



Please note: This manual serves as a broad, general outline for installation of stone veneer. All installations of stone veneer should be in accordance with local building codes. See [MVMA](#) for complete specifications and guidelines.

Installation Instructions

Estimating Riverside Stone Required:

1. Measure area to be covered, width and length, for total square footage.
2. Measure length needed for outside corners, for total linear footage.
3. Note: Extra stone may be needed for trimming and cutting.

Tools Required:

1. Hammer/staple gun, if applying weather resistant barrier and/or metal lath.
2. Metal joining tool/stick, for finishing mortar joints.
3. Plasterer's and/or Mason's trowel, for applying mortar.
4. Grout bag, for grouting joints.

Weather Resistant Barrier:

1. Barrier should be equal to U.B.C. Standard No. 32-1 for saturated asphalt to U.B.C. Standard No. 17-1 for Kraft Waterproof building paper.

Metal Lath:

1. Minimum 2.5 lb expanded metal lath (diamond mesh) galvanized.
2. Also, may use 18-gauge galvanized woven wire mesh.
3. For metal buildings, minimum ¾ lb. rib expanded metal lath galvanized.

Fasteners:

1. Galvanized nails, and/or staples, and/or concrete nails.
2. ¼ inch type S-12 Pancake Head Super Tite Screws.
3. Wheel barrow and hoe, for fixing mortar.

4. Level, for setting hearth slabs.
5. Circular saw with Carborundum blade, for cutting stone pieces.
6. Wide mouth nippers/hatchet, for trimming stone.
7. Whisk brush, for cleaning finished work.

Mortar Components:

1. Premixed: type-S mortar (spec mix), or
2. Component mix:
 - a. Alternate Mix #1:
 - 1 part Type 1 Portland Cement
 - ½ part lime, with 3 ½ to 4 ½ parts masonry sand
 - b. Alternate Mix #2:
 - One part masonry cement (Type-S), with 2 ¼ to 3 parts masonry sand

Masonry Sealer:

1. Breather-type, non-film forming. Do not use Thompson’s sealer.

Mortar:

1. Mixing mortar: Mortar should be mixed to a firm, moist consistency. Mortar that is too dry will not provide the proper bond. If mortar is too wet, it will be weak and messy. Use anti-freeze components to lower the freezing point of the mortar.
2. Applying mortar to surface area: Using a plasterer’s or mason’s trowel, apply mortar to ½ to ¾ of an inch thick to prepare area. Do not spread more than a workable area (5-10 square feet) so that the mortar does not set up before the stone is applied.

Surface Preparation:

Using the table below, determine the correct surface preparation for your installation.

TABLE 1	
WALL SURFACE PREPARATION	
<u>Interior:</u>	<p>Rigid Back wall</p> <p>Cover sheathing with a weather resistant barrier; lap joints in a 4” shingle fashion. Then, in accordance with local building codes, install lath or wire mesh using plywood galvanized nails or staples 6” on center vertically and 16” on center paneling horizontally, penetrating studs a minimum of 1”. Stop lath 1” from finished wall sheathing edges.</p> <p>**Note: For interior application subject to freezing, use exterior application.</p>
<u>Exterior:</u>	<p>Plywood/Drywall</p> <p>Surface must be cleaned and dry, preferably should be plywood. If drywall, it must be painted with primer paint.</p> <p>Step 1: Use #52 Florsett Mortar Thinset. Add water, mix to moist consistency. Let sit for 5-10</p>

minutes, rework/remix and then apply to back of brick or stone slice. Usually 2-3 blobs is enough for stone. Push brick or stone on the wall ensuring good contact between the wall and the material. If stone pieces are large enough, you may have to use nails or screws to help support the stone while the mortar sets.

Step 2: After the thinset is fully cured (24 hrs), remove supporting nails/screws, if any, and grout.

Step 3: Grout is also a powder and water procedure. It is recommended that you use a grout bag for this step. Put grout mixture into bag (2/3 full) and squeeze into mortar joint, much like cake decorating. A 50 lb bag of thinset covers approximately 75 square feet, depending on the depth of the grout.

Open Studs

Install paperbacked metal lath to studs using nails which penetrate a minimum of 1" on center. Apply ½ to ¾ inch scratch coat and allow to dry for 48 hours.

Concrete Masonry Stucco (Cleaned and untreated)

No preparation is needed. Examine newly poured concrete closely to ensure that its finished surface contains no release agents (form oil). If no form oil, etch surface with muriatic acid, rinse thoroughly and/or score with a wire brush.

Metal Buildings

Install paperbacked 3/8" rib expanded metal lath to metal cladding 10-12 gauge. Using United States Gypsum Company's 1 ¼" type S-12 Pancake Head Super Tite screws. Screws must penetrate 3/8" beyond the inside face of the metal surface. Screws are to be installed on centers equal to one screw per square foot and shall not exceed 6" on center in one direction. Apply ½ to ¾ inch scratch coat and allow to dry for 48 hours.

Hearth Surface (Non-masonry)

Install a weather resistant barrier, then apply metal lath. If complying with UL floor protector's listings, apply ½" scratch coat.

Concrete Masonry (Clean and Untreated)

No preparation needed.

Stone Application:

1. **Starting Point:** You may apply mortar and stone working from the bottom up or from the top down. Working from the top down may help prevent mortar from dripping onto applied stone.
2. **Joint Width:** In order to obtain the most natural look, joints should be as narrow as possible. They should not exceed ¾ inch in width. An attractive look can also be achieved by fitting them together tightly. If complying with UL wall shields listings, joints should not exceed ½" thick.
3. **Setting Stones:** Press each stone firmly enough to squeeze some of the mortar around the stone's edges. Apply pressure to the stone to ensure a good bond. Ensure complete coverage between the mortar bed and the back surface of the stone. Mortar can also be applied to the entire back of the stone.
4. **Install corner pieces first:** If your application requires corner pieces, apply those pieces first. Notice that these pieces have a long and short leg. Alternate these in opposite directions.

5. Install flat pieces: After the corner pieces are in place, flat pieces are applied working towards center.
6. Keep mortar joints consistent: Place individual stones close together creating uniform joints between them and trim as required to achieve consistent width in the mortar joints. Then trim small pieces to fit into any remaining voids. Riverside Stone includes smaller pieces to aid in most trimming.
7. Cutting and Trimming: Stones can be cut and shaped for fit. Use wide mouth nippers or a hatchet. Some small stones may be found in the box, which may also be used to fill in the gaps between stones. For best finished appearance, coat cut or broken edges with mortar. If possible, position cut edges up when they are above eye level, and down when they are below.

Grouting and Jointing:

1. Grouting Joints: If additional mortar is required, use a grout bag to fill in joints. Care must be taken to avoid smearing the mortar on the surface of the stone. Accidental smears should be removed only after mortar has become crumbly using a whisk broom or dry bristle brush. DO NOT USE a wet brush or a wire brush.
2. Finishing Joints: When the mortar joints have become firm or thumbprint dry (setting time will vary depending on wall surface and climate condition), they should be pointed up with a wooden stick or a metal joining tool. Rake out excess mortar, compact and seal edges around stones.
3. Cleaning Finished Job: At the end of the work day, or when the mortar is sufficiently set up, the finished job should be broomed or brushed to remove loose mortar and to clean the face of the stone. Again, a wet brush should never be used to treat the mortar joints as this will cause staining and will be difficult or impossible to remove. DO NOT USE ACID TO CLEAN MORTAR OFF OF THE STONE.

Installing Hearths:

1. Place mortar: Place mortar $\frac{3}{4}$ inch deep in 3 inch wide strips 1 inch apart on prepared surface.
2. Install Hearth Pieces: Place the first stone hearth piece on to the mortar bed and level. Place adjacent hearth pieces, aligning and leveling with the first piece. If joints need additional mortar, fill joints using a grout bag. Tool and finish joints following previous instructions under “Grouting and Finishing Joints”.
3. Cutting and Trimming Hearth Pieces: Hearth pieces can be cut as required using a circular saw fitted with a diamond blade or by using a mason’s brick or tile saw. Put cut edges facing away from view, as cut edges are a different color than the finished face of the stone.