

Colorado Wildfire Resiliency Code

Material Guidance

Fire Intensity Classification: Class 2 - Moderate Intensity Area

Important:

This document provides material-selection guidance based on the attached 2025 Colorado Wildfire Resiliency Code (CWRC). It is not a permit approval. The mapped classification, exact product, listed assembly, installation details, and local amendments must be confirmed by the authority having jurisdiction at the time of application.

1. Executive Summary

Because Black Forest is identified as a Moderate Fire Intensity area, Class 2 structure-hardening and site requirements apply. Class 2 includes the Class 1 roof, gutter, downspout, and vent requirements.

Component	Core Requirement	Preferred Compliance Approach
Siding / exterior walls	Noncombustible, exterior fire-retardant-treated, ignition-resistant, or a qualifying rated wall assembly.	Fiber-cement, metal, masonry, or cement plaster/stucco with documented compliance.
Fencing	Within 8 feet of the structure: noncombustible or ignition-resistant. Vinyl may be allowed by the AHJ.	Use steel, aluminum, wire, or masonry for the first 8 feet from the building, including the gate.
Roofing	Class A roof covering or roof assembly tested to ASTM E108 or UL 790.	Class A asphalt shingles, listed metal roofing, concrete/clay tile, slate, or another listed Class A assembly.

2. Applicability and Trigger Thresholds

The CWRC generally applies to new construction and qualifying exterior alterations in designated wildfire hazard areas. For an existing structure, the following thresholds are particularly important:

- Roof replacement: when 25 percent or more of the roof-covering surface is replaced, the entire roof covering must comply with the requirements for new construction.
- Exterior-wall replacement: when 25 percent or more of the total exterior-wall surface is replaced, the entire exterior wall surface, including attachments, must comply.
- Additions: an addition that increases the building footprint by 500 square feet or more must comply as new construction.
- When the exterior-wall threshold is triggered, the immediate 0-to-5-foot zone around the structure must also comply with the CWRC.
- Fences located more than 8 feet from a habitable structure are exempt from the CWRC fencing requirement, although other local requirements still apply.

3. Siding and Exterior-Wall Requirements

CWRC Section 404.3 allows Class 2 exterior walls to use one of the following methods:

1. A wall assembly with a minimum one-hour fire-resistance rating for exposure from the exterior side.
2. Approved noncombustible materials.
3. Heavy-timber or qualifying log-wall construction.
4. Noncombustible material on the exterior side.
5. Fire-retardant-treated wood on the exterior side, labeled for exterior use.
6. Ignition-resistant material meeting the CWRC testing and weathering requirements.

Exterior wall coverings are limited to noncombustible materials, exterior-rated fire-retardant-treated wood, or qualifying ignition-resistant building materials.

Recommended Siding Categories and Product Examples

The brands below are examples to investigate, not blanket approvals. The exact product, thickness, installation method, and supporting evaluation or test report must be submitted for review.

Material Category	Examples	CWRC Review Considerations	General Assessment
Fiber-cement lap, panel, or shingle siding	James Hardie HardiePlank, HardiePanel, or HardieShingle; Allura lap or panel siding; Nichiha fiber-cement panels.	Submit current manufacturer data showing the exact product qualifies as noncombustible or otherwise meets the approved assembly.	Straightforward option when properly documented.
Metal siding	Steel or aluminum standing-seam, board-and-batten, corrugated, or concealed-fastener wall panels.	Identify metal type and thickness, coating, attachment method, backing, trim, and all penetrations.	Preferred noncombustible approach.
Masonry	Brick, natural stone, concrete masonry units, or an approved stone-veneer assembly.	Submit wall-section details, attachment method, required clearances, and the supporting wall assembly.	Preferred noncombustible approach.
Cement plaster / stucco	Traditional cement plaster over a code-compliant wall assembly.	Show lath, weather barrier, drainage plane, base flashing, and the full wall assembly.	Generally suitable when detailed correctly.
Fire-retardant-treated wood	Exterior-rated FRT wood siding or trim products with permanent labeling.	Must be specifically listed for exterior use and meet the referenced building-code requirements.	Acceptable only with complete documentation.
Ignition-resistant products	Specialty wood, composite, or panel products represented as ignition-resistant.	Must meet the CWRC's extended fire testing and weathering requirements. Marketing language alone is insufficient.	Case-by-case review.

Vinyl Siding

Vinyl siding is not automatically approved as a stand-alone Class 2 wall covering. The CWRC exception allows vinyl siding only when the underlying exterior wall complies through either:

- A minimum one-hour exterior fire-resistance-rated wall assembly; or
- An approved noncombustible wall assembly.

Therefore, a vinyl-siding proposal must include the full wall assembly and supporting documentation. Approval is based on the assembly, not merely the vinyl product.

Required Wall, Soffit, Vent, and Flashing Details

- Exterior wall protection must extend from the top of the foundation to the underside of the eave or roof sheathing.
- Install a minimum 6-inch vertical strip of metal flashing or noncombustible material at ground, deck, and roof intersections.
- Protect combustible sheathing exposed at the base of exterior walls, posts, or columns while maintaining drainage and moisture control.
- Protect eaves and soffits with noncombustible, ignition-resistant, approved one-hour-rated material, 5/8-inch Type X gypsum, or another listed option allowed by the CWRC.
- Provide compliant fascia protection.
- Use listed ember-resistant vents tested to ASTM E2886, or corrosion-resistant noncombustible mesh with openings no larger than 1/8 inch.
- The immediate 0-to-5-foot zone should use noncombustible hardscape such as rock, gravel, concrete, bare earth, or pavers, except for approved ignition-resistant plantings.

4. Fencing Requirements

Fencing within 8 feet of the regulated structure, or up to the property line when the property line is closer than 8 feet, must be constructed of noncombustible or ignition-resistant material. The CWRC states that vinyl fencing may be allowed, which should be treated as an AHJ approval item rather than an automatic approval.

Fence Type	Examples	Guidance
Steel or aluminum	Ornamental steel, aluminum picket fencing, steel privacy panels, or metal gates.	Preferred within the 8-foot connection zone.
Wire fencing	Galvanized chain-link, welded-wire panels, or livestock-style wire with metal posts.	Suitable when attachments and gates are also noncombustible.
Masonry	CMU, concrete, brick, or stone walls.	Preferred where privacy and noncombustibility are both required.
Vinyl	Manufacturer-specific vinyl fence systems.	May be allowed only with AHJ approval. Submit the exact product and installation details.
Wood	Standard cedar, pine, or wood privacy fencing.	Do not connect directly to the house. Begin beyond the regulated 8-foot zone unless an approved ignition-resistant product is documented.

Recommended fence layout:

Where the owner wants a wood privacy fence, use steel, aluminum, wire, or masonry for at least the first 8 feet extending away from the house. The gate and gateposts within that connection zone should also be noncombustible.

5. Roofing Requirements

The roof covering or complete roof assembly must be Class A when tested in accordance with ASTM E108 or UL 790. The listing must apply to the installed roof assembly, including underlayment and deck conditions where applicable.

Roofing Category	Examples to Investigate	Required Verification
Fiberglass-asphalt shingles	GAF Timberline series; Owens Corning Duration or TruDefinition series; CertainTeed Landmark series.	Confirm the exact product and installation are listed as Class A.
Standing-seam or exposed-fastener metal	Steel or aluminum systems from established roofing manufacturers.	Submit the complete listed assembly, including deck and underlayment requirements.
Metal shingles	Stone-coated steel or formed metal shingle systems.	Confirm Class A classification for the exact assembly.
Concrete or clay tile	Interlocking concrete tile or clay tile systems.	Address open gaps at edges and profiles; submit the listed Class A assembly.
Slate	Natural slate or an approved listed slate system.	Submit installation and assembly documentation.
Synthetic / composite roofing	Manufacturer-specific synthetic shake, slate, or tile products.	Do not rely on appearance or marketing claims; provide a current Class A listing for the exact assembly.

Additional Roof Details

- Where a profiled roof covering creates a void between the covering and roof deck, protect the space with noncombustible firestopping, an ASTM D3909 cap sheet, or a listed Class A roof assembly.
- Roof valleys must use corrosion-resistant metal flashing at least 0.019 inch thick, approximately No. 26 galvanized sheet gauge, over a minimum 36-inch-wide ASTM D3909 cap sheet.
- Gutters and downspouts must be noncombustible.
- Roof, attic, and underfloor vents must satisfy the ember-resistance provisions.
- Untreated wood shakes should not be accepted unless the applicant submits documentation showing the exact complete roof assembly is listed as Class A.

6. Recommended Product Submittal Checklist

For plan review or permit approval, require the applicant to provide the following:

- Manufacturer and exact product name, model, profile, and thickness.
- Current product data sheet and installation instructions.
- Applicable ASTM, UL, ICC-ES, or other approved evaluation or listing documentation.
- For siding: full exterior wall section, including sheathing, weather barrier, cladding, attachment, base flashing, deck intersections, soffits, fascia, and penetrations.
- For roofing: Class A listing for the exact installed roof assembly, roof-deck and underlayment requirements, valley details, edge closures, vents, gutters, and downspouts.
- For fencing: site plan showing the distance from the fence and gate to the structure, material specifications, posts, and connection details.
- Photographs or field verification may be required where existing construction is being retained as part of a rated or noncombustible assembly.
- Written approval for any proposed alternative material, method, modification, or use of the vinyl-fence exception.

7. Practical Approval Guidance

- Preferred siding package: fiber-cement, metal, masonry, or cement plaster with noncombustible flashing and compliant soffit and vent details.
- Preferred fence package: a noncombustible 8-foot connection segment and gate adjacent to the residence; wood fencing may begin beyond that point.
- Preferred roof package: a clearly documented Class A assembly with metal valleys, noncombustible gutters and downspouts, and ember-resistant vents.
- Do not approve a product solely because it is advertised as 'fire resistant,' 'wildfire rated,' or 'Class A material.' Confirm the exact test, evaluation report, and installed assembly.

8. Code References

- 2025 Colorado Wildfire Resiliency Code, Version 1.0, Sections 101.5-101.7: additions, roof-covering replacement, and exterior-wall replacement.
- Section 303.3: moderate and high fire-intensity areas require Class 2 structure hardening and site requirements.
- Sections 402.2-402.4: noncombustible, fire-retardant-treated, and ignition-resistant materials.
- Sections 403.2-403.4: Class A roofing, valley flashing, noncombustible gutters and downspouts, and vent protection.
- Sections 404.2-404.10: Class 2 eaves, exterior walls, wall coverings, flashing, decking, glazing, doors, and accessory structures.
- Sections 502.1-502.4 and 503.1-503.3: immediate zone, fencing, and Class 2 site requirements.

Final determination:

The authority having jurisdiction retains responsibility for interpreting the CWRC, reviewing alternatives, confirming local amendments, and approving the exact products and assemblies proposed .