

# RUSSELL STONE PRODUCTS, INC

2640 GREENVILLE PIKE

GRAMPIAN, PA 16838

Phone: (814) 236-2449

Fax: (814) 236-7482

Email: [dan@russellstoneproducts.com](mailto:dan@russellstoneproducts.com)

[www.russellstoneproducts.com](http://www.russellstoneproducts.com)

## THIN VENEER INSTALLATION

### Step 1: Surface Preparation

The following steps are a basic overview of the materials and process needed to install Russell Stone's thin veneer. This does not include all project conditions. Be sure to comply and check with your local building codes.

Thin veneer stone can be installed over a variety of surfaces including brick, block, concrete, and framed structures (interior and exterior), without the need for special building shelves or foundations. Cement board or lath and scratchcoat can be used to create a suitable masonry surface over framed walls or other structures. All surfaces should be stable, dry, free of debris and any bond-breaking residue, and where necessary inclusive of a moisture barrier.

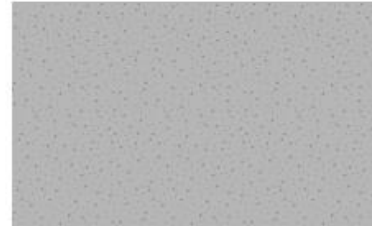
Type N or S mortar, fortified with an acrylic bonding agent, is recommended for base/scratch coats as well as setting the stones. Mortar may be shovel blended on site or purchased in a variety of ready-mix formulations (some offering performance guarantees.) Installer skill level, budget, and job size should all be considered when choosing which option is most appropriate for your application.



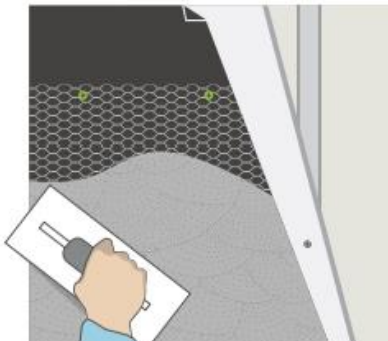
**1. Interior Framed Wall - Cement Board**  
Cement board is applied directly over sheetrock using waferhead cement board screws anchored into wood or metal studs.



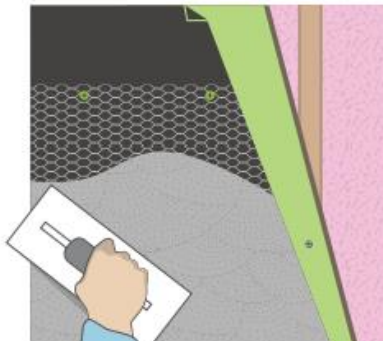
**2. Interior Framed Wall - Lath & Scratchcoat**  
Galvanized wire lath is applied directly over sheetrock and felt vapor barrier using waferhead cement board screws anchored into wood or metal studs.



**3. Exterior Framed Wall - Cement Board**  
Cement board is applied directly over sheathing and two layers of felt vapor barrier using waferhead cement board screws.



**4. Exterior Framed Wall - Lath & Scratchcoat**  
Galvanized wire lath is applied directly over sheathing and felt vapor barrier using waferhead cement board screws anchored into wood or metal studs.



**5. Poured Concrete Wall**  
Thin veneer stones may be set directly provided the surface is clean, clear of loose debris, and free of any bond-breaking agents (i.e. form release oil).



**6. Brick or Block Wall**  
Thin veneer stones may be set directly or, a scratch coat of mortar may be applied first to fill in the existing joints and any surface cracks or uneven areas.

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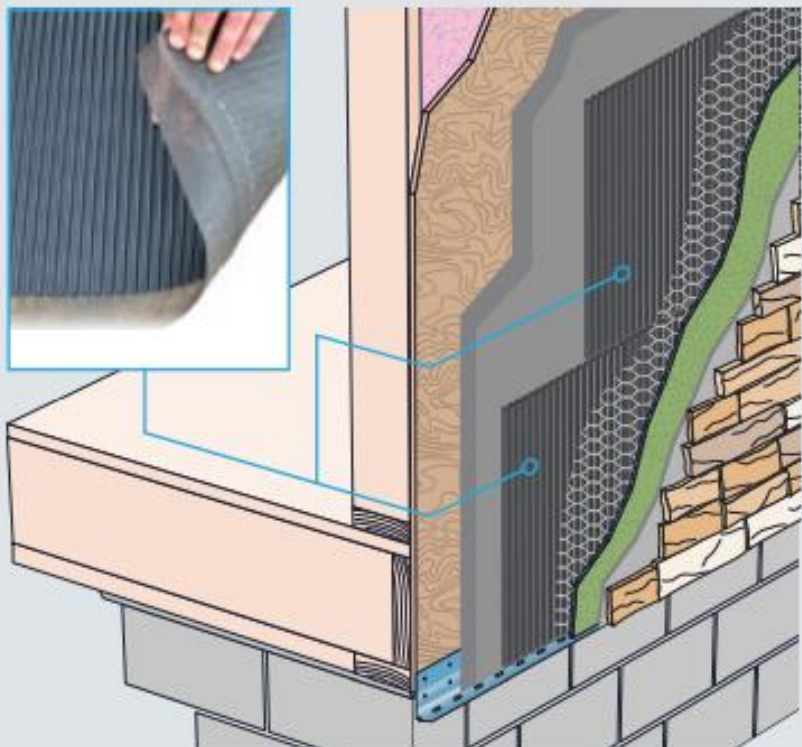
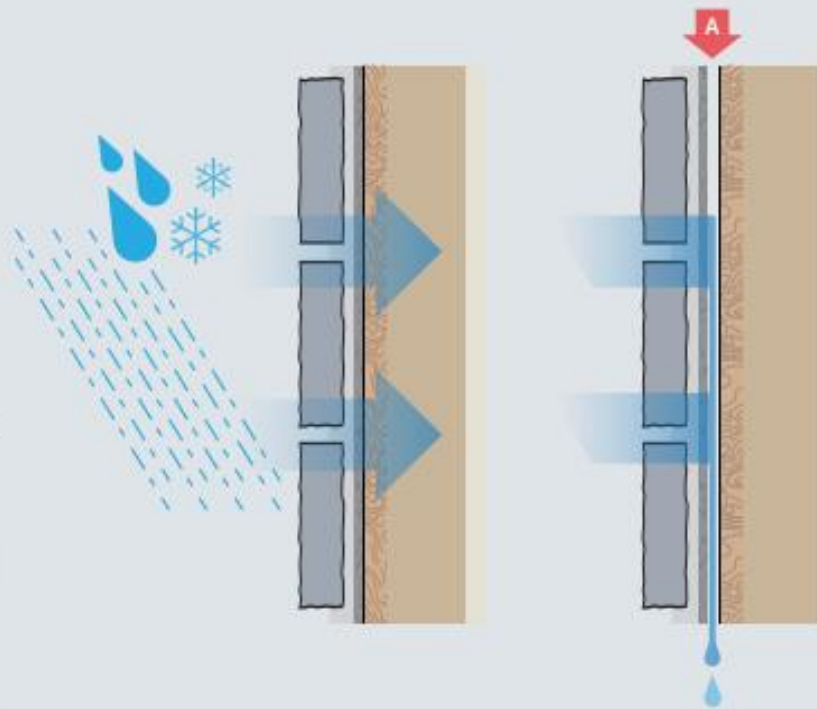
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## Moisture Management:

Some thin veneer applications may require additional considerations for moisture management due to climate factors or the location of the dew point within the wall structure. Wind-driven precipitation and condensation from temperature/humidity variations can cause moisture to permeate the building envelope and accumulate within the wall cavity. This moisture can cause a variety of problems including material decay or failure, mold, and efflorescence.

**Drainage planes**, sometimes referred to as **cavity weep systems**, address the accumulation of moisture within the wall by establishing gaps (air channels) between the masonry component and structural wall unit through which water is directed out (figure A).

There are a variety of commercial solutions available and we encourage thoughtful research to seek out the best solution for your given application and budget. These systems typically feature a filter fabric barrier (to impede the penetration of the veneer mortar into the air gap) mated to a series of vertical channels designed to create a standoff from the sheathing and allow air and moisture to flow through. There are varying approaches to the size and structure of the channels, material construction, and overall cost. Placement within the building envelope is consistent between the lath/setting mortar and the vapor retardant layers as shown.



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## Step 2: Cutting & Trimming



A convenient and efficient method for trimming thin veneer is through the use of a 4" angle grinder equipped with a diamond blade (remember to always wear hearing and eye protection).



Cuts made from the back (sawn) side at 1/2 depth will allow the stone to be "snapped" with a brick hammer along the cut line leaving a natural edge on the front side.



Cuts may also be made at a slight angle from the front (natural) side and then trimmed with a mason's chopper for more precise control of the final edge/joint appearance.





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## Step 3: Setting the Stones

After trimming, ensure that all stones are clean of any film or debris that could impede the mortar bond. Dampen the stone back slightly, and using a margin trowel, apply a thin coat of fortified type S or N mortar to the back of the stone. Spread additional mortar around the perimeter of the stone tapered slightly inward as shown. The idea is to apply sufficient mortar to completely fill the space behind the stone while still allowing for the mortar to spread outward as the stone is set.

Working from bottom to top, press the mortar covered back of the first stone against the prepared substrate sliding the unit slightly up and then down while maintaining even pressure into the desired final position. Pare the excess mortar spreading into the joints as necessary and take care to keep the joints between the stones consistent in width and depth and staggered both vertically and horizontally. At this stage, small dowels or wooden wedges are often used to hold the stones in place as the mortar cures.



## Step 4: Finishing the Joints

After all of the stones have been set, apply pointing mortar to the joints using a grout bag/gun or pointing trowel. Work your way through the field, forcing the mortar into the joints and any voids that may exist. Joint treatments vary by region and individual preference. Be sure to take into account the joint mortar depth required by your specific job.

If excess mortar lands on the faces of the stone during the course of installation, allow it to dry slightly and then brush or sponge off any residue. When the mortar becomes firm to thumb print hardness (30 to 60 minutes depending on climate and temperature), trowel, rake, and/or brush to the desired finish and depth. Final touch up can be achieved with a small bristle brush or whisk broom.

