

**SECTION 04 73 00**  
**SIMULATED MASONRY**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Mortar-on manufactured stone veneer and accessories
- B. Mortarless manufactured stone veneer and accessories.

**1.2 RELATED SECTIONS**

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 04 20 00 - Unit Masonry.
- C. Section 05 40 00 - Cold-Formed Metal Framing.
- D. Section 06 10 00 - Rough Carpentry.
- E. Section 06 16 36 - Wood Panel Product Sheathing.
- F. Section 07 10 00 – Moisture prevention and Waterproofing.
- G. Section 07 60 00 - Flashing and Sheet Metal.
- H. Section 07 90 00 - Joint Protection.
- I. Section 10 30 00 - Fireplaces and Stoves.

**1.3 REFERENCES**

- A. American National Standards Institute (ANSI): ANSI A118.4 Specification for Latex-Portland Cement Mortar.
- B. ASTM International (ASTM):
  - 1. ASTM A641 - Standard Specification for Zinc-Coated. (Galvanized) Carbon Steel Wire.
  - 2. ASTM C 39 - Test Method for Compressive Strength of Cylindrical Concrete Specimens.
  - 3. ASTM C 67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
  - 4. ASTM C 140 - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
  - 5. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar.
  - 6. ASTM C 150 - Standard Specification for Portland Cement.
  - 7. ASTM C 207 - Standard Specification for Hydrated Lime for Masonry Purposes.
  - 8. ASTM C 270 - Standard Specification for Mortar for Unit Masonry.
  - 9. ASTM C 348 - Standard test Method for Flexural Strength of Hydraulic-Cement Mortars.
  - 10. ASTM C 482 - Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement.

11. ASTM C 518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
  12. ASTM C 778 - Standard Specification for Standard Sand.
  13. ASTM C 847 - Standard Specification for Metal Lath.
  14. ASTM C 932 - Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering.
  15. ASTM C 979 - Standard Specification for Pigments for Integrally Colored Concrete.
  16. ASTM C 1032 - Standard Specification for Woven Wire Plaster Base.
  17. ASTM C 1059 - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete.
  18. ASTM C 1262 Standard Test Method for Evaluating the Freeze Thaw Durability of Manufactured Concrete Masonry Units and Related Concrete Units.
  19. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
  20. ASTM F 1667 - Standard Specification for Driven Fasteners, Nails, Spikes and Staples.
  21. ASTM D1761 - Mechanical Fasteners
  22. ASTM D 3498- Construction Adhesive
- C. Building Code Compliance: The International Association of Plumbing and Mechanical Officials (IAPMO).
- D. International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM):
1. RILEM Test No. II.4 - Water Absorption Under Low Pressure (Pipe Method).
- E. US Green Building Council's (USBGC) Leadership in Energy and Environmental Design (LEED).
- F. Masonry Veneer Manufacturers Association (MVMA).
- G. Underwriter's Laboratory (UL) 723 - Standard for Safety for Surface Burning Characteristics of Building Materials.

#### 1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  1. Preparation instructions and recommendations.
  2. Storage and handling requirements and recommendations.
  3. Installation instructions / guides / methods.
  4. Cleaning instructions and maintenance data.
- C. Shop Drawings: Indicate layout, show profiles and product components, including but not limited to anchorage, accessories, finish colors, patterns, textures, edge conditions and relationships with adjacent construction or surfaces.
- D. Qualification Data: Safety and quality documentation for installer.
- E. Test Reports: Certified test reports indicating compliance with specified performance requirements and conformance with specified physical properties.
- F. Evaluation Reports: For metal lath with paper backing in lieu of weather resistive barrier.
- G. LEED Submittals: Manufacturer's certification for regional materials and recycled content.
- H. Pre-Installation Conference: Minutes of pre-installation conference.

- I. Warranty Documentation: Product and installation warranties.
- J. Verification Samples: For each product specified, two sample boards, representing colors, patterns, textures, finishes and mortar to be installed.

## 1.5 QUALITY ASSURANCE

- A. Single Source Responsibility: Obtain primary manufactured stone veneer and trim from a single manufacturer to the greatest extent possible. Provide secondary materials only of type and from source recommended by manufacturer of primary materials.
- B. Manufacturer Qualifications: Shall have a minimum of 5 years' experience in producing manufactured stone veneer.
- C. Installer Qualifications:
  - 1. Shall have a minimum of 5 years' experience installing manufactured stone veneer.
  - 2. Has documented installation procedures and field quality control program.
  - 3. Provides OSHA 10/30 Hour trained project management.
  - 4. Capable of providing extensive jobsite safety programs including scaffold safety, fall protection and personal protective equipment.
- D. Product Compatibility Documentation: Manufacturers of products and systems certify in writing that products are compatible.

## 1.6 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

## 1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards; in manufacturer's unopened packaging with identification labels intact until ready for installation. Protect from damage.

## 1.8 WARRANTY

- A. Manufacturer's standard limited warranty for materials and workmanship.
  - 1. Warranty Period for Installation: 1 year.
  - 2. Warranty Period for Manufactured Product: 30 years.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer:
  - Mason's Mark Stone Veneer Corporation, which is located at: 106 Sewickley Street, New Stanton, PA 15401; Phone: 724-635-0082;
  - Email: [sales@masonsmarkstone.com](mailto:sales@masonsmarkstone.com)
  - Website: <https://www.masonsmarkstone.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60

00 - Product Requirements.

2.2 MANUFACTURED STONE VENEER AND ACCESSORIES

- A. Product: Mortar-on pre-cast manufactured stone veneer and accessories as manufactured by Mason's Mark Stone Veneer Corp.
- B. Manufactured Stone Veneer Properties:
  - 1. Stone Thickness: 3/4 inches (19 mm) to 2-1/4 inches (57.2 mm).
  - 2. Weight: Maximum of 10 lbs/sqft (48.8 kg/m<sup>2</sup>).
  - 3. Compressive Strength: Minimum of 8000 PSI (55.1 Mpa) when tested in accordance with ATSM C 192.
  - 4. Water Absorption: Less than 5 percent when tested in accordance with ASTM C140 or UBC standard 15-5.
  - 5. Freeze-Thaw: Less than 3 percent mass loss when tested in accordance with ASTM C 67.
  - 6. Shear Bond Strength: Minimum of 50 PSI (0.345 MPa) when conducted in accordance with ASTM C 482.
  - 7. Thermal Resistance: R-value greater than or equal to 0.528 when tested at a thickness of 1.48 inch (37.5 mm) in accordance with ASTM C 518.
  - 8. Flexural Strength: Tested in accordance with ASTM C 348, Section 4.4.
  - 9. Tensile Strength: Tested in accordance with ASTM C 190, Section 4.5.
  - 10. Weather Resistance: Mix design to be resistant to degradation by weather.
- C. Architectural Trim:
  - 1. Products: Single source from Mason's Mark Stone Veneer Corp.
  - 2. Wall Capstones:
    - a. Texture: As selected by Architect from manufacturer's full range.
    - b. Color: As selected by Architect from manufacturer's full range.
    - c. Size: As selected by Architect from manufacturer's full range.
  - 3. Pier Capstones:
    - a. Texture: Chiseled.
    - b. Color: As selected by Architect from manufacturer's full range.
    - c. Size: As selected by Architect from manufacturer's full range.
  - 4. Water Table/sill:
    - a. Color: As selected by Architect from manufacturer's full range.
    - b. Size: As selected from manufactured full range.
    - c. Provide sloped top surface and drip edge.
  - 5. Light Fixture Stones:
    - a. Color: As selected by Architect from manufacturer's full range.
    - b. Size: As necessary for light fixture indicated.
  - 6. Receptacle Stones:
    - a. Color: As selected by Architect from manufacturer's full range.
    - b. Size: As necessary for light electrical outlet.
- D. Weather Resistant Barrier: In compliance with ASTM D 226.
  - 1. Description: 2 layers of No. 15 non-perforated asphalt-saturated organic felt paper.
  - 2. Description: 1 layer of No. 15 non-perforated asphalt-saturated organic felt paper and a house-wrap product supported by a current evaluation report showing equivalency to Grade D building paper.
- E. Reinforcing (Lath):

1. Materials: Corrosion resistant, minimum 2.5 lbs per square yard (1.36 kg/m<sup>2</sup>) expanded metal lath in compliance with ASTM C 847.
  2. Materials: Corrosion resistant, minimum 18 gauge woven wire mesh that complies with ASTM C 1032.
  3. Materials: Corrosion resistant, minimum 3.4 lbs per square yard (1.84 kg/m<sup>2</sup>) expanded metal lath, 3/8 inch (9.5 mm) thick, with paper backing on lath meeting the requirements of ASTM D 226.
  4. Materials: \_\_\_\_\_.
- F. Fasteners: Galvanized steel fasteners.
1. For Wood Stud Applications:
    - a. Nails: 11 gage nails having a 7/16 inch (11 mm) head, minimum of 1-1/2 inches (38 mm) long.
    - b. Staples: 7/8 inch long (22 mm), 16 gauge staples.
  2. For Metal Stud Applications:
    - a. Screws: Corrosion resistant screws with 7/16 inch (11 mm) head and of sufficient length to penetrate metal stud a minimum of 3/8 inch (9.5 mm).
- G. Weep Screed: Corrosion resistant, minimum 0.019 inch (0.5 mm with a minimum vertical attachment of 3-1/2 inches (89 mm)).
1. Holes: Minimum diameter of 3/16 inch (4.75 mm), spaced at a maximum of 33 inches (838 mm) on center.
  2. Attachment Flange: Minimum of 3-1/2 inches (89 mm).
  3. Materials: Plastic fabrication.
  4. Materials: Vinyl fabrication.
- H. Mortar: Mixed with potable water clean and free from injurious amounts of oils, acids, alkalis, salts, organic minerals or other deleterious substances.

### 2.3 MORTARLESS MANUFACTURED STONE VENEER AND ACCESSORIES

- A. Product: Country Ledge Quick-Fit as manufactured by Mason's Mark Stone Veneer.
- B. Manufactured Stone Veneer Properties:
1. Stone Thickness: 1-1/8 inches (28.5 mm) to 2-1/2 inches (63.5 mm).
  2. Stone Width: 8 inches (203 mm).
  3. Stone Length: 8 inches (203 mm) to 20.5 inches (520.7 mm).
  4. Weight: Maximum of 15 lbs/ft<sup>2</sup> (73 kg/m<sup>2</sup>).
  5. Density: As determined by ASTM C 567.
  6. Compressive Strength: Minimum of 8000 PSI (55.1 Mpa) when tested in accordance with ATSM C 192.
  7. Water Absorption: Less than 5 percent when tested in accordance with ASTM C140 or UBC standard 15-5.
  8. Freeze-Thaw: Less than 3 percent mass loss when tested in accordance with ASTM C 67.
  9. Shear Bond Strength: Minimum of 50 PSI (0.345 MPa) when conducted in accordance with ASTM C 482.
  10. Thermal Resistance: R-value greater than or equal to 0.528 when tested at a thickness of 1.48 inch (37.5 mm) in accordance with ASTM C 518.
  11. Flexural Strength: Tested in accordance with ASTM C 348, Section 4.4.
  12. Tensile Strength: Tested in accordance with ASTM C 190, Section 4.5.
  13. Weather Resistance: Mix design to be resistant to degradation by weather.
- C. Architectural Trim:
1. Products: Single source from Mason's Mark Stone Veneer Corp.
  2. Water Table/Sill: Provide sloped top surface and drip edge. Color and size as selected from manufacturer's full range.

- D. Weather Resistant Barrier: In compliance with ASTM D 226.
  - 1. Description: 2 layers of No. 15 non-perforated asphalt-saturated organic felt paper.
  - 2. Description: 1 layer of No. 15 non-perforated asphalt-saturated organic felt paper and a house-wrap product supported by a current evaluation report showing equivalency to Grade D building paper.
- E. Fasteners: #8 stainless steel or zinc plated Phillips head screws 1-1/4 inches (32 mm) long.
- F. Masonry Adhesive: SRW Vertical Instant Lock

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Notify Architect in writing of any deviations from manufacturer's recommended installation tolerances and conditions.
- B. Do not proceed with installation until substrates have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Commencement of installation constitutes acceptance of conditions.

### 3.2 MORTARED STONE VENEER INSTALLATION

- A. Install in accordance with manufacturer's written instructions and recommendations, including the following.
  - 1. Corners: Install pre-manufactured corner units. Field built corners are not permitted.
  - 2. Weather Resistant Barrier:
    - a. Install weather resistive barrier in accordance with weather resistive barrier manufacturer's instructions over all exterior surfaces designated to receive stone veneer.
    - b. Apply weather resistive barrier horizontally with the upper layer lapped over the lower layer at not less than 2 inches (51 mm).
    - c. Lap weather-resistive barrier not less than 6 inches (152 mm) at the vertical joints.
    - d. In the case of applications with two layers, start with two horizontal layers at the bottom of exterior wall or structure.
  - 3. Reinforcing (Lath):
    - a. Lap lath not less than 2 inches (51 mm) around vertically and horizontally.
    - b. Terminate lath a minimum of 2 inches (51 mm) on the foundation and flange of the weep screed or as directed by project specifications and or local building codes.
    - c. Install metal lath with the small cups pointing upward to better capture mortar scratch coat.
  - 4. Fasteners:
    - a. In the case of rigid sheathing, avoid excessive fasteners applied between wall framing. In the case of exterior gypsum sheathing (e.g. DensGlass), fasteners shall only be attached into wall framing unless additional fasteners are approved by the design professional.
    - b. Wood Stud Applications:
      - 1) Penetration Depth: Fasteners shall penetrate stud a minimum depth of 3/4 inch (19 mm). Refer to governing building code for information on specific fastener penetration depth.
      - 2) Spacing: Maximum of 6 inches (152 mm) vertically and 16 inches (406 mm) horizontally.

- c. Metal Stud Applications:
  - 1) Penetration Depth: Screws shall penetrate stud a minimum depth of 3/8 inch (9.5 mm). Refer to governing building code for information on specific fastener penetration depth.
- 5. Weep Screed: Integrate with weather resistive barrier and metal lath
  - a. Attachment Flanges: Minimum of 3-1/2 inches (89 mm) at or below the foundation plate line on exterior walls in accordance with ASTM C 926. The exterior lath shall cover and terminate on the attachment flange of the weep screed.
  - b. Do not cover weep holes during installation.
- 6. Clearances:
  - a. Weep Screed and Stone above Finished Grade: Terminates a minimum of 4 inches (102 mm) or per local code and building practices.
  - b. Weep Screed and Stone above Paved Surfaces: Terminates a minimum of 2 inches (51 mm) or as per local code.
  - c. Weep Screed and Stone above Paved Walking Surface Supported By Same Foundation Supporting The Wall: Terminates a minimum of 1/2 inch (13 mm) or as per local code.
- 7. Mortar: Mix with potable water clean and free from injurious amounts of oils, acids, alkalis, salts, organic minerals or other deleterious substances.

### 3.3 MORTARLESS STONE VENEER INSTALLATION

- A. Install in accordance with manufacturer's written instructions and recommendations, must including the following.
  - 1. Fasteners shall penetrate the OSB a minimum of 1/2 inch (12.7 mm). There shall be a minimum of one (1) fastener for every 5" of stone panel length.
  - 2. Weep Screed: Integrate with weather resistive barrier and metal lath
    - a. Attachment Flanges: Minimum of 3-1/2 inches (89 mm) at or below the foundation plate line on exterior walls in accordance with ASTM C 926. The exterior lath shall cover and terminate on the attachment flange of the weep screed.
    - b. Do not cover weep holes during installation.
  - 3. Clearances:
    - a. Weep Screed and Stone above Finished Grade: Terminates a minimum of 4 inches (102 mm) or per local code and building practices.
    - b. Weep Screed and Stone above Paved Surfaces: Terminates a minimum of 2 inches (51 mm) or as per local code.
    - c. Weep Screed and Stone above Paved Walking Surface Supported By Same Foundation Supporting The Wall: Terminates a minimum of 1/2 inch (13 mm) or as per local code.

### 3.4 CLEANING AND PROTECTION

- A. Cleaning: Clean stone veneer in accordance with manufacturer's written instructions and recommendations.
- B. Protection:
  - 1. Protect in-progress and finished work from rain for 48 hours following installation.
  - 2. Protect finished work from damage until the date of Substantial Completion. Repair damaged components as required.

**END OF SECTION**