

CULTURED STONE®

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This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies Cultured Stone® brand simulated masonry, including manufactured stone veneer, manufactured brick veneer, and trim as manufactured by Owens Corning. Cultured Stone®, Cultured Stone Veneer®, Cultured Brick®, Pro-Fit® LedgeStone, Cobblefield®, Desert Blend®, Glacier®, C.S.V.®, Design Solutions™, San Francisco Cobblestone®, Handipak®, StoneCAD® and California Drift® are registered trademarks of Owens Corning. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles, including 04710 Simulated Brick; 04720 Cast Stone; and 04730 Simulated Stone.

SECTION 04700
SIMULATED MASONRY
(MANUFACTURED STONE VENEER, BRICK VENEER AND TRIM)

PART 1 GENERAL**1.01 SUMMARY**

- A. Section Includes: Simulated masonry, including manufactured stone veneer, manufactured brick veneer and trim.

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

- B. Related Sections: Section(s) related to this section include:
1. Frame Support for Substrate: Division 5 Cold Formed Metal Framing Section.
 2. Wall Framing and Sheathing: Division 6 Rough Carpentry Section.
 3. Flashing: Division 7 Flashing Section.
 4. Perimeter Sealing at Openings: Division 7 Joint Sealers Section.
 5. Finish Plaster: Division 9 Lath and Plaster Section.
 6. Fireplaces and Stoves: Division 10 Fireplace and Stove Section.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

1.02 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or

other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.

- B. ASTM International:
 - 1. ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - 2. ASTM C67 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
 - 3. ASTM C91 Standard Specification for Masonry Cement.
 - 4. ASTM C150 Standard Specification for Portland Cement.
 - 5. ASTM C177 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
 - 6. ASTM C192 Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.
 - 7. ASTM C207 Standard Specification for Hydrated Lime for Masonry Purposes.
 - 8. ASTM C270 Standard Specification for Mortar for Unit Masonry.
 - 9. ASTM C482 Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement.
 - 10. ASTM C567 Standard Test Method for Density of Structural Lightweight Concrete.
- C. Underwriters Laboratories, Inc. (UL):
 - 1. UL 723 Standard for Safety for Surface Burning Characteristics of Building Materials.
- D. Uniform Building Code (UBC):
 - 1. UBC Standard No. 15-5 for Water Absorption.
 - 2. UBC Standard No. 14-1 Kraft Waterproof Building Paper.
 - 3. UBC Standard No. 26-10 Parts I and IV: Test Method for Compressive Strength of Cylindrical Concrete Specimens.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide [Section/Product Title] that has been manufactured, fabricated and installed to withstand loads from [Specify code/standard reference.] and to maintain [Specify performance criteria.] performance criteria stated [Certified] by manufacturer without defects, damage or failure.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA® product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures.
- D. Samples: Submit selection and verification samples for finishes, colors and textures.
- E. Quality Assurance Submittals: Submit the following:
 - 1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
 - 2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 - 3. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

- 4. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- F. Closeout Submittals: Submit the following:

1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
2. Warranty: Warranty documents specified herein.

1.05 QUALITY ASSURANCE

A. Qualifications:

1. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided. Current data on building code requirements and product compliance may be obtained from Cultured Stone technical support specialists. Products are tested and listed by Underwriters Laboratories, Inc.

B. Regulatory Requirements: [Specify applicable requirements of regulatory agencies].

Specifier Note: Retain paragraph below for erected assemblies (either onsite or offsite) required for review of construction, coordination of work of several sections, testing or observation of operation. Mock-ups, when accepted or approved, establish standards by which work will be judged. Coordinate below with Division 1 Quality Control (Mock-Up Requirements) Section.

- C. Mock-Ups:** Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern, and workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.

Specifier Note: Edit paragraph below to specifying mock-up size.

1. Mock-Up Size: [Specify mock-up size.] sample panel at jobsite at location as directed.
2. Pattern: Illustrate field pattern of [Stone] [Brick] [Field cutting of units where required] and color and tooling of joints.
3. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
4. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

- D. Preinstallation Meetings:** Conduct preinstallation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

1.06 DELIVERY, STORAGE & HANDLING

- A. General:** Comply with Division 1 Product Requirements Sections.
- B. Ordering:** Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery:** Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection:** Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Store mortar and other moisture-sensitive materials in protected enclosures; handle by methods that avoid exposure to moisture.

1.07 PROJECT CONDITIONS

- A. Environmental Requirements/Conditions:** Ambient air temperature shall be in accordance with manufacturer's requirements.
1. Maintain materials and surrounding air temperature to minimum 40 degrees F (4 degrees C) prior to, during and for 48 hours after completion of work.
 2. Protect materials from rain, moisture and freezing temperatures prior to, during and for 48 hours after completion of work.
 3. Allow no construction activity on opposite side of wall during installation and for 48 hours after completion of work.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.

1.08 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements. Cultured Stone brand products are covered for a period of 50 years from the date of purchase when used on a structure that conforms to local building codes and when installed in accordance with the manufacturer's instructions.

- 1. Warranty Period: [Specify term.] years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards, and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 MANUFACTURED STONE VENEER

Specifier Note: Cultured Stone manufactured stone veneer products are intended for interior or exterior nonstructural use as a lightweight veneer facing on masonry, metal framed or wood framed construction for architectural aesthetics. Products are created by master craftsman who select the best textures, sizes and shapes from natural stones. These products are suitable for use on residential and commercial projects of many types. Cultured Stone brand products are produced in preselected sizes and shapes. Installation is quick and easy, and costs far less than a full thickness natural stone veneer.

- A. Manufacturer: Owens Corning.

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

- 1. Contact: One Owens Corning Parkway, Toledo, OH 43659; Telephone: (800) 255-1727; Fax: (866) 213-3037; E-mail: cltrdstn@owenscorning.com; Web site: www.culturedstone.com.

Specifier Note: Cultured Stone manufactured stone veneer should not be assumed to add to the load bearing capacity of a wall. Product should not be used below water level, as in swimming pool liners. Chlorine and other chemicals may discolor the Cultured Stone brand products and other masonry materials. Product should not be used in areas vulnerable to slush formed by chemicals used to melt ice or snow. Install a minimum of 4 inches (102 mm) above grade. Hearthstones are not recommended or warranted for exterior use or as a surface area subject to traffic. Terra Craft pavers are available for patios and walkways. Cultured Stone manufactured stone veneer is cast in molds, using a unique process that replicates existing colors and textures with meticulous detail. Each color and texture has its own blend of ingredients including Portland cement, lightweight aggregates and iron oxide pigments, producing the look and feel of natural stone.

- B. Proprietary Product(s)/System(s): Cultured Stone products, Cultured Brick products, Architectural Trim.
 - 1. Sizes and Shapes: [Specify random sizes, shapes and textures of finished product to duplicate natural stones. Stone diameter varies from 2 inches (51 mm) to 30 inches (762 mm). The average thickness of Cultured Stone wall veneers is 1 3/4 inches (45 mm). Thickness may vary from 1 inch (25.4 mm) to 2 5/8 inches (67 mm) depending on the texture.].
 - 2. Colors and Textures: [Specify colors and textures. Refer to manufacturer's published literature for available colors.].

Specifier Note: Edit below to specify selected patterns and colors. Designations are the copyrighted names of the products manufactured by Owens Corning. Manufacturer offers the following types: Stone veneer; Brick veneer; Hearthstones; Quoins; Capstones; Watertable/Sill; Keystones/Lintel Stones; Patio Pavers.

- 3. Cultured Stone Manufactured Stone Veneer, Texture: Type as indicated below:
 - a. [Blended Textures: As desired].
 - b. [Carolina LedgeStone: Onyx Brown, Pewter Gray, Silver Sand, Vintage Sand].

- c. [Cobblefield: Austin, Brown, Chardonnay, Desert Blend, Gray, Ohio, Old Country, San Francisco, Texas Cream].
 - d. [Coral Stone: Fossil Reef].
 - e. [Country LedgeStone: Aspen, Bucks County, Caramel, Chardonnay, Eucalyptus, Fawn, Honey, Mojave, Platinum, Shale, Walnut, White Oak].
 - f. [Dressed Fieldstone: Aspen, Brandywine, Bucks County, Chardonnay, Villa di Lago].
 - g. [Driftstone: Regular].
 - h. [Drystack LedgeStone: Caramel, Cedar, Chardonnay, Mist, Suede].
 - i. [European Castle Stone: Bucks County, Chardonnay, Golden Blend, Gray, Slate].
 - j. [Fieldstone: Napa Valley].
 - k. [Limestone: Buckeye, Bucks County, Cedar, Chardonnay, Kentucky, Lake Erie, Suede].
 - l. [Old Country Fieldstone: Chardonnay, Piedmont, Riviera, Romana, Tudor].
 - m. [Pro-Fit LedgeStone: Autumn, Gray, Mojave, Platinum, Shale, Southwest Blend].
 - n. [River Rock: Earth Blend, Lakeshore, Lake Tahoe, Michigan, Whitewater].
 - o. [Rock Face: Bucks County, Dover, Granite, Romana, Stirling].
 - p. [Southern LedgeStone: Bucks County, Chardonnay, Fawn, Fog, Gray, Rustic, Walnut, White Oak].
 - q. [Split Face: Granite, Great Lakes, Superior].
 - r. [Stream Stone, Standard sizes with [Specify %.] "Skimmer": Spring, Summer, Winter].
 - s. [Water Wash: Tehama, Toffee, Yosemite].
 - t. [Weather Edge LedgeStone: Fox Valley, Silverado, Wisconsin].
4. Cultured Brick, Texture: Type as indicated below:
- a. Used: [Antique Red, California Drift, Chicago Used, Old Used, Vintage Used].
5. Trim Products: Cultured Stone Manufactured Stone Veneer:
- a. Quoins, Type: [Buckskin] [Champagne] [Gray] [Taupe].
 - b. Capstones, Type: [Buckskin] [Champagne] [Gray] [Taupe].
 - c. Watertable/Sill: [Buckskin] [Champagne] [Gray] [Taupe].
 - d. Keystones: [Buckskin] [Champagne] [Gray] [Taupe].
 - e. Trim Stones: [Buckskin] [Champagne] [Gray] [Taupe].
6. Terra Craft: Landscape Pavers:
- a. Waterwash: [Spring] [Summer] [Tehama] [Winter].

Specifier Note: Cultured Stone brand manufactured stone veneers and hearthstones are made from noncombustible materials. They are listed by Underwriters Laboratories, Inc. (UL Listing #209T and #3592) for use as floor protectors and wall shields with stoves and on fireplace hearths. Mortar joints must not exceed 1/2 inch (12.7 mm) in width and the mortar must be even with the top of the hearth surface.

- 7. Hearthstones, Type:
 - a. 19 inches x 20 inches (483 x 508 mm); [Blond, Cream, Drift, Granite, Gray, Great Lakes, Marsh, Napa, Silver Sand, Whitewater].
 - b. Water Wash: [Spring, Summer, Winter].
- C. Proprietary Material Approvals: Provide manufactured stone veneer products with the following approvals:
- 1. National Evaluation Service Report NER-358 (BOCA, UBC, SBC, TRC, IBC).
 - 2. International Conference of Building Officials (ICBO) Report 5749.
- D. U.S. Department of Housing and Urban Development, Materials Release No. 1316.
- 1. City of Los Angeles, Research Report RR23744.

2. Underwriters Laboratories, Inc., listed in UL Material Approval Guide.
 3. Texas Department of Insurance Product Evaluation EC-21.
 4. Building Materials Evaluation Commission BMEC #01-04-256.
- E. Proprietary Product(s)/System(s) Testing:
1. Shipping Weight of Manufactured Units: 8 - 12 psf (39 - 59 kg/m²).
 2. Compressive Strength: Tested in accordance with ASTM C39 and C192.
 3. Shear (Adhesion) Strength: Tested in accordance with ASTM C482 using a unit thickness approximately the same as the stone unit.
 4. Thermal Resistance: K-factor 2.82 in accordance with ASTM C177. R-factor is 0.355 per 1 inch (25.4 mm) of thickness.
 5. Freeze/Thaw: Tested in accordance with ASTM C67.
- F. Fire Hazard Test on 1 7/8 inch (48 mm) Thick Sample: Flamespread of 0, smoke development of 0 in accordance with UL 723.

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.03 RELATED MATERIALS

- A. Related Materials: Refer to other sections listed in Related Sections specified herein for related materials.
- B. Mortar:
1. Portland Cement, ASTM C150, Type I or masonry cement (Type N), ASTM C91.
 2. Masonry sand.
 3. Lime: ASTM C207.
 4. Iron oxide pigments.
- C. Masonry Sealer: [If specifying use: breather type (non-film forming) sealer].
- D. Weather Resistant Barrier: Kraft waterproof building paper, UBC Standard No. 14-1 or ASTM D226 for Type 1 felt.
- E. Metal Lath: Minimum 18 gauge galvanized woven wire mesh or galvanized [2.5 lb (1.1 kg) flat diamond mesh] [3.4 lb (1.5 kg) flat rib].

2.04 MORTAR MIXES

- A. Mixing: Mix proprietary materials in accordance with manufacturer's instructions, including product data and product technical bulletins. Thoroughly mix mortar ingredients in quantities needed for immediate use in accordance with ASTM C270, Type N. Do not use antifreeze compounds to lower the freezing point of mortar.

2.05 SOURCE QUALITY

- A. Source Quality: Obtain [Product title] materials from a single manufacturer.

PART 3 EXECUTION

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.03 PREPARATION

Specifier Note: Edit Article below to specify requirements for substrates used on Project.

- A. Surface Preparation: [Specify applicable product preparation requirements.].
 1. Open Stud: Install paperbacked metal lath to studs using galvanized nails or staples which penetrate a minimum of 1 inch and 4 inches (25.4 and 102 mm) on center. Wrap weather resistant barrier and metal lath a minimum of 16 inches (406 mm) around all outside and inside corners. Apply 1/2 inch - 3/4 inch (12.7 - 19.1 mm) scratch coat and allow to dry 48 hours.
 2. Sheathed Surfaces: Install 1 layer of weather resistant barrier with lap joints 4 inches (102 mm) shingle fashion. Apply code approved metal lath, attach with galvanized nails or staples which penetrate a minimum of 1 inch (25.4 mm) into framing. Fastener spacing should be 6 inches (152 mm) on center vertically and 16 inches (406 mm) on center horizontally. Wrap weather resistant barrier and metal lath a minimum of 16 inches (406 mm) around all outside and inside corners.
 3. Concrete and Masonry Surfaces, New, Clean and Untreated: No preparation needed. Examine newly poured concrete closely to ensure that its finished surface contains no releasing agents (form oil). If it does contain form oil, etch surface with muriatic acid, rinse thoroughly and/or score with a wire brush, or use high pressure water or sandblasting to remove.
 4. Dirty, Painted, Sealed or Oil Based Releasing Agent: Sandblast or waterblast to original surface. Remove sandblasting dust by washing, or securely attach lath.

Specifier Note: Retain paragraph either above or below.

- 5. Apply metal lath to surfaces; attach with galvanized concrete nails that penetrate a minimum of 1 inch (25.4 mm). Apply 6 inches (152 mm) apart, 16 inches (406 mm) on center.

Specifier Note: Coordinate article below with manufacturer’s recommended installation details and requirements. Manufacturer recommends spreading out Cultured Stone brand products at the jobsite so there is a good variety of sizes, shapes and colors from which to choose. Plan some variety and contrast in the overall design. Use small stones next to large ones, heavy-textured pieces next to smooth and thick stones next to thinner ones. Mixing Cultured Stone manufactured stone veneer products from different boxes during application will allow a desirable balance of individual stones on the finished project. 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 Cultured Stone products using iron oxide pigments.

3.04 MANUFACTURED STONE VENEER INSTALLATION

Specifier Note: 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. Applications should be protected from freezing as mortar will not set up properly under such conditions. Do not use antifreeze compounds to lower the freezing point of mortar.

Specifier Note: Edit paragraph below. 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. Ledge stone types should be installed from the bottom up. Using a trowel, apply mortar 1/2 inch - 3/4 inch (12.7 - 19.1 mm) thick to prepared surface area. Do not spread more than a workable area of 5 - 10 ft² (0.47 - 0.93 m²) so that mortar will not “set up” before stone is applied.

- A. Mortar: Apply 1/2 inch - 3/4 inch (12.7 - 19.1 mm) of mortar to [Lath] [Dampened masonry, stucco or concrete surfaces], covering a maximum of 10 ft² (0.93 m²) at one time. Press the units firmly into position in soft mortar bed, wiggle and apply slight pressure to unit to ensure firm bonding, causing mortar to extrude slightly around edges of units. Mortar may also be applied to the entire back of the stone.

Specifier Note: Edit paragraph below. In order to obtain the most natural look, joints should be as narrow as possible; average joint should not exceed 1/2 inch (12.7 mm) in width. An attractive look can also be achieved by fitting stones tightly together if desired.

- B. Joints: Place units with uniform mortar joints. Stone joints should not be over 1/2 inch - 3/4 inch (12.7 - 19.1 mm) in width. When installing pre-fitted stone textures, [Pro-Fit Ledge stone] [Carolina Ledge stone] [European Castle Stone], units should be tight fit/dry stacked against each other with no allowance for mortar joints. Brick joints should be a uniform 3/8 inch (9.5

mm) in width, with horizontal joints level, [With head joints of brick evenly spaced and centered above unit below]. Install outside corner return units with short and long lengths alternated.

1. Remove excess mortar; do not allow mortar to set up on face of units. Point [Rake] and tool joints before mortar has set. Clean and finish joints in accordance with manufacturer's instructions.

Specifier Note: Exterior Applications: On exterior applications, the incorrect installation or absence of flashing, cant strips, gutters and downspouts may result in diversion of water runoff 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 surface damage. The application of Cultured Stone brand manufactured stone veneer under these conditions is not recommended.

- C. Setting Units: 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.
 1. Install hearth pieces in a full 1/2 inch - 3/4 inch (12.7 - 19.1 mm) deep mortar setting bed.
- D. Cutting: Perform necessary cutting with proper tools to provide uniform edges; take care to prevent breaking unit corners or edges.
- E. Finish Color/Textures/Patterns: [Specify installation finishes coordinated with finishes specified in Part 2 Products.].
- F. Related Products Installation: Refer to other sections listed in Related Sections specified herein for related materials installation.

3.05 FIELD QUALITY REQUIREMENTS

Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer, and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service not required.

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
 1. Site Visits: [Specify number and duration of periodic site visits.].

3.06 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Remove construction debris from project site and legally dispose of debris.
 1. Cleaning: Use 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. Do not attempt to clean using acid or acid based products. Do not clean with high pressure power washer.
 2. Salt and De-icing Chemicals: Do not use de-icing chemicals on areas immediately adjacent to a Cultured Stone products application.

Specifier Note: Edit paragraph below. Scuffing occurs on all natural stone. Occasionally, some scuffing will occur on the surface of Cultured Stone products. Some scuff marks can be removed by cleaning as described above.

3. Scuffing: Remove scuff marks by cleaning as specified herein.

Specifier Note: Edit paragraph below. On rare occasions, efflorescence may occur on Cultured Stone products.

4. Efflorescence: To remove efflorescence, allow stone to dry thoroughly, then scrub vigorously with a stiff bristle brush and clean water. Rinse thoroughly. Do not use a wire brush. For difficult efflorescence problems, scrub thoroughly with a solution of 1 part white household vinegar to 5 parts water. Rinse thoroughly.

Specifier Note: Sealers are not necessary on Cultured Stone brand products, however, some customer use sealers help prevent staining in applications prone to smoke, soot, dirt or water splashing. Sealer 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 spalling.

5. [Sealer: Use a silane based, breathable sealer.].

3.07 PROTECTION

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- A. Protection: Protect installed product and finish surfaces from damage during construction.

END OF SECTION