MANUFACTURER'S INSTALLATION INSTRUCTIONS

Cultured Stone® and Cultured Brick® Product Installation Instructions are available separately from your Dealer and can also be found at www.culturedstone.com

Building code requirements vary from area to area. Check with local authorities for building code requirements in your area. Carefully read all Installation Instructions before proceeding with your Cultured Stone® products application. Observe safety precautions. Cultured Stone® products are covered by a 50-Year Limited Warranty when installed in accordance with the manufacturer's Installation Instructions. See warranty on page 7.

ESTIMATING THE STONE REQUIRED

Determine the amount of Cultured Stone® products needed by measuring the area to be covered. Measure the length times the height to arrive at the gross square footage of flat stone needed. Subtract square footage for window, door and other openings. Measure the linear feet of outside corners to determine the amount of corner pieces needed. One linear foot of corner pieces covers approximately ¾ of a square foot of flat area. Subtract the flat area covered by the linear feet of corner pieces from the square footage of flat stone required. You may wish to obtain some extra stone to allow for cutting and trimming. In addition, be sure to verify whether the texture chosen is sold based on coverage with a ½" mortar joint or tight-fitted. Most texture coverages are listed for a ½" joint, the exceptions being Drystack Ledgestone, European Castle Stone, Pro-Fit® Ledgestone and Pro-Fit® Alpine Ledgestone.

Formula:
Length x Height = Wall Area
Window Width x Window Height = Window Area
Lineal Feet of Corners Required x .75 = Wall Area
   Covered by Corners
Wall Area – Window Area – Wall Area Covered by
   Corners = Square Ft. Flats Required

TOOLS REQUIRED

Choose the tools required for your installation—see page 7 for illustrations and appropriate use.

• Safety Glasses and other personal protective equipment
• Staple Gun or Hammer • Wheelbarrow & Hoe • Hock & Trowel • Mason's Trowel • Margin Trowel • Masonry, Circular, Table, Wet Saw or Grinder with Carborundum or Diamond Blade • Wide-Mouth Nippers or Hatchet • Dust Mask[1] • Level • Metal Jointing Tool or Wood Stick • Grout Bag • Whisk Broom

SUNDRY MATERIAL REQUIREMENTS

A. Mortar Components
1. Premixed: Type N mortar.
2. Mortar mixed: as per Table #2 on page 3.
3. Mortar color: iron oxide color (if desired).
4. Water: Potable water

NOTE: Additives should not be used unless approved by building official. Additives should meet the requirements of ASTM C 270 or CSA A179.

B. Weather-Resistant Barrier
Depending on local building code requirements, barrier shall meet the requirements of ICC Acceptance Criteria 38 "Acceptance Criteria for Water Resistive Barriers."

Note: Weather-resistant barrier must be used on all exterior and interior mortar applications except for those over masonry or concrete.

C. Flashing
1. To maintain the weather-resistance of the exterior wall on which stone products are installed, rigid, corrosion-resistant flashing, weep screed and a means of drainage shall be installed at all penetrations and terminations of the stone cladding. Flashing type and locations shall be in accordance with the requirements of the applicable building code.
2. For additional recommendations regarding flashing, refer to the following trade associations, standards, organizations and resources:
   a. ASTM E 2112
   b. Asphalt Roofing Manufacturers Association (ARMA)
   c. Brick Institute of America (BIA)
   d. The American Plywood Association (APA)
   e. Local building department
   f. Architect or engineer
   g. Cultured Stone® Flashing and Best Practices brochure, or visit www.culturedstone.com for a downloadable PDF

D. Metal Lath
1. Minimum 2.5-lb. galvanized expanded metal lath (diamond mesh) meeting the requirements of ASTM C 847, or min. 18-gauge galvanized self-furring woven wire mesh meeting the requirements of ASTM C 1032.
2. For metal buildings and open stud construction—minimum 3.4-lb. ⅜" rib, paper-backed, expanded galvanized metal lath.
3. Or other code accepted mesh or lath.

E. Fasteners
1. Galvanized nails, staples, concrete nails.
2. Corrosion-resistant, self-drilling, self-tapping pancake-head screw with ⁷⁄₁₆" head, of 1¼" length or suitable to obtain ⅜" penetration beyond inside surface of metal. (Used for installing to metal surfaces such as metal studs or metal building siding.)

F. Masonry Sealer
1. Silane-based breather-type sealer (if required). See "Sealers" in General Information section (page 6).

SURFACE PREPARATION FOR MORTAR INSTALLATIONS

Using Table I, determine the correct surface preparation for your installation.
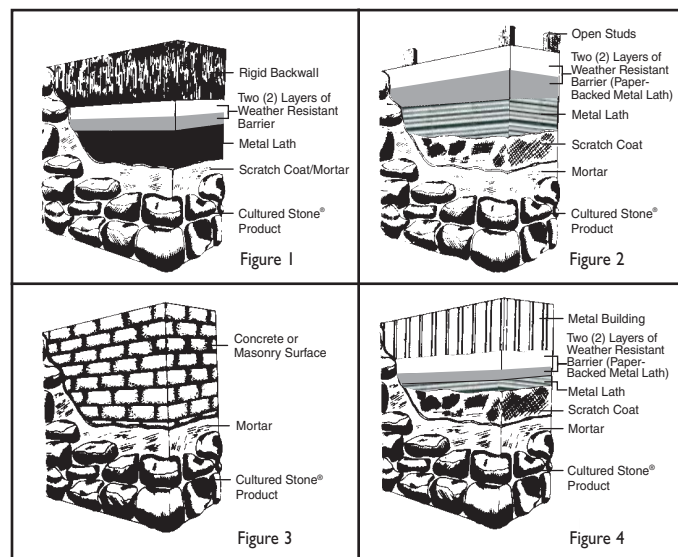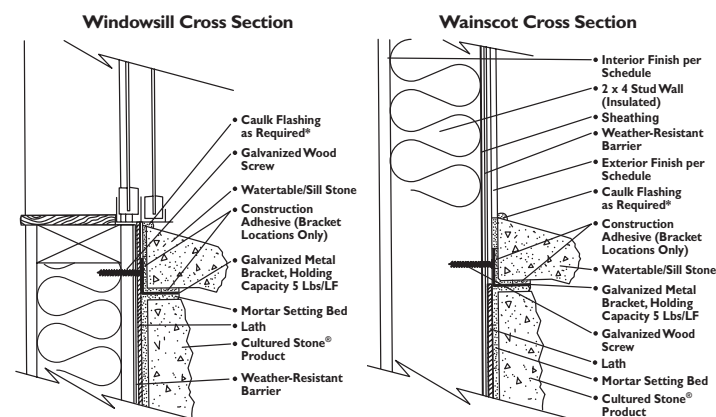

Rigid Backwall
Two (2) Layers of Weather Resistant Barrier
Metal Lath
Scratch Coat/Mortar
Cultured Stone® Product

Figure 1

Open Studs
Two (2) Layers of Weather Resistant Barrier (Paper-Backed Metal Lath)
Metal Lath
Scratch Coat
Mortar
Cultured Stone® Product

Figure 2

Concrete or Masonry Surface
Mortar
Cultured Stone® Product

Figure 3

Metal Building
Two (2) Layers of Weather Resistant Barrier (Paper-Backed Metal Lath)
Metal Lath
Scratch Coat
Mortar
Cultured Stone® Product

Figure 4

Table I

WALL SURFACE	INTERIOR & EXTERIOR PREPARATION REQUIRED
Rigid Backwall Wallboard Plywood Paneling OSB Concrete Board Polystyrene Insulation Board installed over a Rigid Backwall	Cover sheathing with a minimum of one (1) layer of breather-type weather-resistant barrier, lap joints minimum 6" at vertical joints and minimum 2" at horizontal joints in shingle fashion. Then, in accordance with local building code, lap and install lath or mesh using galvanized nails or staples 6" on center vertically, penetrating studs a minimum of 1⅜". Continuously wrap weather-resistant barrier and metal lath a minimum of 16" to next framing member around all outside and inside corners (Fig.1).
Clean & Untreated Concrete Masonry Stucco	Examine newly poured concrete closely to ensure that its finished surface contains no release agents (form oil). If it does contain form oil, etch surface with muriatic acid, rinse thoroughly and/or score with a wire brush (Fig. 3). No further preparation needed.
Dirty, Painted or Sealed Concrete, Masonry or Stucco	Sandblast or waterblast to original surface (remove sandblasting dust by washing) or securely attach lath.
Metal Buildings	Install primary weather resistant barrier. Lap and install 3.4-lb. ⅜" rib, paper-backed, expanded metal lath to metal cladding supports of 20 ga. to 12 ga. using corrosion-resistant, self-drilling, self-tapping pancake-head screw with ⁷⁄₁₆" head, of 1¼" length or suitable to obtain ⅜" penetration beyond inside surface metal. Screws are to be installed on center equal to 1 screw/sq. ft. and shall not exceed 6" on center in one direction. Apply ½" to ¾" scratch coat and allow to dry 48 hours (Fig. 4).
Insulation Board or Open Studs Polystyrene Foam Board Please see Installation Over Thick Foam note page 7	Install primary weather-resistant barrier. Lap and install 3.4-lb. ⅜" rib, paper-backed, expanded metal lath to studs using nails which penetrate a minimum of 1" at 4" on center. Apply ½" to ¾" scratch coat and allow to dry 48 hours (Fig. 2).

WEATHER RESISTANT BARRIER/WATER RESISTIVE BARRIER (WRB)

When installing manufactured stone veneer, in an exterior application requiring a WRB, it is recommended that two separate layers of WRB be used. Each layer of WRB should meet the requirements for Water Resistive Barrier (Grade D) as defined by ICC Acceptance Criteria AC-38. Installation of the WRB should follow instructions provided by specific manufacturer.

WATERTABLE/SILL INSTALLATIONS

Watertables/sills provide a transition piece between a stone wainscot and other exterior finishes and for water runoff. They can also be used as a windowsill. Install using galvanized metal support brackets (Simpson Strong Tie A-21 or other galvanized right angle bracket with holding capacity minimum 5 lbs./LF) fastened with galvanized nails or screws penetrating studs 1" at a minimum of 16" on center. Two brackets per sill is preferred if blocking is present. Use construction adhesive to bond stone at bracket locations. Caulk and flash as required at Watertable/Sill locations using an approved corrosion-resistive flashing that extends to the surface of exterior wall finish and is installed to prevent water from re-entering the exterior wall envelope.

Windowsill Cross Section

- Caulk Flashing as Required*
- Galvanized Wood Screw
- Watertable/Sill Stone
- Construction Adhesive (Bracket Locations Only)
- Galvanized Metal Bracket, Holding Capacity 5 Lbs/LF
- Mortar Setting Bed
- Lath
- Cultured Stone® Product
- Weather-Resistant Barrier

Wainscot Cross Section

- Interior Finish per Schedule
- 2 x 4 Stud Wall (Insulated)
- Sheathing
- Weather-Resistant Barrier
- Exterior Finish per Schedule
- Caulk Flashing as Required*
- Construction Adhesive (Bracket Locations Only)
- Watertable/Sill Stone
- Galvanized Metal Bracket, Holding Capacity 5 Lbs/LF
- Galvanized Wood Screw
- Lath
- Mortar Setting Bed
- Cultured Stone® Product

*Failure to properly caulk flashing as described in these installation directions may result in water damage to the structure.

INSTALLING STONE AT GROUND LEVEL

Keep the finished edge of the Cultured Stone® product a minimum of 4" above grade if earth or 2" above pavement. Use a 2" × 4" leveling strip (straightedge) or weep screed/ flashing. This will:

- Provide drainage as required by applicable building code.
- Avoid possible staining of the stone by soils containing alkali or other minerals.

PREPARE YOUR WORK AREA

Spread Cultured Stone® wall veneer out at the job site so you have a good variety of sizes, shapes and colors to choose from. Plan for some variety and contrast in the overall design. Use small stones next to large ones, heavy-textured pieces next to smooth, thick stones next to thinner ones. Mixing Cultured Stone® wall veneer from different boxes during application will allow you to achieve a desirable balance of stones on your finished project.

MORTAR

NOTE: Weather Conditions

If stone is being applied in hot or dry weather, the back of each piece should be moistened with a fine spray of water or a wet brush to adequately prevent excessive absorption of moisture from the mortar. If being installed over concrete, masonry or scratch coat substrate, the substrate surface area should also be dampened before applying mortar. Surfaces should appear damp but free of surface water.

Applications should be protected from temperatures below 40°F as mortar will not cure properly under such conditions. Do not use antifreeze compounds to lower the freezing point of mortar. See International Building Code Section 2104.3 for cold weather construction requirements.

A. Mixing Mortar/Grout

Using Premixed Type N mortar or components from Table 2, mix to a firm, moist consistency. Mortar that is too dry and crumbly will not provide proper bond. Mortar that is too wet will be weak and messy.

Table 2 – Proportions for Mortar				
Parts By Volume				
Mortar Type	Portland Cement or Blended Cement	Masonry Cement Type N	Hydrated Lime or Lime Putty	Aggregate
N	1 —	— 1	1 —	4½ to 6 2¼ to 3

B. Mortar Color

Tinting mortar complements the color of the stone being installed. Example: Use tan mortar with earth-tone stones. This will greatly enhance the appearance of the finished installation. Regular mortars can be tinted to complement your Cultured Stone® product using iron oxide pigments available from your dealer.

C. Applying Mortar to Prepared Surface Area

Using a plasterer's or mason's trowel (Fig. 5 and 6), apply mortar ½" to ¾" thick to prepared surface area. Do not spread more than a workable area (5 to 10 sq. ft.) so that mortar will not "set up" before stone is applied.

Figure 5 — Apply mortar using a plasterer's trowel.
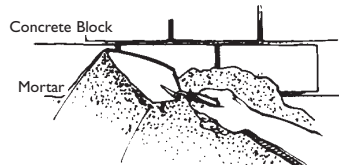
Figure 6 — Apply mortar using a mason's trowel.

APPLYING CULTURED STONE® PRODUCTS

See page 4 for additional instructions concerning Pro-Fit® Ledgestone, Pro-Fit® Alpine Ledgestone and European Castle Stone.

A. Starting Point

Apply mortar and stone working from the bottom up, or most stones can also be applied from the top down. Working from the top down may help avoid splashing previously applied stone with dripping mortar. Ledgestone types should be installed from the bottom up.

B. Joint Width

In order to obtain the most natural look, joints should be as narrow as possible. The average should not exceed ½" in width. An attractive look can also be achieved by fitting stones tightly together if desired. If using tight fit/drystack method, it is important to make sure scratch coat/backing has been covered completely by the setting bed of mortar. This will conceal the scratch coat/backing and prevent pockets from forming behind stones that could trap water.

C. Setting the Stones

Press each stone into the mortar setting bed firmly enough to squeeze some mortar out around the stone's edges. Apply pressure to the stone to ensure a good bond. **Ensure complete coverage between the mortar bed and back surface of the stone.** Mortar may also be applied to the entire back of the stone (Fig. 7). When stone is installed correctly, lath will not be visible.

Figure 7 — Mortar applied to the entire back of the stone.
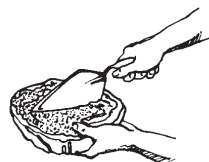
Care must be taken to avoid smearing mortar on surface of stone. Accidental smears or mortar droppings should be removed using a whisk broom only after mortar has become crumbly.

D. Install Corner Pieces First

If your application requires corner pieces, apply these first. Notice that the corner pieces have a long and a short leg. Alternate these in opposite directions (Fig. 8).

Figure 8 — Apply corners—alternating long and short legs in the opposite directions.

E. Install Flat Pieces

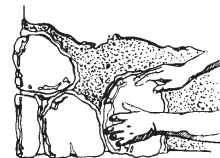After the corner pieces are in place, flat pieces are applied working toward the wall center (Fig. 9).

Figure 9 — Apply flat pieces.

F. Keep Your Mortar Joints Consistent

Place the individual stones close together, creating uniform joints between them. Cut and trim as required to achieve consistent width in the mortar joints. Then trim and fit small pieces into any remaining voids (Fig. 10).

Figure 10 — Position large pieces first, then trim and fit in smaller pieces.

G. Cutting and Trimming

Stones can be cut and shaped for fit. Use wide-mouth nippers or a hatchet (Fig. 11 and 12). (Refer to page 7–Tools Required.) Some broken stones may be found in the box. These also may be used in filling gaps between large stones. For best finished appearance, coat cut or broken edges with mortar. If possible, position cut edges up when they are above eye level, down when below eye level. **SAFETY GLASSES AND A DUST MASK[1] SHOULD ALWAYS BE WORN WHEN CUTTING ANY CULTURED STONE® PRODUCTS.**
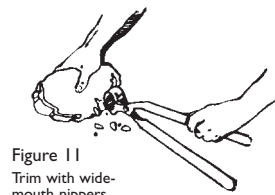

Figure 11 — Trim with wide-mouth nippers.

Figure 12 — Trim with a hatchet.

NOTES:
Level and Plumb Joint Lines

When applying Cobblefield® manufactured stone veneer, European Castle Stone, Limestone, Rockface, Coral or Ledgestone, endeavor to maintain level and plumb joint lines. Also, long rectangular pieces will look most natural if applied horizontally.

River Rock and Stream Stone

When applying River Rock or Stream Stone, plan the placement of stones to minimize trimming and cutting to maintain the natural look of the rounded shapes.

Ledgestone Types

When applying ledgestone types, keep joints as small as possible to maintain a natural look, and install from the bottom up. Strike joints deeply, being careful not to expose the back edge of stones or scratch coat/backing. See page 4 for additional instructions regarding Pro-Fit® Ledgestone, Pro-Fit® Alpine Ledgestone and European Castle Stone.

GROUTING AND FINISHING JOINTS

A. Grouting Joints

If additional mortar is required, use a grout bag to fill in joints (Fig. 13). Care must be taken to avoid smearing mortar on surface of stone. Accidental smears or mortar droppings should be removed only after mortar has become crumbly using a whisk broom or dry bristle brush. Never use a wet brush or wire brush.

Figure 13
Grout joints.

B. Finishing Joints

When the mortar joints have become firm or "thumb-print" dry (setting time will vary depending on wall surface and climatic conditions), they should be pointed up with a wood stick or metal jointing tool. Rake out excess mortar, compact and seal edges around stones (Fig. 14). Careful attention to proper and even jointing will result in a professional looking finish.
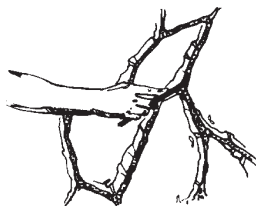
Figure 14
Finishing the job.

C. Cleaning Finished Job

At the end of the work day, or when 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. **A wet brush should never be used to treat the mortar joints** as this will cause staining that will be difficult, or impossible, to remove. **Do not use acid or acid-based products.**

ADDITIONAL INSTRUCTIONS FOR PRO-FIT® LEDGESTONE, PRO-FIT® ALPINE LEDGESTONE AND EUROPEAN CASTLE STONE

Fit the Joints Tightly

Install all these products with tight-fitted joints. Generally, components should be placed butting each other and aligned for level and plumb. When installing, the backs of all these components must be wet. They should be noticeably damp, but free from surface water. Mortar must be tinted to match the color of the stone you are installing to help conceal the joint lines.

A. Starting Point

Products are applied starting from the bottom and working up. Start each ProFit® Ledgestone course level and and continue horizontally completing each course before starting the next. European Castle Stone is done in a similar sequence to achieve a random ashlar pattern. If required, cut the appropriate size component to fit at the end or top of the finish area (Fig. 18). Frequently check the installation for level and alignment.

B. Install Corner Pieces First

If your application requires corner pieces, start by installing a corner piece first, followed by the adjoining flat pieces. Notice that the corner pieces have a long and short leg. Alternate these in opposite directions.
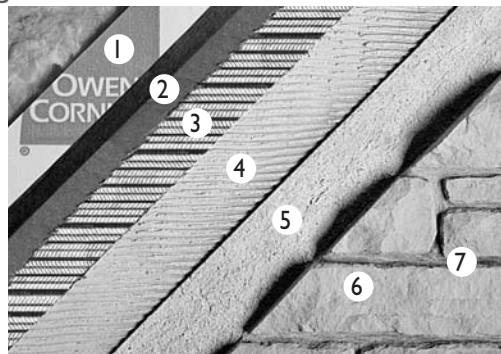
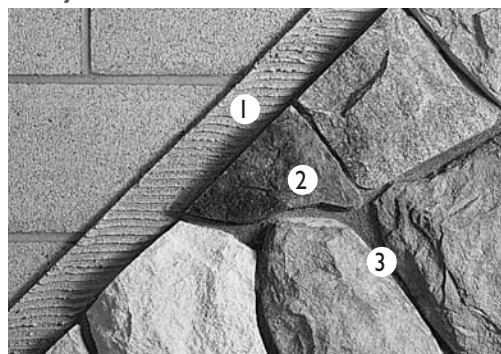## TYPICAL INSTALLATIONS:

Wood Frame:
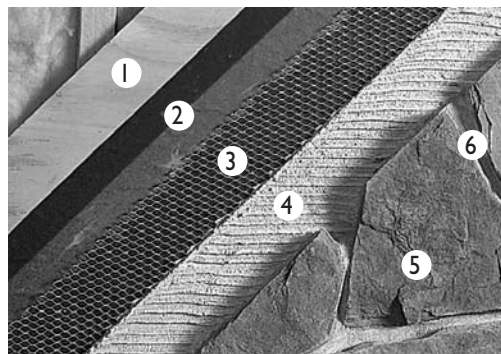
In sequence: (1) sheathing, (2) two layers of weather-resistant barrier, (3) galvanized metal lath, (4) mortar, (5) Cultured Stone® manufactured stone veneer, (6) mortar joint.

Rigid Foam Insulation:

In sequence: (1) rigid foam insulation, (2) two layers of weather-resistant barrier, (3) metal lath, (4) scratch coat, (5) mortar setting bed, (6) Cultured Stone® manufactured stone veneer, (7) mortar joint.

Masonry or Concrete:

In sequence: (1) mortar applied directly to untreated, unpainted masonry, concrete or stucco, (2) Cultured Stone® manufactured stone veneer, (3) mortar joint.

Corner Preparation:
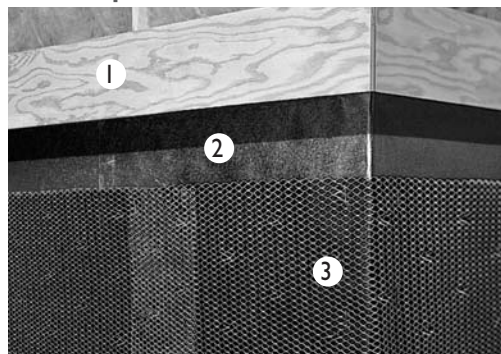
Weather-resistant barrier and galvanized metal lath must continuously lap a minimum of 16" beyond outside and inside corners. Lap materials 4" on horizontal and vertical joints. (1) wall substrate, (2) two layers of weather-resistant barrier, (3) metal lath.

C. Setting the Stones

Press each stone into the mortar setting bed firmly enough to squeeze some mortar out around the mortar groove at the back edge of component. Apply pressure to the component to ensure a good bond. **Ensure complete coverage between the mortar bed and back surface of stone.** Mortar may also be applied to the entire back of the stone. Check for level and plumb.

D. Install Flat Pieces

After the first corner piece is in place, the adjoining flat pieces of each course or pattern are applied. Using a trowel, strike off the excess mortar around the edges of the component prior to placing the next component. This will allow the next adjacent component to fit tightly (see Fig. 15). **Choose the correct length component to ensure that vertical joints do not line up.**
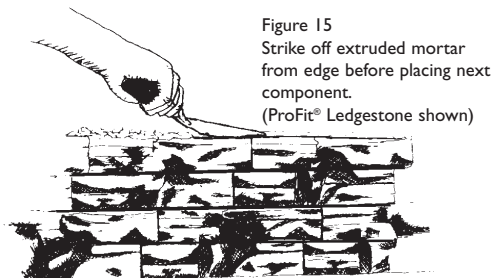
Figure 15
Strike off extruded mortar from edge before placing next component.
(ProFit® Ledgestone shown)

E. Cutting and Trimming

Vertical or horizontal cuts can be made using a table saw, circular saw or small grinder equipped with a dry cutting diamond or carborundum blade.

CUTTING SHOULD BE DONE OUTSIDE AS SOME DUST WILL OCCUR. SAFETY GLASSES AND A DUST MASK[1] SHOULD ALWAYS BE WORN WHEN CUTTING ANY CULTURED STONE® PRODUCTS. Stones can also be cut and shaped using wide-mouth nippers or a hatchet.

Additional Information on Cutting and Fitting

Finished Edges — Place finished edges at exposed areas.
Cut Edges — Place cut edges within courses.

Finishing Joints

The design simplicity of Pro-Fit® Ledgestone, Pro-Fit® Alpine Ledgestone and European Castle Stone allows for easy installation of components and provides a finished, tightfit joint between the stones. This reduces the time required for cutting, grouting and jointing.

Surface Cleaning

Care must be taken to avoid smearing mortar on the surface of components. Accidental smears or mortar droppings should be removed with a whisk broom or dry bristle brush only after mortar has become crumbly. **Do not use a wet brush or a wire brush. Do not use acid or acid-based products, power-washing, sandblasting or wire-brush cleaning.**

INSTALLING FINISHING TOUCHES

Hearthstone Installation Instructions

Hearthstones are not recommended or warranted for exterior use or as a surface area subject to foot traffic. TERRA CRAFT® Pavers are available from your dealer for use as a hearthstone or for patios and walkways.

A. Place Mortar

Place mortar ¾" deep in 3-inch wide strips 1 inch apart on prepared surface (Fig. 16).

Figure 16
Place mortar for Hearthstone installation.

B. Install Hearthstones

Place the first Hearthstone onto the mortar bed and level (Fig. 17). Place adjacent Hearthstones, aligning and leveling with the first piece.
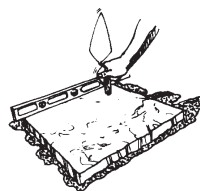

Figure 17
Place Hearthstone.

If joints need additional mortar, fill joints using a grout bag. Tool and finish joints following previous instructions under "Grouting and Finishing Joints." Ensure Hearthstones are set in a complete bed of mortar.

C. Cutting and Trimming Hearthstones

Hearthstones can be cut as required using a circular saw fitted with a carborundum or diamond blade or using a mason's brick or tile saw. Place finished edges at exposed areas. **SAFETY GLASSES AND A DUST MASK[1] SHOULD ALWAYS BE WORN WHEN CUTTING ANY CULTURED STONE® PRODUCTS.**

NOTES: Hearthstone Installation UL Listed

Cultured Stone® manufactured stone veneer and hearth products are made from non-combustible materials (UL Listing #209T). They are listed by Underwriters Laboratories, Inc., for use as floor protectors and wall shields with stoves and on fireplace hearths. To comply with UL Listing, mortar joints must not exceed ½" in width and the mortar must be even with the top of the hearth surface.

Raised Hearth

Do not cantilever or extend Hearthstones more than 1½" beyond direct support. When grouting the extended portion of a cantilevered Hearthstone, bring the grout to the front edge. Push a long galvanized nail horizontally into the grout to add support, then cover the nail with mortar.

Sealing Fireplaces/Hearths

If desired, sealing the Cultured Stone® facing or hearth of a fireplace installation will assist in the removal of smoke and soot stains should they occur. See "Sealers" in General Information section for more information (page 6).

Cultured Stone® Electrical Box Stones Installation Instructions

Attach UL-listed extension box to pre-wired and mounted electrical box.

Apply mortar to back of Electrical Box Stone or prepared substrate.

Center Electrical Box Stone over the extension box. Level and plumb. Use removable shims if required.

Complete placement of Cultured Stone® veneer or other exterior material around Electrical Box Stone.

NOTES: Electrical Box Stones Installation

- Electrical Box Stones must be installed in accordance with Cultured Stone® Installation Instructions.
- Extension box, light fixture or receptacle plate must be attached in accordance with manufacturer's instructions and local building codes.

Tuscan Lintel Installation Instructions
Method One
On installations where the top of the opening provides no support for the bottom edge of the Tuscan Lintel: Install metal support brackets as per Cultured Stone® Installation Instructions for Watertables/Sills. Then install Lintel stones in a full setting bed of mortar in accordance with Cultured Stone® Installation Instructions.

Method Two
On installations where the bottom edge of the Tuscan Lintel will be supported by a window or door frame's molding or profile: Install lintel stones in a full setting bed of mortar in accordance with Cultured Stone® Installation Instructions.

Make sure you do not cause deflection to window with weight of Lintel. If there is any question, use method one.

GENERAL INFORMATION
Cleaning
Dirt, etc., may be removed by using a strong solution of granulated soap or detergent and water with a bristle brush. **Do not use a wire brush** as it will cause damage to the surface. Rinse immediately with fresh water. For help with serious cleaning problems, contact your local dealer. **Do not attempt to clean using acid or acid-containing products, power-washing, sandblasting or wire-brush cleaning.**

Salt and De-Icing Chemicals
Because all concrete and masonry are vulnerable to damage by salt, Cultured Stone® products are not warranted against damage incurred from salt or other chemicals used to remove snow or ice. Do not use de-icing chemicals on areas immediately adjacent to a Cultured Stone® manufactured stone veneer application.

Scuffing
Scuffing occurs on all natural stone. Occasionally some scuffing will occur on the surface of Cultured Stone® products. This can enhance the natural appearance of your Cultured Stone® manufactured stone veneer installation. Some scuff marks can be removed by cleaning as described above.

Efflorescence
Efflorescence is a water-soluble salt that is deposited on the surface of stucco, concrete, brick and other masonry products by the evaporation of water from the wall. On rare occasions efflorescence will occur on Cultured Stone® products. To remove efflorescence, allow the stone to dry thoroughly, then scrub vigorously with a stiff bristle brush and clean water. Rinse thoroughly—do not use a wire brush. For more difficult efflorescence problems, scrub thoroughly with a solution of 1 part white household vinegar to 5 parts water. Rinse thoroughly. For unusually difficult cleaning problems, contact your local Cultured Stone® dealer.

Sealers
Sealers are not necessary on Cultured Stone® products. However, some customers use sealers to help prevent staining in applications prone to smoke, soot, dirt or water splashing. If you choose to use a sealer, make sure it is a silane-based, breathable sealer. Take note that sealers may darken the color of the stone. A sealer may also slow the natural movement of moisture out of the stone and increase the possibility of efflorescence and/or spalling. For information regarding actual performance or application of sealers, contact the manufacturer of the sealer directly.

Use of Cultured Stone® Below Water Levels
Cultured Stone® veneer is a lightweight concrete material and will not deteriorate from exposure to fresh liquid water. The use of Cultured Stone® veneer below water level, in which the water is chlorinated, treated with chemicals or dirty will likely cause discoloration as it would on any concrete, natural stone or other materials. Cultured Stone® concrete and many natural stone materials are subject to potential damage from adverse freeze thaw conditions. Water should be drained below susceptible materials prior to freezing temperatures. Pressure and abrasion from constant fast flowing water may cause some surface deterioration as it would on other concrete materials. The surfaces of concrete and many other materials may be affected by exposure to extensive salt-water conditions. Cultured Stone® veneer should not be considered a waterproof material.

INCORPORATE GOOD BUILDING PRACTICES
Building Code Requirements
Building code requirements vary from area to area. Check with local authorities for building code requirements in your area. Carefully read all Installation Instructions before proceeding with your Cultured Stone® manufactured stone veneer application.

Exterior Applications
Make sure that the application of Cultured Stone® products and the structure they are being applied to incorporate good building practices. Rigid, corrosion-resistant flashing shall be installed at all wall penetrations. Flashing type and locations shall be in accordance with the requirements of the applicable building code. On exterior applications, the incorrect installation or absence of flashing, cant strips, gutters and downspouts may result in diversion of water run-off onto

finished surface areas. Masonry and other building products subjected to these conditions may develop staining and, when combined with severe freeze-thaw conditions, may eventually cause damage. The application of Cultured Stone® products under these conditions is not recommended.

Rainscreen Statement

Some building codes require a rainscreen behind cladding materials, including manufactured stone veneer. If you are installing manufactured stone/brick veneer in one of these jurisdictions, or are concerned about extreme weather conditions, it is recommended that you choose a rainscreen system that can achieve the following:

• The system should create a space with a minimum depth of $^3/_8$'' (10mm) and maximum depth of ¾'' (19mm).

• The materials should be corrosion and rot resistant.

• Unless otherwise designed to manage moisture vapor, the system should be vapor open.

• If rainscreen space is created with a material other than solid strapping/ furring attached directly to framing, the following must be considered. Lath fasteners must be capable of supporting the weight of the finished wall cladding system considering the unsupported/cantilevered portion of fastener that is equal to the thickness of the rainscreen materials.

Overhead Application

Overhead, horizontal or sloped applications are not included in our building code evaluation reports or acceptances. These applications often require special approval/inspections by local building code inspectors. Contact your architect or engineer for assistance designing these installations.

Installation Over Thick Foam

Installation over foam board thicker than $^1/_2$" may require special fasteners. Consult your architect or engineer for assistance designing a thick foam installation.

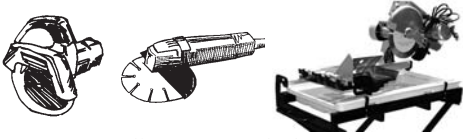## Capping Off the Exposed Top of Exterior Walls
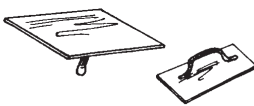
To achieve a finished architectural look on horizontal or sloping top areas of exterior walls, piers, retaining walls or other surfaces, Cultured Stone® Capstones or a poured-in-place concrete cap must be used to provide adequate run-off protection to the wall areas. Caps should extend approximately 1"–2" beyond the finished stone surface. **Cultured Stone® corner pieces, flat pieces, or hearthstones should not be used to cap walls.**

Retaining Walls

All retaining walls must be waterproofed at the fill side. Wall construction should incorporate proper use of granular backfill and provisions for good drainage. A continuous longitudinal drain along the back of the wall set in drain rock is recommended.

Chimney Cap

All chimney chases must be capped with a one-piece cap that extends 1"–2" beyond the finished stone surface to prevent water from entering the wall system. Chimney or chase construction should incorporate proper flashing.

(1) **CAUTION**: Contains Crystalline Silica. Dusts from cutting or sawing may create possible cancer hazard. Dusts of this product may cause irritation of the nose, throat and respiratory tract. Avoid prolonged or repeated inhalation of dusts from this product. A properly fitted NIOSH approved N-95 series disposable particulate filtering facepiece respirator (formerly referred to as "dust masks") should be used when mechanically altering this product (e.g., sawing, cutting, drilling or similar dust generating processes). Wear long-sleeved shirt, long pants, gloves and safety glasses with side shields when handling and installing material. Wash hands and face with soap and warm water immediately after handling this product.

Tools Required

Staple Gun/Hammer (Applying weather-resistant barrier and/or metal lath)

Metal Jointing Tool/Wood Stick (Finishing joints)

Mason's Trowel (Applying mortar)

Margin Trowel (Applying masonry adhesive)

Grout Bag

Wheelbarrow and Hoe (Mixing mortar)

Hock and Trowel

Level

Masonry, Circular, Table, Wet Cut Saw or Grinder with Carborundum or Diamond Blade

Whisk Broom (Cleaning finished work)

Wide-Mouth Nippers/Hatchet (Trimming stone)

Dust Mask(1)

Safety Glasses(1)

Cultured Stone® 50-Year Limited Warranty

Cultured Stone® products are covered for a period of 50 years from the date of purchase when used on a structure which conforms to local building codes and when installed in accordance with the manufacturer's instructions. Cultured Stone® will repair or provide, free of charge, new materials to replace any determined to be defective. This warranty is limited to the original purchaser and may not be transferred to any subsequent owner.

This warranty does not cover damage resulting from:

• Settlement of the building or other wall movement

• Contact with chemicals or paint

• Discoloration due to airborne contaminants
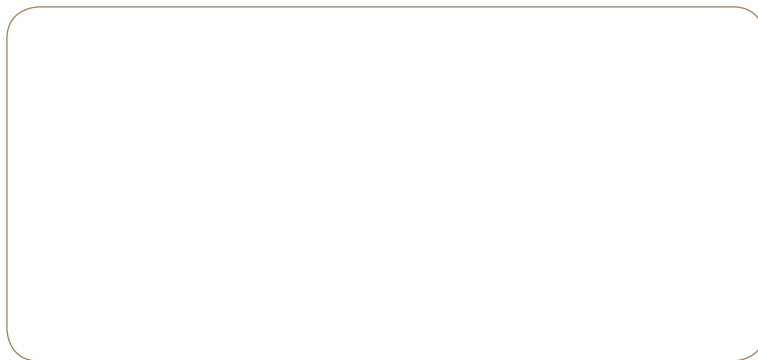
• Staining or oxidation

This warranty covers only manufacturing defects in Cultured Stone® manufactured stone products. Cultured Stone® is not responsible for labor costs incurred in removal and replacement of defective products. Hearthstones are not warranted for use on the ground or as a surface area subject to foot traffic.

CODE COMPLIANCE EVALUATION AND LISTINGS

ICC-ES ESR-1364. Tested or listed by Underwriters Laboratories, Inc., City of Los Angeles RR23744, HUD Materials Release No.1316, Texas Dept. of Insurance Product Evaluation EC-21.

AUTHORIZED DEALER

For additional information on
Owens Corning Cultured Stone® products
visit **www.culturedstone.com**
or call
1-800-255-1727

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The Preferred Name In Stone™