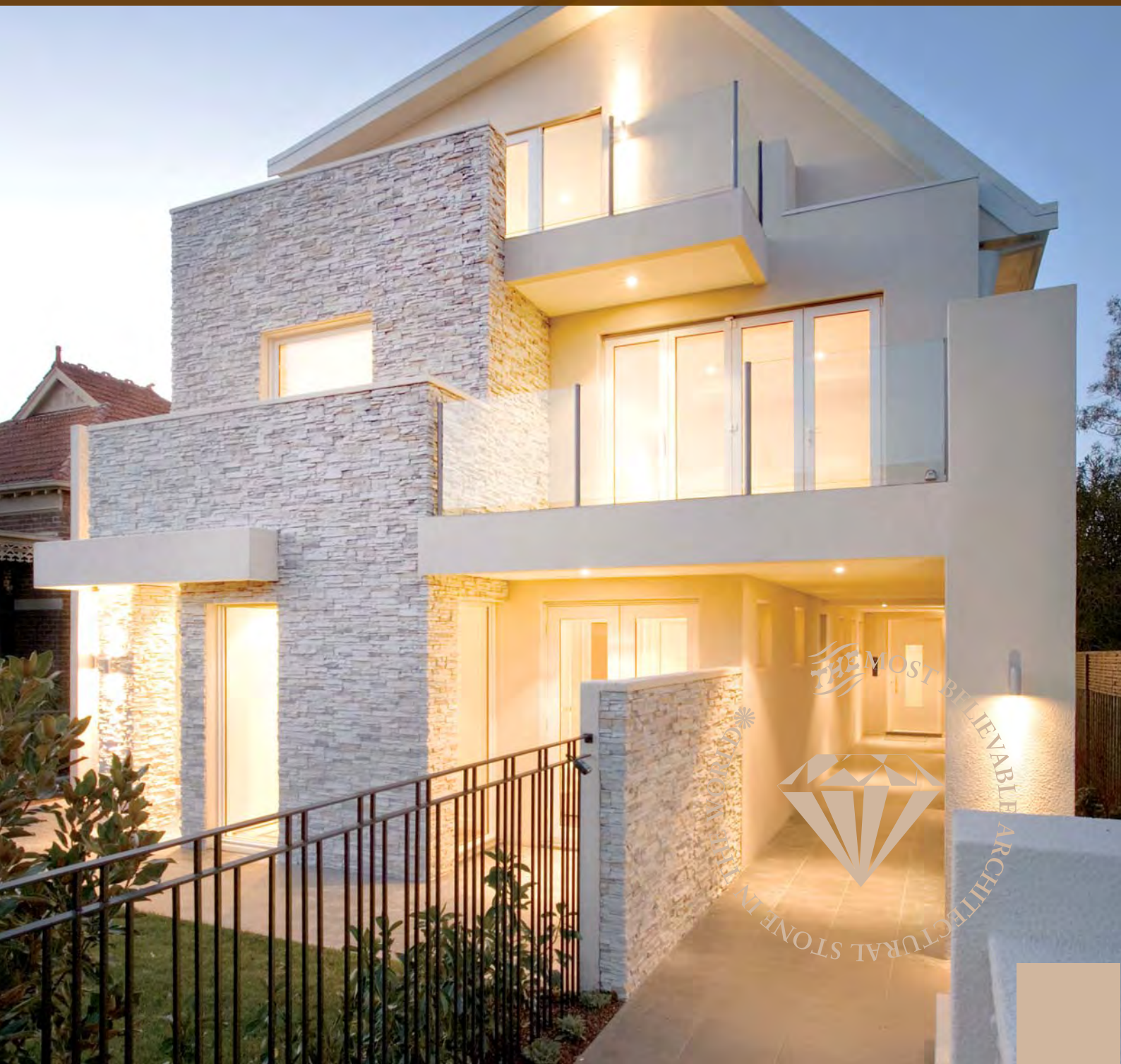
adbri MASONRY

ELDORADO STONE

Eldorado Stone



FRONT COVER: STACKED STONE IN OLD ENGLISH

Stacked Stone Castaway

Stacked Stone Castaway

Eldorado Stone began in 1969 with the objective to create the most believable stone veneer in the world. It had to be easy to install and less expensive than real stone but more importantly it had to look like the real thing - something not always true of other architectural stone veneers.

Adbri Masonry could see a need in the market for a realistic and cost effective stone veneer and a worldwide search resulted in Adbri Masonry being appointed as the sole distributor of Eldorado Stone in Australia and New Zealand.

For Adbri Masonry the decision to be associated with the product was an easy one. The stone veneers are realistic, the range is comprehensive and installation is straight forward. The last factor was that Eldorado Stones' founder shares the same philosophy to manufacturing as Adbri Masonry in "creating unbelievable products at believable prices".

The Production Process

Moulds are created from natural rocks and stones so that every detail is replicated using a patented moulding process. The pigments used in the mix are from natural iron oxide dyes and run the full depth so they closely resemble the original rocks and stones they have been moulded from. These details are enhanced by hand painting fine accent details onto the inside of the moulds before the mix is poured. Once manufactured, the stones are removed from the moulds and carefully hand packed.

Uses & Applications

Eldorado Stone profiles are available as either individual stones or as panels which gives total freedom and flexibility to the designer. With the individual stones (Country Rubble, Limestone and Santa Barbara), the profiles can be blended for a custom look or a mix of colours within the same profile can be blended. This last option was used successfully with the Country Rubble mix at the Mount Hotham resort (see page 6).

COMMERCIAL & RESIDENTIAL PROJECTS

Eldorado Stone can be used for Commercial and Residential projects as feature walls, fireplace surrounds, kitchen splashbacks, outdoor kitchens, entrance foyers, bathrooms, in hotels, restaurants & bars, as accents, on pillars or for entire buildings.

INTERIOR & EXTERIOR

Eldorado Stone can be used both inside and outside as part of the landscape design or the external walls or accents on buildings.

ACCESSORIES

There are matching cornerstones for all the profiles, these can be used to cover blade walls, awkward corners or simply to update any structurally sound surface.

Benefits of Eldorado Stone

CORNERS

A key feature for all Eldorado Stone profiles are the matching cornerstones. These give the appearance of a solid natural stone wall.

COST

The installation cost of Eldorado Stone is approximately half that of natural stone because the installation procedure is much quicker with Eldorado Stone.

LIGHTWEIGHT

As Eldorado Stone is manufactured from lightweight materials it is much easier to transport and handle on site than natural stone.

STRUCTURALLY THIN

Construction of veneer faced concrete masonry offers structurally thinner walling than natural stone which maximises floor space.

TIME

The installation procedure is much quicker with Eldorado Stone than with real stone so there are time savings on site.

Limestone

Limestone Appalachian

Limestone is a tailored stone that conveys a traditional formality. It is a hand-dressed, chisel - cut textured stone that has been rough hewn into a rectangular ashlar profile.

Limestone comprises a large variety of stone sizes varying from 50 to 200mm high and 150 to 300mm long. This, combined with variations on the grout application, makes Limestone suitable for a wide array of project styles including traditional, formal and rustic.

CORNERS

Limestone cornerstones come in a wide variety of shapes and sizes to maintain a natural stone finish.

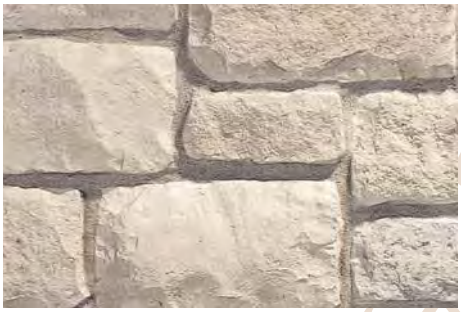
PACKAGING

Flat Profiles: 1.3m² per box
Corners: 3.1 l/m per box

PASEDENA LIMESTONE

APPALACHIAN LIMESTONE

CHEYENNE LIMESTONE



AUSTIN CREAM LIMESTONE

Country Rubble

Country Rubble is evocative of provincial Europe where the architecture is a reflection of a simpler way of life. The rough faced stones come in all shapes and sizes and the simple rustic beauty is reflected in the randomness.

Country Rubble is proportioned to compliment installation over large areas.

CORNERS

Country Rubble cornerstones come in a wide variety of shapes and sizes to maintain a natural stone finish.

PACKAGING

Flat Profiles:	1.3m² per box
Corners:	4.0 l/m per box

TUSCANY COUNTRY RUBBLE

CHATEAU COUNTRY RUBBLE

ENGLISH COUNTRY RUBBLE

SERRANO COUNTRY RUBBLE

Mountain Ledge

WARM SPRINGS MOUNTAIN LEDGE

Mountain Ledge has a contemporary look and is proportioned to compliment installation over large areas.

Mountain Ledge is supplied as an easy to install panel system, which further reduces installation costs (available in 125mm high panels in lengths of 500, 300 and 200mm).

Soft natural colours add to the contemporary look and feel of Mountain Ledge.

SYCAMORE MOUNTAIN LEDGE

BUCKSKIN MOUNTAIN LEDGE

CORNERS

Mountain Ledge cornerstones come in two sizes to maintain a natural stone finish and to allow for easy installation with the panels.

PACKAGING

Flat Profiles: 1.1m² per box
Corners: 3.3 l/m per box

SMOKEY MOUNTAIN LEDGE

OAKRIDGE MOUNTAIN LEDGE

Stacked Stone

BLUESTONE STACKED STONE

The classic elegance and intricate detail of small stones combined with the simplicity of a panel system give this stone veneer the appearance of a precision hand-laid dry-stack set. Installation is easy for expansive walls and column fascias alike.

Stacked Stone is supplied as an easy to install panel system, which further reduces installation costs (available in 100mm high panels in lengths of 500, 300 and 200mm).

CORNERS

Stacked Stone cornerstones come in two sizes to maintain a natural stone finish and to allow for easy installation with the panels.

PACKAGING

Flat Profiles: 1.3m² per box
Corners: 3.6 l/m per box

OLD ENGLISH STACKED STONE

MOUNTAIN BLEND STACKED STONE

SLATE GREY STACKED STONE

CASTAWAY STACKED STONE

Installation

Installation Procedures

There are two types of Eldorado Stone profiles - single stones and panels. The single stones are Country Rubble, Limestone and Santa Barbara and the panels are Stacked Stone and Mountain Ledge. The single stones are usually finished with grout joints and should be installed from the top down as this helps to keep the stones clean. The panels are usually installed without grout joints and can be installed from the bottom up.

Estimating Stone Quantities Needed

Two components, flats and corners, are used for most installations. Flats are applied to the flat wall surface and are ordered by the full box. Corners are applied to outside corners and are ordered by the lineal metre.

CALCULATE THE TOTAL PROJECT SQUARE METREAGE by multiplying the length times the height of each surface area to be covered and then deducting the area of all openings such as doors and windows.

CALCULATE THE LINEAL METREAGE OF CORNER STONES required for the project by measuring all external corners from top to bottom. Allow extra for cutting and trimming wastage and note that orders need to be placed in lineal metres.

Note: 1 lineal metre of corners equates to approximately 0.3m^2 of flats.

1. Preparing the Surface

NOTE: The key requirement for a successful installation is a strong, sound substrate. Eldorado Stone can weigh up to 60kg/m^2, so if the substrate is weak, the risk of delamination could be high regardless of how strong the bonding agent is. A structural engineer should always be consulted when in doubt.

WALL SURFACE	PREPARATION REQUIRED
RIGID PANELS (Plywood, Wallboard, Cement Sheet, etc.)	Cover wall with a minimum of one layer of water-proof barrier, such as Sisalkraft building paper. The paper shall be applied horizontally with the upper layer overlapping the lower layer by at least 50mm. Overlap vertically by at least 150mm. Attach a 1.4kg/m^2 gauge diamond mesh expanded metal lath, (galvanized for external applications) to the wall using galvanized clouts at 150mm vertical centres and 400mm horizontal centres, penetrating studs by at least 35mm. Ensure ▪ The metal lath has the small cups pointing upwards. ▪ The metal lath extends around corners by at least 400mm. ▪ The lath ends and sides overlap by at least 30mm. Apply a 10-12mm thick mortar scratch coat (see 2.1 on page 12) over the metal lath. Before the mortar has hardened, scratch horizontal grooves into the surface using a steel comb. Allow to set for at least 48 hours before applying the bonding mortar, (see page 12).

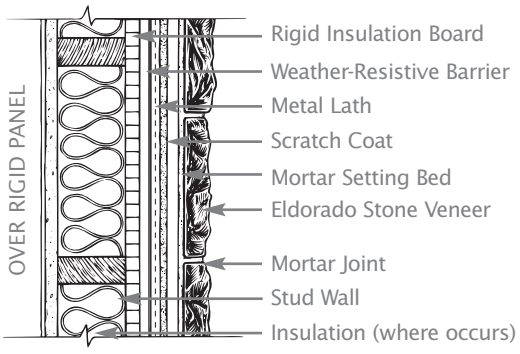


fig. 1.

WALL SURFACE	PREPARATION REQUIRED
CONCRETE MASONRY OR CONCRETE PANELS	Surface must be totally free of oil, grease, paint, curing compounds, sealers, mould release agents, dust or other loose contaminating materials. If any of these materials are present the surface must be cleaned back to the original surface by sandblasting, water blasting, acid etching or wire brushing. Alternatively, a metal lath can be attached using corrosion resistant concrete nails and a scratch coat applied over the lath, as for rigid panels above. New concrete surfaces must be allowed to cure for 6 weeks and, preferably have a woodfloat finish. Prior to applying the bonding mortar, dampen the surface, then prime with a slurry bond coat, (See 2.2 page 12) brushed or rollered on to a depth of not more than 2mm. Priming is not required if a scratch coat on a metal lath has been applied.
RENDERED WALLS	Unless it is known that the render coat is sound, it is recommended that a metal lath be installed with a scratch coat as described for rigid panels, above.
OPEN STUD	For external installations, fit sarking membrane or builders paper over the studs with timber or steel battens fixed at 300mm vertical centres. (See fig. 3.) The battens should be fixed with 90 x 2.5mm galvanized nails. Battens should be 50 x 20 Grade H3.1 timber or galvanised steel, (0.46gm/m²). Screw fix fibre cement board to the battens. The only board we recommend using is BGC Stonesheet; 7.5mm thick up to 2.4 metre height and 9.0mm over 2.4 metre.

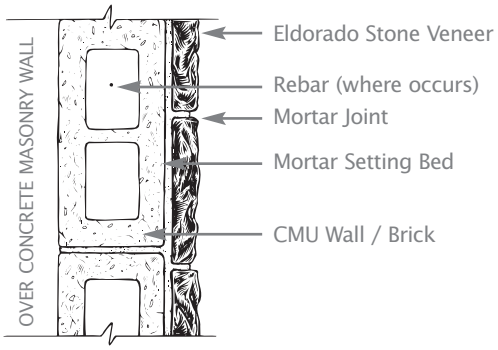


fig. 2.

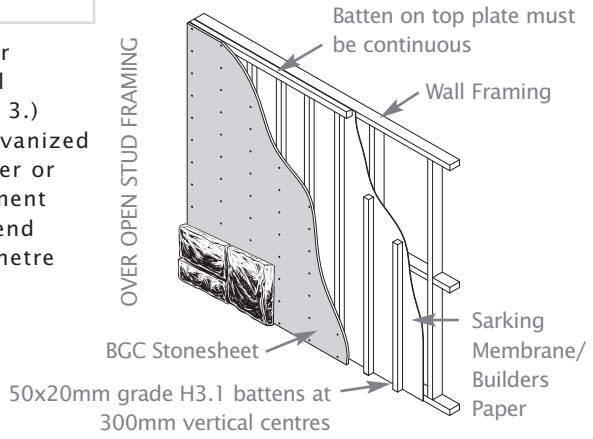


fig. 3.

1. Preparing the Mortar

Use a bucket to measure out the materials, not a shovel.

2.1 SCRATCH COAT MORTAR

One (1) part Type GP General Purpose Portland cement. Three (3) parts clean washed sand.

Mix with solution* to a firm, workable mix, not too wet, not too dry. (The mortar should stick to the side of a trowel when turned on its side, but slide off easily when given a quick shake).*Solution: 3 parts water plus 1 part polymer modifier.

The polymer modifier can be products such as Davco's Davelastic, Ardex's Abacrete or similar.

2.2 SLURRY BOND COAT

One (1) part Type GP cement. One (1) part clean fine sand.

Mix with neat polymer liquid, (Davelastic or Ardex Abacrete or similar), in accordance with the manufacturers' recommendation.

2.3 BONDING MORTAR

Adbri Masonry recommends the use of a premixed polymer modified cement based adhesive to bond the stone to the substrate. These products generate high bond strengths whilst retaining some elasticity and flexibility.

Suitable cement based adhesives include, (but are not restricted to) Davco SE-7 with Davelastic, Ardex STS8 with Ardion 90 and Mapei Kerabond with Isolastic.

2.4 GROUTING MIXTURE

A suitable grouting mixture consists of:
One (1) part Type GP cement
One (1) part Builder's Lime
Five (5) parts clean masonry sand
Plus sufficient water to produce a smooth mix which will flow through a grout bag.

If desired, the grout can be tinted using iron oxide pigments available from a hardware shop. For example, using tan grout with earth tone stones will greatly enhance the appearance of the finished wall.

3. Precautionary Notes

There are several important points to note when installing Eldorado Stone:

- Check the Building Code requirements in your area to ensure compliance with specifications.
- Ensure proper flashing and guttering is installed around the perimeter and wall openings to divert water run-off away from stone surfaces. Run-off may stain the stone.
- Retaining walls must be water-proofed behind and incorporate provisions for adequate drainage.
- In hot, dry weather dampen the substrate before applying the mortar. Also dampen the stone by dipping into a bucket of water. Do not apply mortar to a dripping wet surface.
- Do not spread more than about one sq. metre of mortar at a time, so that mortar will not stiffen up before stone is applied.
- Do not install stones over any wall joints.
- Do not exceed 9m in height.

4. Installation

SINGLE STONES

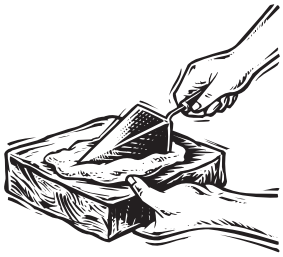
- Limestone
- Country Rubble

DRY-STACKED

- Stacked Stone
- Mountain Ledge

4.1 STARTING

Step 1. Apply the mortar



Step 2. Install the corners first

For dry-stacked panels or dry joints, Eldorado Stone is applied from the bottom up. When finishing with grouted joints, Eldorado Stone is applied from the top down - this helps to keep the stone clean.

Install the corners first for easiest fitting. Corner pieces have a long and short return. These should be altered in opposite directions on the wall corner.

4.2 FITTING STONES

Stones should be installed with uniform size grout joints. A consistent 12mm or less space around the stones is desirable.

Chalk lines should be snapped every 100-200mm as a guide for keeping the installation level and then a level should be used during the installation of individual pieces. It is of particular importance to frequently stagger the joint lines both vertically and horizontally.

4.3 TRIMMING STONES

Step 3. Trim stone to fit. For straight cuts use a diamond or carbide blade.

Install the corners first for easiest fitting. Corner pieces have a long and short return. These should be altered in opposite directions on the wall corner. For best fit, stones can be cut or shaped using a hatchet, widemouth nippers or mason's trowel edge. Straight cuts can be made with a diamond or carbide saw blade. Cut edges should be turned so they are not visible (down when below eye level and up when above eye level). To conceal cut or broken edges, cover them with mortar when grouting (back cutting the stone edges will also help with concealment).

Note: Eye protection should be worn when cutting stone. If cutting with a blade a dust mask should be worn as well.

4.4 SETTING THE STONE

Step 4. Then install the stones

When applying the stone to a clean concrete panel or masonry surface, first prime the wall with a slurry bond coat using a brush or roller. The bond coat should be no more than 2mm thick. The primed surface does not need to be dry before applying the bonding mortar.

Using a mason's trowel, apply a 12mm thick even layer of mortar to the entire back of the stone. Then press the stone firmly into place on the prepared wall surface, squeezing the mortar out around all edges. Using a gentle 'wiggling' action while pressing the stone will ensure a good bond.

For Dry-Stacked Panel installations it's important when setting the stone, that the edges of the stone are properly sealed with mortar to ensure a satisfactory bond. This can be achieved by following these steps:

1. Apply workable mortar generously to the back of each stone to allow ample mortar to squeeze out around all edges of the stone as it is pressed onto the wall.
2. Right after setting each stone, use a mason's trowel or a margin trowel to remove any excess mortar and to fill any voids along the stone's exposed edges. This serves not only to help seal the stone edges but also for tighter fitting of following stones.
3. Just prior to setting each stone, apply a thin bead of mortar with a grout bag to the edges of all previously installed, adjacent stone. If any mortar accidentally gets on the stone face, do not try to wipe it off as it will smear and stain the stone. The mortar should be allowed to set until dry and crumbly, and then brushed off with a dry whisk broom.

4.5 WETTING THE STONE & SUBSTRATE

Under certain conditions the stone and substrate may need to be wetted. If the stone is being installed onto a very hot/dry surface or in a hot/dry climate, the stone and wall surface should be wet to prevent excessive absorption of moisture from the mortar. This can be done by spraying water onto wall surface and back of stone (you may also dip stone into a container of water). In either case the stone and the wall surface should be allowed to dry for a few minutes after wetting to eliminate excess surface water. For Dry-Stacked Panel installations it will be necessary to wet the stones regardless of the weather conditions. For cold weather installations, applications should be protected from temperatures below freezing, so the mortar may set properly.

4.6 GROUTING THE JOINTS

Step 5. Grout the joints

There are three distinct grout techniques, each with their own unique look: Standard Joints, Dry Joints and Overgrout Joints. These three joint finishes play a major role when it comes to finishing a job that has the look and feel of real stone.

4.6.1 STANDARD JOINT (fig. 4) is achieved by laying each stone roughly one finger width apart from each other, then a grout bag is used to fill the joints with mortar, forcing grout into any voids. Be careful not to smear grout onto the face of the stone. Any mortar that accidentally gets on the stone should be allowed to set until dry and crumbly, and then brushed off with a dry whisk broom.

4.6.2 DRY JOINT (fig. 5) stonework is accomplished by 'dry' fitting each stone prior to installation. Each piece can be laid with virtually no joint. Despite using mortar to set the stone to the surface, when completed, the finished look will appear as though no mortar was used to install the stone. However, it is sometimes desirable to do touch-up grouting to fill noticeable voids and to conceal cut or broken stone edges.

fig. 4. Standard Joint

fig. 5. Dry Joint

fig. 6. Overgrout Joint

4.6.3 OVERGROUT (fig. 6), an increasingly popular way to achieve an old-world look and is a technique that tends to make the stonework appear rustic and aged. The grout overlaps the face of the stone, widening the joints and making them very irregular. It's important that the joint's mortar be applied without air pockets and are filled completely to the substrate. Overfill joints when applying grout. Mortar should be right between being too wet and too crumbly.

4.7 FINISHING THE JOINTS

Step 6. Finish the joint

Step 7. Whisk away any loose mortar

When the mortar joints become firm (normally 30-60 minutes), use a wooden or metal striking tool to rake out the excess mortar to the desired depth while at the same time forcing the mortar into the joints to thoroughly seal the stone edges. Be careful not to work the joints too soon or the mortar will smear. After working the joints, use a whisk broom to smooth the joints and clean away any loose mortar from the joints and stone face. Loose mortar and mortar spots which have set for only a few hours clean up easily and should never be allowed to set overnight.

CAUTION: Do not use wet brushes or sponges to wipe the joints or clean mortar off the face of the stone as it will smear and stain. Also, never use wire brushes or acid on the stone surface.

Adbri Masonry
Eldorado Stone
1st Edition Victoria