

# Thin Stone Veneer Installation

This guide is intended to be a starting point for your project. Please see our list of recommended books and publications for more information

## Choose the Correct Stone for Your Project

**Thin Veneer** (stone adhered to wood, metal, brick, or concrete wall): Stone is 1.0 inch thick (+/- 0.5 inches) and weighs less than 14 lbs per sq foot. It does not require a supporting masonry shelf and can be used for exterior cladding or interior applications. Most projects are installed by experienced stone masons and contractors. We recommend viewing a project portfolio and speaking with references before selecting an installer. Some customers elect to install this stone as a do-it-yourself (DIY) project.

**Building Veneer** (stone anchored to a concrete masonry shelf - a weight bearing foundation). Stone is 3.0-6.0 inches thick and is typically used for exterior cladding applications. Building veneer installation is done best in the hands of a skilled craftsman.

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*This guide will explain the basics of installing New England Fieldstone Thin Veneer. Please consult your architect or structural engineer for specific installation requirements.*

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## Reading List

- Masonry Veneer 3rd Edition, ISBN: 9780940116504.

## Material Calculator

- **Flats:** Calculate the total area to be covered by multiplying the Length (in feet) times the Height (in feet).  
Area = Length x Height = Square Feet (SF). Be sure to subtract for doors and windows
- **Corners:** Length of corner area = linear feet (LF). One linear foot will cover approximately 0.75 square feet (SF) of flats, which should be deducted from the quantity of flats needed. For example: If you need 10 LF of corners, be sure to deduct 7.5 SF of flats from your order.

*Note: Be sure to add 5% to 15% extra material, depending on the size of the project, to ensure the desired blend of color and shape, and to allow for field dressing and cutting.*

## Tools

- Dust Mask (NIOSH P100 or N-95)
- Clear Safety Glasses
- Ear Plugs
- Diamond Blade Masonry Saw
- Masonry Hammer
- Carpenter's Level
- Chalk Line
- Pencil
- Tape Measure
- Nail and/or Staple Gun
- Margin Trowel
- Mason's Trowel
- Notched Trowel
- Tuck Pointer
- Wheel Barrow or Cement Mixer
- Grout Bag
- Brush
- Whisk Broom

## Materials

- Type S mortar
- Dry masonry sand
- Acrylic bonding agent (for mortar mix)
- Clean water
- New England Fieldstone Thin Veneer Flats & Pre-Cut Corners

## Temperature

- The ideal air and materials temperature to install stone veneer is 60-80 F.
- Temperatures below 40F or above 120F will not allow the mortar to properly bond.
- See ACI 530.1 / ASCE 6 / TMS 602 for more information.

## Suitable Substrates for Stone Veneer

(see local building codes)

1.	<b>Wood Studs</b> (with rigid 0.5 inch sheathing)	<b>Metal Studs</b> (with rigid 0.5 inch sheathing)	<b>Concrete Masonry Unit (Concrete Block)</b> virgin surface	<b>Poured Concrete</b>
2.	Moisture Control System			
3.	Wire Mesh			
4.	Scratch Coat			
5.	Thin Stone Veneer			

Notes:

- Do not install rigid insulation with sheathing.
- Moisture control system helps to prevent efflorescence (white deposits on face of stone) and protects the rigid sheathing from water damage.
- **Interior applications** in "dry areas" do not require moisture control system.

## **Preparation of Work Area**

- Protect floors, trim and any other finished areas that could be damaged during installation.
- Layout material close to installation area so that stones can be reached and easily viewed. Be sure to select stone from multiple shipping containers and organize by size, color, shape, and texture so that the desired finished results will be obtained.

## **Moisture Control System**

- Install moisture control for all exterior applications and any wet interior applications such as water features, pools, showers, or spas.
- See Masonry Technology Inc moisture control systems at [www.stoneyard.com/mti](http://www.stoneyard.com/mti) for complete details and instructions.

## **Wire Mesh (Metal Lath)**

- Use expanded galvanized, diamond-mesh meeting requirements of ASTM C847-07, minimum of 2.5 lb/yd<sup>2</sup>.
- Install tightly and overlap sections approximately 1 inch.
- Install rough side out and upward. Check by passing your fingers from top to bottom, it should feel rough.
- Fasten every 16 inches horizontally on-center and minimum 6 inches vertically.
- Wrap corners minimum of 16 inches for both inside and outside corners.
- If anchoring to wood studs use wide-crown staples and penetrate at least 1 inch deep.
- If anchoring to metal studs penetrate at least 0.5 inch beyond inside surface.

## **Scratch Coat**

- Surface must be clean and free of debris.
- Use Type-S mortar.
- DO NOT leave scratch coat smooth. Groove horizontally with a notched trowel.

## **Mortar**

- Type-S (ASTM C270) should be used.
- Mortar should stick to the trowel if it is the correct consistency. Ensure that it is not too wet or too dry.
- Add acrylic bonding agent to Type-S mortar to enhance the flexural, adhesion, compressive and tensile strength.

## **Trimming and Field Dressing**

- Use a diamond blade masonry saw and grinder to shape the stone to fit. Be sure to use safety gear including eye and ear protection.
- A masonry hammer can also be used to custom fit and trim stone as required.

## **Applying New England Fieldstone Thin Veneer**

- Install a temporary ledge to keep stone off of floor or finished grade.
  - 0.5 inches for interior.
  - 3-4 inches for exterior.
- Apply horizontal chalk lines every 16 inches to keep courses of stone parallel.
- Start at the bottom of the structure and work up.
- Start with “corners” before “flats”.
- Use mason’s trowel to apply thin mortar layer to scratch coat where placing stone.
- Butter the back of the stone with a roughly 0.50 inch thick mass of mortar leaving no air pockets.
- Press the buttered stone to surface and hold for a few seconds, pressing far enough to ensure mortar oozes out all sides, but leaving a roughly 0.50 inch bed of mortar behind each stone.
- Scrape excess stone from joints with pointer while ensuring that the mortar has contact with all sides and the back of each stone with no air pockets.
- Once placed, the stone cannot be moved or adjusted. If stone loosens, it must be removed, cleaned and reinstalled.

### **Filling Joints**

- Once stones have been set for a minimum of 24 hrs after adhering, you are ready to grout.
- Use a grout bag (looks like a cake frosting bag) to inject mortar into the joints after the stone has been installed.
- Color can be added to the mortar as desired.

### **Finishing**

- When mortar is firm, thumbprint hard, then the joints can be finished.
- Rake joints to reveal the edge of the stones and sweep smooth with a stiff brush. Use care so that joints are not raked too deep which could loosen the stone.
- An Over-grout method can also be used. Fill joints flush to the surface of the stone then smooth with a soft brush.

### **Cleaning**

- If mortar attaches to the face of the stone during installation, let it harden slightly and then brush off with a sponge and bristle brush. Avoid wire brushes because they leave scratch marks on the stone’s face.
- Stone can be cleaned with a mild detergent, diluted with clean water. Wait 2-3 days before cleaning and test a small area first.
- Do not use metal brushes or acid.