



TriLITE

MANUFACTURED STONE VENEER

Installation Guide

Updated for current industry practices and building-code coordination



TriLite manufactured stone veneer installation example

IMPORTANT SCOPE

This guide covers adhered (mortared) manufactured stone veneer, including tight-joint (no visible mortar) installations that still use mortar. It does not cover TriLite Super-Stak mechanically fastened mortarless panels. For Super-Stak, use the dedicated TriLite installation resources.

Read this guide completely before beginning installation.

1. Before You Begin

TriLite Stone manufactured stone veneer is intended to be installed as part of a complete wall assembly. Good performance depends on correct substrate preparation, water management, flashing, lath or approved backer systems, mortar selection, and workmanship.

CODE & PROJECT DOCUMENTS CONTROL

Always follow the building code adopted in the project jurisdiction, approved construction documents, and current manufacturer instructions. Current industry references include ASTM C1780 and the Concrete Masonry & Hardscapes Association (CMHA) Manufactured Stone Veneer Installation Guide. Where requirements differ, use the most stringent applicable requirement or obtain direction from the project design professional.

Safety

- **Silica dust:** Cutting, grinding, drilling, or crushing stone, brick, concrete, and mortar can create respirable crystalline silica. Use engineering controls such as wet cutting or appropriate local exhaust/HEPA dust collection and comply with OSHA 29 CFR 1926.1153.
- **Personal protective equipment:** Use eye protection, gloves, hearing protection, and other PPE appropriate to the task. Respiratory protection must be selected and used in accordance with applicable OSHA requirements.
- **Mortar and cement:** Fresh cementitious materials are caustic. Avoid skin and eye contact and follow the mortar manufacturer's safety instructions.

Estimate Material

For flat stone, multiply wall length by height and subtract the area of doors, windows, and other openings. Measure outside corners in linear feet. Corner pieces cover some flat wall area, so the flat-stone quantity can usually be reduced to account for corner coverage. Include reasonable waste for fitting, cuts, breakage, and pattern selection.

LEGACY TRILITE EXAMPLE

A project with three walls, each 5 ft high x 40 ft wide, has 600 sq ft of wall area. Four 5-ft-high outside corners total 20 linear ft. Using the traditional TriLite estimating rule, half of the corner linear footage (10) is subtracted from flat area, resulting in approximately 590 sq ft of flats plus 20 linear ft of corners, before adding desired waste.

2. Substrate Preparation & Water Management

Suitable Substrates

- **Bondable concrete or concrete masonry:** May accept a direct mortar setting bed when the surface is sound, clean, free of curing compounds, paint, sealers, water repellents, form-release agents, dirt, and other bond breakers, and has adequate surface profile. When the substrate is not reliably bondable, use an approved lath/scratch-coat or other code-compliant system.
- **Wood or metal framing with structural sheathing:** Use the required water-resistive barrier, lath, scratch coat, or an approved cement-board system in accordance with current code and system requirements.
- **Existing stucco or masonry:** Confirm the existing assembly is structurally sound, clean, compatible, and capable of supporting the veneer system. Do not bond over questionable coatings or unstable material. When conditions are uncertain, use a code-compliant lath/scratch-coat assembly or consult the design professional.

Water-Resistive Barrier (WRB)

For exterior light-frame walls using metal lath and scratch coat, current industry guidance requires two separate layers of WRB, installed in shingle fashion and integrated with flashing, openings, penetrations, and cladding transitions. Approved cement-board systems may have different WRB requirements. Follow the current CMHA guide, code, and WRB manufacturer instructions for the specific assembly.

- Install sheet WRB from the bottom upward so upper courses lap over lower courses.
- Integrate WRB with window, door, roof-wall, deck, utility, and other penetration flashing.
- Extend and lap WRB around corners as required by the current system details.
- Do not rely on stone veneer or mortar joints as the primary water barrier.

Drainage & Weep Screed

Use weep screeds, casing beads, flashings, and drainage components where required by code and the wall design. Current CMHA details call for veneer to terminate at least 4 in. above finished grade and typically 2 in. above paving not supported by the same foundation. Some assemblies permit reduced clearance at paving supported by the same foundation; follow the applicable detail and code.



WRB and metal lath preparation. Use current fastening and lapping requirements.

3. Materials & Job Conditions

Metal Lath & Fasteners

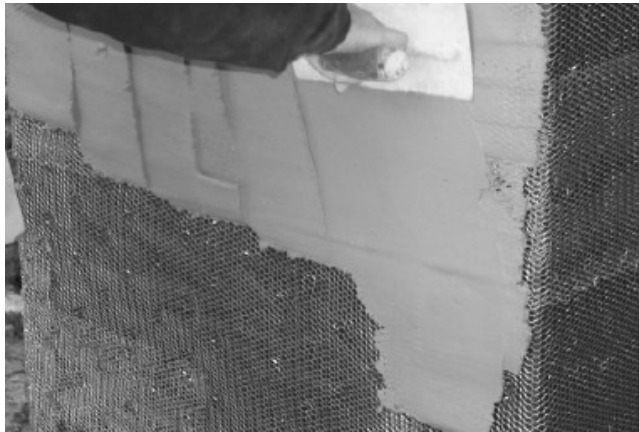
- Use corrosion-resistant lath approved for the application. A common prescriptive option is 2.5 lb/yd² or heavier self-furring galvanized metal lath meeting ASTM C847; other approved welded or woven wire lath systems may also be used.
- Fasten through sheathing into framing or another approved structural backup with corrosion-resistant fasteners of the type, spacing, and penetration required by the current code/system detail.
- Lap and terminate lath in accordance with current CMHA/ASTM requirements and the lath manufacturer instructions. Keep lath tight to the wall without loose pockets.

Mortar

Use mortar intended for manufactured stone veneer and compatible with the substrate and wall assembly. Depending on the system, this may include ASTM C270 Type N or Type S mortar, preblended masonry mortar, or an approved modified setting mortar meeting ANSI A118.4 or A118.15. Follow the mortar manufacturer's water, mixing, open-time, and curing instructions. Do not add improvised bonding agents or extra cement unless specifically permitted by the mortar manufacturer.

Scratch Coat

Over metal lath, apply a nominal 1/2 in. mortar scratch coat that completely engages and covers the lath. When the mortar is thumbprint hard, scarify the surface horizontally. If the scratch coat dries before veneer is installed, lightly mist it to control suction; it should be damp but free of standing water.



Mortar scratch coat over metal lath.

Weather Conditions

- Protect masonry work when temperatures are 40°F or below before, during, and for at least 48 hours after installation, in accordance with current TMS 402/602 requirements.
- In very hot, dry, or windy conditions, protect the installation from rapid moisture loss and follow current hot-weather masonry requirements.
- Do not install on frozen substrates or with frozen materials. Protect fresh work from rain and freezing during curing.

4. Installing TriLite Stone

Plan the Layout

- Open and work from multiple boxes or pallets to blend color, size, and texture naturally.
- Lay out enough stone to understand the available shapes before setting pieces.
- Use a level and chalk lines as needed to maintain coursing and prevent drift.
- Install manufactured corner pieces first when the project uses them, alternating long and short legs to avoid continuous vertical joints.



Alternate the long and short legs of corner pieces.

Cutting & Fitting

Cut stone with equipment appropriate for masonry materials. Use wet cutting or other OSHA-compliant silica dust controls whenever feasible. Position cut edges where they are least visible and preserve a natural-looking pattern. Do not use a cutting method that damages the stone face or compromises the installation.

Setting the Stone

1. Confirm the scratch coat or direct-bond substrate is clean, sound, and properly conditioned.
2. Apply the approved setting-bed mortar to achieve complete mortar contact on the back of the veneer in accordance with current manufacturer and industry requirements.
3. Press the stone firmly into place with a slight back-and-forth motion so the mortar keys into the substrate and stone back.
4. Maintain the intended joint width and pattern shown by the approved layout or project mock-up. Avoid long uninterrupted joint lines.
5. Remove mortar smears as work progresses using non-metallic tools and the cleaning guidance in Section 6.



Applying setting mortar to the back of a veneer unit.

5. Joint Styles: Tight-Joint Look & Grouting

Not the same as Super-Stak

In this guide, “tight-joint” describes a look created with adhered veneer and mortar. It is not the same as TriLite Super-Stak, a mechanically fastened mortarless panel system that includes our Dry-Stak profile..

Tight-Joint Appearance

- Install from the bottom upward when needed to keep courses level and support the tight-joint pattern.
- Use the approved setting mortar and maintain full bond coverage. Tight joints do not eliminate the need for proper mortar contact behind adhered veneer.
- Fit pieces closely while maintaining the planned pattern. Complete each course in a controlled manner rather than building irregular circular patches.
- At exposed tight joints, use mortar and detailing methods appropriate to the system so voids do not create water-management or bond problems.

Grouted-Joint Installations

When the selected profile uses mortar joints, fill joints with approved pointing mortar after the veneer has developed sufficient bond. Tool the mortar when it is firm enough to crumble rather than smear. Joint style and depth should match the project mock-up, product profile, and intended appearance.



Tooling mortar joints after the mortar begins to firm.

Finished Joint Cleaning

Use a dry, stiff, non-metallic brush after mortar has reached the appropriate crumbly state. Avoid smearing wet mortar across stone faces. Do not use wire brushes, acid, or acid-based cleaners on TriLite Stone unless a current written TriLite instruction specifically permits the product and method.



Final brushing of finished joints.

6. Sills, Thin Brick & Existing Wall Conditions

Sill / Water-Table Stone

Plan sill and water-table locations before installing the field veneer. Provide the required gap, support, flashing, and slope shown in the applicable project detail. Install from a consistent starting point and maintain alignment around corners. Temporary non-staining support may be used until the setting material develops sufficient strength.



Project photo showing a finished sill/veneer condition.

TriLite Thin Brick Veneer

The same wall-preparation, water-management, bonding, curing, and safety principles apply to TriLite thin brick veneer unless the current product instructions state otherwise. Use layout lines to keep brick courses level and maintain consistent joint spacing.

Tear-Off & Reinstallation

- Inspect the exposed wall and repair deterioration, loose material, or structural damage before proceeding.
- Confirm flashing, WRB, penetrations, and drainage details are complete and code compliant before covering the wall.
- Replace or repair damaged lath and scratch coat rather than bonding to unstable remnants.
- Clean and condition existing cementitious surfaces before new mortar is applied. Dampen dry absorptive surfaces when appropriate, but do not leave standing water.

Movement Joints & Special Conditions

Do not bridge building movement joints with adhered veneer. Where control or movement joints are shown on the project documents, carry them through the veneer and use compatible sealant/detailing. Multi-story walls, continuous insulation, unusual substrates, large commercial installations, and other nonstandard conditions should follow engineered project details and the current CMHA/ASTM guidance.



7. Cleaning, Inspection & Final Check

Cleaning

- Allow accidental mortar to firm to a dry, crumbly state before carefully removing it with a stiff non-metallic brush.
- Use clean water and a mild cleaner only when compatible with TriLite Stone and the mortar system.
- Do not use muriatic acid or other acid-based masonry cleaners on TriLite Stone.
- Avoid metal tools or wire brushes that can scratch, stain, or damage the veneer surface.

Final Installation Check

- ☐ WRB, flashing, weep screed, and drainage details are complete and properly integrated.
- ☐ Veneer maintains required clearances from grade, paving, roof surfaces, and other terminations.
- ☐ Corners, sills, openings, penetrations, and transitions are detailed to shed water.
- ☐ Veneer is well bonded with no loose pieces or visible installation defects.
- ☐ Joint pattern, color blending, and coursing match the approved layout or project expectation.
- ☐ Movement joints and sealant joints are complete where required.
- ☐ Work is protected from rain, freezing, and rapid drying during the required cure period.
- ☐ Site and finished veneer are clean without acid damage, wire-brush marks, or mortar smears.

Need Project-Specific Help?

TriLite Stone Company

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INSTALLATION SUPPORT

For project-specific conditions, code questions, unusual substrates, flashing details, or commercial specifications, use the current project documents and contact TriLite or the project design professional before proceeding.



8. Current Reference Standards

This revised guide retains useful TriLite installation practices from the legacy document while updating outdated language and aligning key technical points with current industry guidance available as of October 2026.

Reference	How it is used
ASTM C1780	Standard Practice for Installation Methods for Cement-Based Adhered Masonry Veneer. Current editions govern installation practices and are intended to complement manufacturer instructions and building codes.
ASTM C1670/C1670M	Standard Specification for Adhered Manufactured Stone Masonry Veneer Units.
CMHA Manufactured Stone Veneer Installation Guide	6th Edition, 1st Printing, revised September 2026 for projects using the 2024 IBC/IRC; CMHA also maintains a 5th Edition version coordinated with 2021 and earlier codes.
CMHA Key Installation Checkpoints for Manufactured Stone Veneer	Industry guidance emphasizing substrate preparation, water management, lath, mortar, and installation quality.
TMS 402/602-22	Building Code Requirements and Specification for Masonry Structures, including current hot- and cold-weather provisions referenced by CMHA.
OSHA 29 CFR 1926.1153	Respirable Crystalline Silica standard for construction, including engineering controls and work practices for cutting masonry materials.

PUBLICATION NOTE

This guide is intended as general manufacturer installation guidance, not engineering or architectural design. Project-specific plans, adopted codes, evaluation reports, mortar/lath/WRB manufacturer instructions, and licensed design-professional requirements take precedence.