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PANEL FORMING

— MOBILE UNIT —

ON-SITE PANEL SUPPLY

Mobile Standing Seam Roll Forming • Roofing, Siding & Fencing Panels

STANDING SEAM METAL ROOFING

Installation Guide — New Construction, Recover Systems & Specifications

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Overview

The complete guide to standing seam metal roofing — from new construction to installing over existing shingles. Custom-length panels fabricated on-site mean zero horizontal seams, zero leak points, and a 50+ year roof that outlasts everything else on the home.

Why Standing Seam Roofing?

- **50+ Year Lifespan** — Routinely lasts 50–60 years, with 40-year paint warranties and lifetime substrate warranties common.
- **Energy Efficient** — Reflects solar radiant heat, cutting cooling costs 20–40%; Above Sheathing Ventilation (ASV) reduces attic heat transfer further.
- **100% Recyclable** — Contains 25–95% recycled content and is fully recyclable at end of life, unlike landfill-bound asphalt shingles.
- **Insurance Discounts** — 10–35% premium discounts common for wind (140+ mph), hail, and Class A fire resistance.
- **Long-Term Value** — No re-roofing every 15–20 years, no maintenance, no moss treatment, no granule loss.
- **All-Climate Performance** — Handles coastal rain, interior snow loads, and northern cold without cracking.

Tools & Materials Checklist

Tools

- Drill/impact driver with hex bits
- Tin snips (left, right, straight cut)
- Nibbler tool (for clean panel cuts)
- Hand seamer or electric seaming machine
- Wuko bender (for trim/flashing bends)
- Portable metal brake (custom trim)
- Tape measure (25-foot minimum)
- Chalk line and string line
- Pop rivet gun
- Caulking gun and sealant
- Roofing harness & fall protection
- Ladder and/or scaffolding
- Safety glasses and cut-resistant gloves

Materials

- 12" standing seam panels (custom length)
- Synthetic underlayment
- Ice and water shield membrane (cold climates)
- Standing seam clips (fixed and floating)
- Eave drip edge and starter strip
- Ridge cap
- Gable trim
- Valley flashing
- Wall flashing
- Pipe boot flashings
- Color-matched sealant
- Stainless steel or galvanized screws
- Touch-up paint

New Construction — Standard Installation

For new construction or full tear-off re-roofs, standing seam panels are installed over clean roof decking with underlayment — the ideal scenario for maximum performance and longevity.

01 PREPARE THE DECK

Ensure the roof decking (plywood or OSB) is in good condition, properly fastened, and free of rot or damage. Repair or replace any compromised sections. The deck must be flat and smooth — standing seam panels will telegraph any irregularities in the substrate.

02 INSTALL UNDERLAYMENT

Roll out synthetic underlayment over the entire roof deck. Overlap seams by 6 inches minimum and tape all seams, starting at the eave and working upward so each course overlaps the one below. In cold climates, install ice and water shield along the eaves extending at least 24 inches past the exterior wall line.

03 INSTALL EAVE DRIP EDGE AND STARTER

Install a metal drip edge along the eave, extending over the fascia board, to direct water into the gutter and block wind-driven rain. Install the eave starter strip or cleat that will receive the bottom edge of the first panel.

04 ATTACH CLIPS TO DECK

Fasten standing seam clips to the roof deck at 24-inch intervals along each panel line, aligned in straight rows from eave to ridge. Use stainless steel or galvanized screws rated for the expected wind uplift loads. Clips allow panels to expand and contract with temperature changes while remaining securely fastened.



New Construction — Continued

05 INSTALL FIRST PANEL

Starting at one end of the roof (typically the gable end opposite the prevailing wind direction), engage the first panel into the eave starter and snap it onto the clips. Ensure the panel is square to the eave — this first panel sets the alignment for the entire roof. Use a chalk line or laser level to verify.

06 CONTINUE PANELS ACROSS ROOF

Each subsequent panel interlocks with the previous one via the standing seam. Snap-lock panels simply press together; mechanical seam panels require a hand seamer or electric seaming machine to fold the seam closed. Continue across the roof, checking alignment every few panels.

07 INSTALL RIDGE CAP AND TRIM

Once all field panels are installed, install the ridge cap along the peak to cover the top ends of the panels and provide a weather-tight seal. Install hip caps, valley flashing, gable trim, and any wall flashing where the roof meets vertical surfaces. All trim should be color-matched to the panels.

08 SEAL PENETRATIONS

Install flashing boots around all roof penetrations (plumbing vents, exhaust fans, chimneys). Use manufacturer-approved sealant at all trim-to-panel junctions and penetration flashings. Inspect the entire roof from the ground and from on top, checking for gaps, misaligned panels, or unsealed connections.

Recover System — Metal Over Existing Shingles

In many cases, standing seam metal roofing can be installed directly over existing asphalt shingles without a tear-off. This “recover” method saves significant cost, reduces landfill waste, and provides an additional insulation benefit through the built-in air gap.

How It Works

Specialized recover clips sit on top of the existing shingle surface, with fastener holes aligned to the shingle tab pattern for secure attachment through the shingles into the roof deck below. The clips create a 3/4-inch integrated air space between the old shingles and the new metal panels.

This air space — Above Sheathing Ventilation (ASV) — creates a convective loop that actively vents heat away from the roof deck, reducing heat transfer through the roof assembly by up to 30 percent. The existing shingles remain in place as an additional moisture and insulation layer while the metal roof handles all weather protection duties.

Recover Requirements

- **Shingle Condition** — Must lay flat, no curling, cupping, or missing shingles. Minor granule loss is acceptable.
- **Deck Condition** — Underlying deck must be structurally sound; walk the roof to check for soft spots indicating rot or delamination.
- **Number of Layers** — Most codes limit roofs to two layers total; a tear-off is required if two layers already exist.
- **Roof Slope** — Recover systems work on slopes of 2:12 or greater; lower slopes require a full tear-off and mechanical seam system.
- **Weight** — Metal roofing adds only 1–1.5 lbs per square foot — minimal additional structural load.
- **Permits** — Some jurisdictions require a permit for a recover; check with the local building authority first.

Cost Savings: Recover vs. Tear-Off

Cost Item	Tear-Off + New Metal	Recover (Metal Over Shingles)	Savings
Tear-off labor	\$1.50–2.50/sq ft	\$0	\$1.50–2.50/sq ft
Dumpster & disposal	\$500–1,500	\$0	\$500–1,500
New underlayment	\$0.50–1.00/sq ft	Not required	\$0.50–1.00/sq ft
Deck repairs	Often needed	Rarely needed	Variable
Total per 2,000 sq ft roof	\$3,000–7,000 extra	\$0 extra	\$3,000–7,000

Technical Specifications

Parameter	Specification
Panel Width	12" standing seam profile
Panel Material	Galvalume steel (premium residential & commercial)
Seam Height	1" to 1.75"
Seam Type	Snap-lock or mechanical seam
Panel Length	Custom — fabricated on-site to exact roof measurement
Substrate	Galvalume AZ55 (aluminum-zinc alloy coated steel)
Yield Strength	50 ksi minimum
Paint System	SMP or PVDF (Kynar 500) — 40-year warranty
Clip Spacing	24" on center typical
Minimum Slope (snap-lock)	3:12
Minimum Slope (mechanical seam)	1/2:12
Minimum Slope (recover)	2:12
Wind Rating	UL 580 Class 90 (140+ mph)
Fire Rating	Class A (non-combustible)
Hail Rating	Class 4 (highest)
Weight	1.0 to 1.5 lbs per square foot
Thermal Movement	≈ 1/8" per 10' per 100°F change
Colors Available	20+ standard colors in SMP and PVDF

Safety and Important Notes

- **Fall protection is mandatory.** Always use a properly rated roofing harness, anchor points, and fall arrest system. Never work on a wet or icy roof. If not comfortable working at height, hire a professional.
- **Never use abrasive cut-off wheels on panels.** The heat destroys the Galvalume coating and sparks embed in the paint finish, causing premature rust. Use tin snips, a nibbler, or a fine-toothed metal blade.
- **Allow for thermal expansion.** Panels expand approximately 1/8 inch per 10 feet per 100°F change. Use a combination of fixed and floating clips; never over-tighten fasteners.
- **Check local building codes.** Permits may be required for roofing work, and jurisdictions typically limit roofs to 2 layers maximum. Verify requirements with the local building authority before starting.
- **Consider snow guards in heavy snow areas.** Metal roofs shed snow very efficiently — install snow guards or rails to prevent sudden avalanches that can damage gutters, landscaping, or cause injury.

Ready for a New Roof?

We fabricate 12-inch standing seam panels on-site to the exact length of your roof. No horizontal seams, no leak points, no factory limitations. No job too big or small.

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