes the roof deck, substrate or thermal barrier, insulation, vapor retarder and roof covering. This chapter provides the requirement for wind resistance of roof coverings. The types of roof covering materials and installation addressed by Chapter 9 are: asphalt shingles, clay and concrete tile, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shakes and shingles, built-up roofs, metal roof panels, modified bitumen roofing, thermoset and thermoplastic single-ply roofing, sprayed polyurethane foam roofing, liquid applied coatings and photovoltaic shingles. Chapter 9 also provides requirements for roof drainage, flashing, above-deck thermal insulation, rooftop-mounted photovoltaic systems and recovering or replacing an existing roof covering.

Section R901: General

R901.1 Scope.

The provisions of this chapter shall govern the design, materials, construction and quality of *roof assemblies*.

Section R902: Fire Classification

R902.1 Roof covering materials.

Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B or C roofing shall be installed in *jurisdictions* designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a *lot line*. Class A, B and C roofing required by this section to be *listed* shall be tested in accordance with ASTM E108 or UL 790.

Exceptions:

1. Class A *roof assemblies* include those with coverings of brick, masonry and exposed concrete *roof deck*.
2. Class A *roof assemblies* include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.
3. Class A *roof assemblies* include minimum 16 ounces per square foot (4.882 kg/m²) copper sheets installed over combustible decks.
4. Class A *roof assemblies* include slate installed over *underlayment* over combustible decks.

Section R903: Weather Protection

R903.1 General.

Roof decks shall be covered with *approved* roof coverings secured to the building or structure in accordance with the provisions of this chapter. *Roof assemblies* shall be designed and installed in accordance with this code and the *approved* manufacturer's instructions such that the *roof assembly* shall serve to protect the building or structure.

R903.2 Flashing.

Flashings shall be installed in a manner that prevents moisture from entering the wall and roof through joints in copings, through moisture permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

R903.2.1 Locations.

Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings. A flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical sidewall. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet).

R903.2.2 Crickets and saddles.

A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

Exception:

Unit skylights installed in accordance with Section R308.6 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle.

Section R904: Materials

R904.1 Scope.

The requirements set forth in this section shall apply to the application of roof covering materials specified herein. *Roof assemblies* shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of *roof assemblies* shall comply with the applicable provisions of Section R905.

R904.2 Compatibility of materials.

Roof assemblies shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.

R904.3 Material specifications and physical characteristics.

Roof covering materials shall conform to the applicable standards listed in this chapter.

R904.4 Product identification.

Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and *approved* testing agency *labels* required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

Section R905: Requirements for Roof Coverings

R905.1 Roof covering application.

Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions. Unless otherwise specified in this section, roof coverings shall be installed to resist the component and cladding loads specified in Table R301.2.1(1), adjusted for height and exposure in accordance with Table R301.2.1(2).

R905.1.1 Underlayment.

Underlayment for asphalt shingles, clay and concrete tile, *metal roof shingles*, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles, wood shakes, *metal roof panels* and *photovoltaic shingles* shall conform to the applicable standards listed in this chapter. *Underlayment* materials required to comply with ASTM D226, D1970, D4869 and D6757 shall bear a *label* indicating compliance to the standard designation and, if applicable, type classification indicated in Table R905.1.1(1). *Underlayment* shall be applied in accordance with Table R905.1.1(2). *Underlayment* shall be attached in accordance with Table R905.1.1(3).

Exceptions:

1. As an alternative, self-adhering polymer-modified bitumen *underlayment* bearing a label indicating compliance with ASTM D1970 and installed in accordance with both the *underlayment* manufacturer's and roof covering manufacturer's instructions for the deck material, roof ventilation configuration and climate exposure for the roof covering to be installed, shall be permitted.
2. As an alternative, a minimum 4-inch-wide (102 mm) strip of self-adhering polymer-modified bitumen membrane bearing a *label* indicating compliance with ASTM D1970, installed in accordance with the *manufacturer's installation instructions* for the deck material, shall be applied over all joints in the roof decking. An *approved underlayment* complying with Table R905.1.1(1) for the applicable roof covering for areas where wind design is not required in accordance with Figure R301.2.1.1 shall be applied over the entire roof over the 4-inch-wide (102 mm) membrane strips. *Underlayment* shall be applied in accordance with Table R905.1.1(2) using the application requirements for areas where wind design is not required in accordance with Figure R301.2.1.1. *Underlayment* shall be attached in accordance with Table R905.1.1(3).

Belton: the City's amended Table R301.2(1) sets the ultimate design wind speed at 115 mph, with no special wind region. That is below the threshold at which Figure R301.2.1.1 requires wind design, so the **"wind design is NOT required"** column of the three tables below is the one that applies. (Note, not code text. Confirm with the Belton inspector if in doubt.)

TABLE R905.1.1(1) UNDERLAYMENT TYPES

ROOF COVERING	SECTION	AREAS WHERE WIND DESIGN IS NOT REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1	AREAS WHERE WIND DESIGN IS REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1
Asphalt shingles	R905.2	ASTM D226 Type I or II ASTM D4869 Type I, II, III or IV ASTM D6757	ASTM D226 Type II ASTM D4869 Type III or Type IV
Clay and concrete tile	R905.3	ASTM D226 Type II ASTM D2626 Type I ASTM D6380 Class M mineral-surfaced roll roofing	ASTM D226 Type II
Metal roof shingles	R905.4	ASTM D226 Type I or II ASTM D4869 Type I, II, III or IV	ASTM D226 Type II ASTM D4869 Type III or Type IV
Mineral-surfaced roll roofing	R905.5	ASTM D226 Type I or II ASTM D4869 Type I, II, III or IV	ASTM D226 Type II ASTM D4869 Type III or Type IV
Slate and slate-type shingles	R905.6	ASTM D226 Type I ASTM D4869 Type I, II, III or IV	ASTM D226 Type II ASTM D4869 Type III or Type IV
Wood shingles	R905.7	ASTM D226 Type I or II ASTM D4869 Type I, II, III or IV	ASTM D226 Type II ASTM D4869 Type III or Type IV
Wood shakes	R905.8	ASTM D226 Type I or II ASTM D4869 Type I, II, III or IV	ASTM D226 Type II ASTM D4869 Type III or Type IV
Metal panels	R905.10	Manufacturer's instructions	ASTM D226 Type II ASTM D4869 Type III or Type IV
Photovoltaic shingles	R905.16	ASTM D4869 Type I, II, III or IV ASTM D6757	ASTM D4869 Type III or Type IV

For SI: 1 mile per hour = 0.447 m/s.

TABLE R905.1.1(2) UNDERLAYMENT APPLICATION (asphalt shingle row; other roof-covering rows omitted)

ROOF COVERING	SECTION	AREAS WHERE WIND DESIGN IS NOT REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1	AREAS WHERE WIND DESIGN IS REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1
Asphalt shingles	R905.2	For roof slopes from 2 units vertical in 12 units horizontal (2:12), up to 4 units vertical in 12 units horizontal (4:12), underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet. For roof slopes of 4 units vertical in 12 units horizontal (4:12) or greater, underlayment shall be one layer applied in the following manner: underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.	Underlayment shall be two layers applied in the following manner: apply a 19-inch strip of underlayment felt parallel to and starting at the eaves. Starting at the eave, apply 36-inch-wide sheets of underlayment, overlapping successive sheets 19 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. End laps shall be 4 inches and shall be offset by 6 feet.

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s.

TABLE R905.1.1(3) UNDERLAYMENT APPLICATION (attachment; asphalt shingle row; other roof-covering rows omitted)

ROOF COVERING	SECTION	AREAS WHERE WIND DESIGN IS NOT REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1	AREAS WHERE WIND DESIGN IS REQUIRED IN ACCORDANCE WITH FIGURE R301.2.1.1
Asphalt shingles	R905.2	Fastened sufficiently to hold in place.	The underlayment shall be attached with corrosion-resistant fasteners in a grid pattern of 12 inches between side laps with a 6-inch spacing at side and end laps. Underlayment shall be attached using annular ring or deformed shank nails with 1-inch-diameter metal or plastic caps. Metal caps shall have a thickness of not less than 32-gage sheet metal. Power-driven metal caps shall have a minimum thickness of 0.010 inch. Minimum thickness of the outside edge of plastic caps shall be 0.035 inch. The cap nail shank shall be not less than 0.083 inch. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 3/4 inch into the roof sheathing.

For SI: 1 inch = 25.4 mm, 1 mile per hour = 0.447 m/s.

R905.1.2 Ice barriers.

In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2, an ice barrier shall be installed for asphalt shingles, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles and wood shakes. The ice barrier shall consist of not fewer than two layers of *underlayment* cemented together, or a self-adhering polymer-modified bitumen sheet shall be used in place of normal *underlayment* and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building. On roofs with slope equal to or greater than 8 units vertical in 12 units horizontal (67-percent slope), the ice barrier shall also be applied not less than 36 inches (914 mm) measured along the roof slope from the eave edge of the building.

Exception:

Detached *accessory structures* not containing conditioned floor area.

Belton: Table R301.2(1) as amended by the City reads "**Ice Barrier required – Yes.**" An ice barrier is therefore mandatory on this roof. See Appendix.

R905.2 Asphalt Shingles

R905.2 Asphalt shingles.

The installation of asphalt shingles shall comply with the provisions of this section.

R905.2.1 Sheathing requirements.

Asphalt shingles shall be fastened to solidly sheathed decks.

R905.2.2 Slope.

Asphalt shingles shall be used only on roof slopes of 2 units vertical in 12 units horizontal (17-percent slope) or greater. For roof slopes from 2 units vertical in 12 units horizontal (17-percent slope) up to 4 units vertical in 12 units horizontal (33-percent slope), double *underlayment* application is required in accordance with Section R905.1.1.

R905.2.3 Underlayment.

Underlayment shall comply with Section R905.1.1.

R905.2.4 Asphalt shingles.

Asphalt shingles shall comply with ASTM D3462.

R905.2.4.1 Wind resistance of asphalt shingles.

Asphalt shingles shall be tested in accordance with ASTM D7158. Asphalt shingles shall meet the classification requirements of Table R905.2.4.1 for the appropriate ultimate design wind speed. Asphalt shingle packaging shall bear a *label* to indicate compliance with ASTM D7158 and the required classification in Table R905.2.4.1.

Exception:

Asphalt shingles not included in the scope of ASTM D7158 shall be tested and *labeled* in accordance with ASTM D3161. Asphalt shingle packaging shall bear a *label* to indicate compliance with ASTM D3161 and the required classification in Table R905.2.4.1.

TABLE R905.2.4.1 CLASSIFICATION OF ASPHALT ROOF SHINGLES

MAXIMUM ULTIMATE DESIGN WIND SPEED, V_{ult} FROM FIGURE R301.2(2) (mph)	MAXIMUM BASIC WIND SPEED, V_{ASD} FROM TABLE R301.2.1.3 (mph)	ASTM D7158 ^a SHINGLE CLASSIFICATION	ASTM D3161 SHINGLE CLASSIFICATION
110	85	D, G or H	A, D or F
116	90	D, G or H	A, D or F
129	100	G or H	A, D or F
142	110	G or H	F
155	120	G or H	F
168	130	H	F
181	140	H	F
194	150	H	F

For SI: 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s.

a. The standard calculations contained in ASTM D7158 assume Exposure Category B or C and a building height of 60 feet or less. Additional calculations are required for conditions outside of these assumptions.

Belton: wind design speed 115 mph falls in the 116 mph row: shingles must be labeled ASTM D7158 Class D, G or H (or ASTM D3161 Class A, D or F). Check the shingle bundle wrapper for this label.

R905.2.5 Fasteners.

Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12-gage [0.105 inch (3 mm)] shank with a minimum 3/8-inch-diameter (9.5 mm) head, complying with ASTM F1667, of a length to penetrate through the roofing materials and not less than 3/4 inch (19.1 mm) into the roof sheathing. Where the roof sheathing is less than 3/4 inch (19.1 mm) thick, the fasteners shall penetrate through the sheathing.

R905.2.6 Attachment.

Asphalt shingles shall have the minimum number of fasteners required by the manufacturer's *approved* installation instructions, but not less than four fasteners per strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 21 units vertical in 12 units horizontal (21:12, 175-percent slope), shingles shall be installed in accordance with the manufacturer's *approved* installation instructions.

R905.2.7 Ice barrier.

Where required, ice barriers shall comply with Section R905.1.2.

R905.2.8 Flashing.

Flashing for asphalt shingles shall comply with this section and the asphalt shingle manufacturer's *approved* installation instructions.

R905.2.8.1 Base and cap flashing.

Base and cap flashing shall be installed in accordance with manufacturer's instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness or mineral-surfaced roll roofing weighing not less than 77 pounds per 100 square feet (4 kg/m²). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness.

R905.2.8.2 Valleys.

Valley linings shall be installed in accordance with the manufacturer's instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be not less than 24 inches (610 mm) wide and of any of the corrosion-resistant metals in Table R905.2.8.2.
2. For open valleys, valley lining of two plies of mineral-surfaced roll roofing, complying with ASTM D3909 or ASTM D6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer not less than 36 inches (914 mm) wide.
3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D6380 and not less than 36 inches wide (914 mm) or valley lining as described in Item 1 or 2 shall be permitted. Self-adhering polymer-modified bitumen *underlayment* complying with ASTM D1970 shall be permitted in lieu of the lining material.

TABLE R905.2.8.2 VALLEY LINING MATERIAL

MATERIAL	MINIMUM THICKNESS (inches)	GAGE	WEIGHT (pounds)
Aluminum	0.024	—	—
Cold-rolled copper	0.0216 nominal	—	ASTM B370, 16 oz. per square foot
Galvanized steel	0.0179	26 (zinc coated G90)	—
High-yield copper	0.0162 nominal	—	ASTM B370, 12 oz. per square foot
Lead	—	—	2 1/2
Lead-coated copper	0.0216 nominal	—	ASTM B101, 16 oz. per square foot
Lead-coated high-yield copper	0.0162 nominal	—	ASTM B101, 12 oz. per square foot
Painted terne	—	—	20
Stainless steel	—	28	—
Zinc alloy	0.027	—	—

For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg, 1 square foot = 0.93 m².

Belton / this roof: the painted steel "W" valley is the galvanized steel row: minimum 26 gage (0.0179 in.), G90 zinc coating, 24 inches wide. Owens Corning's open-valley bulletin asks for the same 26 gage minimum. Verify the gage on the product label.

R905.2.8.3 Sidewall flashing.

Base flashing against a vertical sidewall shall be continuous or step flashing and shall be not less than 4 inches (102 mm) in height and 4 inches (102 mm) in width and shall direct water away from the vertical sidewall onto the roof or into the gutter. Where siding is provided on the vertical sidewall, the vertical leg of the flashing shall be continuous under the siding. Where anchored masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and counterflashing shall be provided in accordance with Section R703.8.2.2. Where exterior plaster or adhered masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and Section R703.6.3.

R905.2.8.4 Other flashing.

Flashing against a vertical front wall, as well as soil stack, vent pipe and chimney flashing, shall be applied in accordance with the asphalt shingle manufacturer's printed instructions.

R905.2.8.5 Drip edge.

A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be overlapped not less than 2 inches (51 mm). Drip edges shall extend not less than 1/4 inch (6.4 mm) below the roof sheathing and extend up back onto the *roof deck* not less than 2 inches (51 mm). Drip edges shall be mechanically fastened to the *roof deck* at not more than 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. *Underlayment* shall be installed over the drip edge along eaves and under the drip edge along rake edges.

Section R908: Reroofing

R908.1 General.

Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 9.

Exceptions:

1. *Reroofing* shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide *positive roof drainage*.
2. For roofs that provide positive drainage, recovering or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or *scuppers* of Section R903.4.1 to be added to an existing roof.

R908.2 Structural and construction loads.

The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.

R908.3 Roof replacement.

Roof replacement shall include the removal of existing layers of roof coverings down to the *roof deck*.

Exception:

Where the existing *roof assembly* includes an ice barrier membrane that is adhered to the *roof deck*, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905.

R908.3.1 Roof recover.

The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

1. Where the new roof covering is installed in accordance with the roof covering manufacturer's *approved* instructions.
2. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.
3. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs where applied in accordance with Section R908.4.
4. The application of a new protective *roof coating* over an existing protective *roof coating*, *metal roof panel*, *metal roof shingle*, mineral surfaced roll roofing, built-up roof, modified bitumen roofing, thermoset and thermoplastic single-ply roofing and spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

R908.3.1.1 Roof recover not allowed.

A *roof recover* 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 slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.

R908.5 Reinstallation of materials.

Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Any existing flashings, edgings, outlets, vents or similar devices that are a part of the assembly shall be replaced where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.

R908.6 Flashings.

Flashings shall be reconstructed in accordance with *approved* manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

Appendix: City of Belton, Missouri — Local Amendments

Source: City of Belton letter "RE: Ice and Water Shield Code," quoting Belton Unified Development Code Sec. 10-5 (saved in this folder as *Belton_MO_Ice_and_Water_Shield_Requirement_Letter.pdf*). The City confirmed on belton.org that the 2018 I-codes took effect January 1, 2023 (Council approval September 27, 2022).

Sec. 10-5. Adoption of International Residential Code for One- and Two-Family Dwellings, 2018 edition, with local amendments.

The International Residential Code for One- and Two-Family Dwellings, 2018 edition, and Appendices A, B, C, D, F, G, H, I, J, K, M, N, O, and P is hereby adopted by the City of Belton.

The following amendments to and deletions from the International Residential Code for One- and Two-Family Dwellings, 2018 edition, are hereby adopted:

Amend Table R301.2 (1) as follows: Table R301.2 (1); The following values shall be inserted into the table:

**TABLE R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA —
Belton, MO values**

Criterion	Belton value
Ground snow load (psf)	20
Wind design speed (mph)	115
Topographical effects	No
Windborne debris zone	No
Special wind region	No
Seismic Design Category	A
Weathering	Severe
Frost line depth	36 inches
Termite	Moderate to Heavy
Winter design temp	6 degrees F
Ice barrier required	Yes
Air freezing index	927
Mean annual temp	55.5 degrees F
Flood hazard	Current FIRM
Manual J design criteria	Delete

Belton inspection checklist item — Roof

From the City of Belton Inspection Guidebook (saved in this folder). Inspection type 58: "ROOF – MID-PHASE ROOF & FINAL."

"Sheathing, ice and water shield and underlayment, drip edge, valleys, and venting installed to adopted codes."

Transcribed 2026-09-05 from UpCodes screenshots of IRC Chapter 9 (2021 edition) and checked against the 2018 edition text. Model code text is copyright International Code Council. This document is a personal working reference for a permitted DIY re-roof and is not an official publication of the ICC or the City of Belton.