PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cultured Stone Veneer.
B. Architectural Trim Stone.

1.2 RELATED SECTIONS

A. Section 04 20 00 - Unit Masonry.
B. Section 06 10 00 - Rough Carpentry.
C. Section 05 40 00 - Cold-Formed Metal Framing.
D. Section 07 27 00 - Air Barriers.
E. Section 07 28 00 - Underlayments*
F. Section 07 62 00 - Sheet Metal Flashing & Trim.
G. Section 07 90 00 - Joint Protection.
H. Section 09 24 13 - Adobe Finish.
I. Section 10 30 00 - Fireplaces and Stoves.

1.3 REFERENCES

D. ASTM C 192 - Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.
G. ASTM C 1780 - Standard Practice for Installation Methods for Adhered Manufactured Stone Masonry Veneer
I. ICC ES AC 51 Acceptance Criteria for Manufactured Stone Veneer
J. National Concrete Masonry Association (NCMA): Installation Guide for Adhered Manufactured Stone Veneer
1.4 DESIGN / PERFORMANCE REQUIREMENTS

A. Building Code Compliance:
1. International Code Council (ICC):
   a. ES Report: ICC ESR 1364
   b. UBC Standard No. 14-1, Kraft Waterproof Building Paper.
2. Florida Product Approval Number FL15047
3. Texas Department of Insurance: Product Evaluation—EC 21
5. Tested by Underwriters Laboratories, Inc.
6. Average Recycled Content of 58 percent validated by 3rd party analysis.

B. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
   1. Verification Samples: For each finish product specified, two samples, minimum size 8 inches (203 mm) square, representing actual product, color, and texture.
   2. Shop Drawings: Submit drawings depicting proper installation and flashing techniques. Coordinate locations with those found on the Drawings.

C. Warranty:
   1. Manufacturer Qualifications: Manufacturer who is a current member of National Concrete Masonry Association (NCMA) with a minimum of 5 years documented experience manufacturing and marketing all Manufactured Stone products of the type specified in this section.
   2. Installer Qualifications: Company with documented experience in installation of manufactured masonry of the type specified including at least five projects within a 400 mile (650km) radius of the Project.

D. Closeout Submittals: Provide manufacturer’s maintenance instructions that include recommendations for cleaning and repair of components.

1.5 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 standards and methods.

C. Shop Drawings: Submit drawings depicting proper installation and flashing techniques. Coordinate locations with those found on the Drawings.

D. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
   1. LEED v4. Product Data for Credit MR 4: For products having recycled content documentation; indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
   2. LEED v4. Product Data for Credit MR 4: For products having recycled content documentation; indicating percentages by weight of post-consumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
   3. LEED v4. Product Data for Credit EQ 2: For products and materials to comply with low emittance standards, provide documentation substantiating that products comply with requisite low emittance standards.
   4. LEED v4. Product Data for Credit for location and distance from Project of material manufacturer and point of extraction, harvest or recovery for main raw material.

E. Selection Samples: For each finish product specified, two complete sets of color sample representing manufacturer’s full range of available colors and textures.
F. Verification Samples: For each finish product specified, two samples, minimum size 8 inches (203 mm) square, representing actual product, color, and texture.
G. Manufacturer’s Certificates: Certify products meet or exceed specified requirements.
H. Closeout Submittals: Provide manufacturers’ maintenance instructions that include recommendations for cleaning and repair of components.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer who is a current member of National Concrete Masonry Association (NCMA) with a minimum of 5 years documented experience manufacturing and marketing all Manufactured Stone products of the type specified in this section.
B. Installer Qualifications: Company with documented experience in installation of manufactured masonry of the type specified including at least five projects within a 400 mile (650km) radius of the Project.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish panel of size and location designated by Architect.
   2. Minimum size 3 foot by 3 foot and showing transition to adjacent materials anticipated.
   3. Do not proceed with remaining work until workmanship, color, texture and pattern are approved by Architect.
   4. Refinish mock-up area as required to produce acceptable work.

D. Pre-Installation Conference:
   1. Contractor shall arrange a meeting not less than thirty days prior to starting stone veneer work.
   2. Attendance: Contractor, Architect/Owner Representative, veneer stone installer and manufacturer’s representative.

1.7 DELIVERY, STORAGE & HANDLING

A. Store and handle products in conformance with the manufacturer’s requirements and recommendations.
B. Store products off the ground on pallets in manufacturer’s unopened packaging until ready for installation.
C. Protect materials from precipitation and freezing temperatures. Product with visible frozen moisture should not be installed.

1.8 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 absolute limits.
B. Cold weather installations: Maintain materials and ambient temperature at minimum 40 degrees F (4 degrees C) prior to, during, and 48 hours after installation.
C. Hot weather installations: Mist water on the scratch coated surface and the backs of the masonry veneer for installations that exceed 90 degrees (32 degrees C).

1.9 WARRANTY

A. Provide manufacturers 50-year limited warranty.
PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Cultured Stone® by Boral; which is located at: 200 Mansell Court E. Suite 305; Roswell, GA 30076; Toll Free Tel: 800-255-1727; Email to request info: boralstoneanswers@boral.com; Web: www.culturedstone.com

2.2 MANUFACTURED STONE VENEER—GENERAL

A. Manufactured Stone Veneer Performance Requirements: Conforming to ASTM C 1670 and as follows:

1. Compressive Strength: Not less than 1800 psi (12.4 MPa) average for 5 specimens and not less than 2100 psi (14.4 MPa) for individual specimen when tested in accordance with ASTM C 39 & ASTM C 192.

2. Bond Between Manufactured Masonry Unit, Mortar and Backing: Not less than 50 psi (345 kPa) when tested in accordance with ASTM C 482 using Type S mortar.

3. Thermal Resistance: R-value of not less than 0.355 per inch (25.4 mm) of thickness when tested in accordance with ASTM C 177.

4. Freeze/Thaw: No disintegration and less than 3 percent weight loss when tested in accordance with ASTM C 67.

5. Water Absorption: Tested in accordance with UBC 15-9-22% depending on density value.

6. Unit Weight: Not more than 15 psf (73 kg/m2) saturated.

7. Surface Burning Characteristics: Not more than the following when tested in accordance with UL 723:
   b. Smoke Development: 450.

8. UV Stable – Mineral oxide pigments.

9. Certifications:
   b. Cultured Stone Ancient Villa Ledgestone: Includes matching corner pieces.
   c. Cultured Stone Cast-Fit: Includes matching corner pieces.
   d. Cultured Stone Coral Stone: Includes matching corner pieces.
   e. Cultured Stone Country Ledgestone: Includes matching corner pieces.

2.3 CULTURED STONE VENEER

A. Cultured Stone Ancient Villa Ledgestone: Includes matching corner pieces.

1. Height: Variable from 2 inches to 12 inches (50 mm to 304 mm).

2. Lengths: Variable from 4 inches to 16 inches (127 mm to 406 mm).


7. Color: Timber Creek.


9. Walls: Provide with Blended Color/Texture:
   a. Percent: ___________.
      Color: ________________.
   b. Percent: ___________.
      Color: ________________.

B. Cultured Stone Cast-Fit: Includes matching corner pieces.

1. Dimensions: 8 inches by 16 inches or 12 inches by 24 inches (200 mm by 400 mm or 305 mm by 610 mm).


C. Cultured Stone Cobblefield: Includes matching corner pieces.

1. Heights: Variable from 2 inches to 8 inches (50 mm to 200 mm).

2. Lengths: Variable from 4 inches to 20 inches (100 mm to 500 mm).

3. Color: Chardonnay.


10. Walls: Provide with Blended Color / Texture:
    a. Percent: ___________.
       Color: ________________.
    b. Percent: ___________.
       Color: ________________.

D. Cultured Stone Coral Stone: Includes matching corner pieces.

1. Pattern: Random Ashlar or Repeating.

2. Stone sizes: Variable sizes in increments of 4 inches from 4 inches by 4 inches to 12 inches by 16 inches by 16 inches (100 mm from 100 mm by 100 mm to 204 mm by 304 mm).

3. Corner sizes: 4 inch, 8 inch and 12 inch heights with 4 inch and 8 inch lengths.

4. Average thickness: 1¼ inches and sized for a ¼ inch (12.5 mm) mortar joint.


7. Walls: Provide with Blended Color/Texture:
   a. Percent: ___________.
      Color: ________________.
   b. Percent: ___________.
      Color: ________________.

E. Cultured Stone Country Ledgestone: Includes matching corner pieces.

1. Heights: Variable from 1½ inches to 6 ½ inches (38 mm to 162 mm).

2. Lengths: Variable from 4 ½ inches to 22 inches (120 mm to 560 mm).


18. Color: Timber Creek.


23. Walls: Provide with Blended Color/Texture:
    a. Percent: ___________.
       Color: ________________.
    b. Percent: ___________.
       Color: ________________.
F. Cultured Brick Veneer Handmade Brick: Includes matching corner pieces.
1. Height: Variable from 2 ½ inches (63 mm) to 22 inches (560 mm).
2. Colors: Carbon, Canvas, Moroccan Sand, Titanium.
5. Color: Chardonnay.

G. Cultured Brick Veneer Used Brick: Includes matching corner pieces.
1. Height: Variable from 2 ½ inches (63 mm).
2. Lengths: Variable from 8 inches (200 mm).
5. Walls: Provide with Single Color and Texture throughout.
6. Walls: Provide with Blended Color/Texture:
   a. Percent: __________..
   b. Percent: __________.
   Color: __________.
   Color: __________.

H. Cultured Stone Del Mare Ledgestone: Includes matching corner pieces.
1. Height: Variable from 1 inch to 9 ½ inches (25 mm to 235 mm).
2. Lengths: Variable from 4 inches to 16 inches (114 mm to 406 mm).
7. Walls: Provide with Blended Color/Texture:
   a. Percent: __________.
   Color: __________.
   b. Percent: __________.
   Color: __________.

I. Cultured Stone Dressed Fieldstone: Includes matching corner pieces.
1. Sizes: Variable from 2 ½ inches to 22 inches (63 mm to 560 mm).
3. Color: Bucks County.
7. Color: Wolf Creek.
8. Walls: Provide with Blended Color/Texture:
   a. Percent: __________.
   Color: __________.
   b. Percent: __________.
   Color: __________.

J. Cultured Stone Drystack Ledgestone Panel: Includes matching corner pieces.
1. Heights: 6 inches (150 mm).
2. Lengths: Variable from 20 inches to 24 inches (500 mm to 610 mm).
5. Color: Rubicon.

K. Cultured Stone European Castle Stone: Includes matching corner pieces.
1. Heights: Variable from 2 inches to 12 inches (50 mm to 300 mm).
2. Lengths: Variable from 2 inches to 16 inches (50 mm to 400 mm).
3. Color: Bucks County.
5. Walls: Provide with Single Color and Texture throughout.
6. Walls: Provide with Blended Color/Texture:
   a. Percent: __________.
   Color: __________.
   b. Percent: __________.
   Color: __________.

L. Cultured Stone Hewn Stone: Includes matching corner pieces.
1. Size: Provide sizes required to match customized pattern selected by the Architect from the following.
   a. 3 inch by 8 inch
   b. 3 inch by 14 inch
   c. 5 inch by 14 inch
   d. 5 inch by 22 inch
   e. 8 inch by 22 inch
2. Corner sizes: 3 inch and 7 inch heights with 3 inch and 8 inch lengths.
3. Average thickness: 1 1/2 inches (38 mm).
9. Walls: Provide with Blended Color/Texture:
   a. Percent: __________.
   Color: __________.
   b. Percent: __________.
   Color: __________.

M. Cultured Stone Limestone: Includes matching corner pieces.
1. Heights: Variable from 1 1/4 inches to 6 inches (30 mm to 150 mm).
2. Lengths: Variable from 4 inches to 16 inches (100 mm to 420 mm).
3. Color: Bucks County.
8. Walls: Provide with Blended Color/Texture:
   a. Percent: __________.
   Color: __________.
   b. Percent: __________.
   Color: __________.

N. Cultured Stone Old Country Fieldstone: Includes matching corner pieces.
1. Heights: Variable from 1 ½ inches to 10 inches (38 mm to 250 mm).
2. Lengths: Variable from 4 inches to 16 inches (100 mm to 400 mm).
3. Color: Chardonnay.
Q. Cultured Stone Pro-Fit Modern Ledgestone: Includes matching corner pieces.
   1. Heights: 4 inches (101.6 mm)
   2. Lengths: Variable from 8 inches to 20 inches (203 mm to 500 mm)
   3. Corner Returns: 4 inches, or 8 inches, or 12 inches
   4. Texture: Variable from 1/8 inch to 3/4 inch
   5. Color: Carbon
   6. Color: Intaglio
   7. Color: Rustic
      a. Percent: ___________
      b. Percent: ___________
      c. Percent: ___________
       1. Heights: Variable from 1/2 inch to 6 inches (13 mm to 150 mm)
       2. Lengths: Variable from 4 inches to 20 inches (100 mm to 500 mm)
       3. Color: Aspen
       4. Color: Bucks County
       5. Color: Chardonnay
       6. Color: Echo Ridge
       7. Color: Fog
       8. Color: Gray
       9. Color: Hudson Bay
       10. Color: Nightfall
       11. Color: Sable
       12. Color: Taupe
   11. Walls: Provide with Blended Color/Texture:
       a. Percent: ___________
       b. Percent: ___________
       c. Percent: ___________
       1. Heights: Variable from 1/2 inch to 6 inches (13 mm to 150 mm)
       2. Lengths: Variable from 4 inches to 20 inches (100 mm to 500 mm)
       3. Color: Aspen
       4. Color: Bucks County
       5. Color: Chardonnay
       6. Color: Echo Ridge
       7. Color: Fog
       8. Color: Gray
       9. Color: Hudson Bay
       10. Color: Nightfall
       11. Color: Sable
       12. Color: Taupe
   13. Walls: Provide with Blended Color/Texture:
       a. Percent: ___________
       b. Percent: ___________
       c. Percent: ___________

R. Cultured Stone River Rock: Includes matching corner pieces.
   1. Sizes: Variable from 2 inches to 14 inches (50 mm to 350 mm)
   2. Color: Earth Blend
   3. Color: Lake Tahoe
   4. Color: Lakeshore
   5. Walls: Provide with Single Color and Texture throughout.
   6. Walls: Provide with Blended Color/Texture:
      a. Percent: ___________
      b. Percent: ___________
      c. Percent: ___________
   7. Cultured Stone Rockface: Includes matching corner pieces.
      1. Heights: Variable from 2 inches to 8 inches (50 mm to 200 mm)
      2. Lengths: Variable from 4 inches to 20 inches (100 mm to 500 mm)
      3. Color: Bucks County
      4. Color: Stanhope

T. Cultured Stone Southern Ledgestone: Includes matching corner pieces.
   1. Heaights: Variable from 1/2 inch to 6 inches (13 mm to 150 mm)
   2. Lengths: Variable from 4 inches to 20 inches (100 mm to 500 mm)
   3. Color: Aspen
   4. Color: Bucks County
   5. Color: Chardonnay
   6. Color: Echo Ridge
   7. Color: Fog
   8. Color: Gray
   9. Color: Hudson Bay
   10. Color: Nightfall
   11. Color: Sable
   12. Color: Taupe
   13. Walls: Provide with Blended Color/Texture:
       a. Percent: ___________
       b. Percent: ___________
       c. Percent: ___________

U. Cultured Stone Stream Stone: Includes matching corner pieces.
   1. Sizes: Variable from 2 inches to 12 inches (50 mm to 300 mm)
   2. Skimmer Stones: Smaller fill stones, average 2 1/2 inches (63 mm) tall by 3 1/2 inches (89 mm to 200 mm)
   3. Color: Spring
   4. Color: Summer
   5. Walls: Provide with Single Color and Texture throughout.
   6. Walls: Provide with Blended Color/Texture:
      a. Percent: ___________
      b. Percent: ___________
      c. Percent: ___________

V. Cultured Stone Textured Cast-Fit: Includes matching corner pieces.
   1. Dimensions: 12 inches by 24 inches (305 mm by 610 mm)
   2. Color: Stanhope

2.4 ARCHITECTURAL TRIM STONES
A. Pier Capstones:
   1. Surface Texture: Flagstone
   2. Nominal Size: 24 inches by 24 inches (610 mm by 610 mm)
   3. Nominal Size: 32 inches by 32 inches (813 mm by 813 mm)
   4. Color: Champagne
   5. Color: Gray
   6. Color: Nightfall
   7. Color: Sable
   8. Color: Taupe
B. Flat Wall Capstones:
   1. Nominal Size: 10 inches by 20 inches (254 mm by 508 mm)
   2. Nominal Size: 12 inches by 20 inches (305 mm by 508 mm)
   3. Nominal Size: 16 inches by 20 inches (406 mm by 508 mm)
   4. Color: Champagne
   5. Color: Gray
   6. Color: Nightfall
   7. Color: Sable
   8. Color: Taupe
C. Capstones/Peak Flagstone Texture:
   1. Nominal Size: 12 inches by 20 inches (305 mm by 508)
   2. Nominal Size: 16 inches by 20 inches (406 mm by 508)
   3. Color: Champagne
   4. Color: Nightfall
   5. Color: Gray
   6. Color: Sable
   7. Color: Taupe
D. Hearthstones:
   1. Nominal Size: 19 inches by 20 inches (483 mm by 508 mm)
   2. Color: Beige
   3. Color: Chardonnay
   4. Color: Cream
   5. Color: Marsh
   6. Color: Gray
   7. Color: Nightfall
   8. Color: Sable
E. Trimstones:
   1. Nominal Size: 6 inches by 8 inches (152 mm by 203 mm)
   2. Color: Champagne
   3. Color: Gray
   4. Color: Nightfall
   5. Color: Sable
   6. Color: Taupe
F. Keystones:
   1. Nominal Size: 8 1/2 inches by 10 inches by 1 3/4 inches (216 mm by 254 mm by 48 mm)
   2. Color: Champagne
   3. Color: Gray
   4. Color: Nightfall
   5. Color: Sable
   6. Color: Taupe
G. Tuscan Lintels:
   1. Nominal Size: 22 inches by 6 inches by 2 1/2 inches (559 mm by 152 mm by 67 mm)
   2. Color: Champagne
   3. Color: Gray
   4. Color: Nightfall
   5. Color: Sable
   6. Color: Taupe
H. Waterstable/Sill Rock Face Texture:
   1. Nominal Size: 2 inches front, 2 1/2 inches back, by 3 inches by 18 inches (51 mm front, 64 mm back by 76 mm by 455 mm)
   2. Color: Champagne
   3. Color: Gray
   4. Color: Nightfall
   5. Color: Sable
   6. Color: Taupe
   7. Provide sloped top surface & drip edge.
I. Waterstable/Sill Cast-Fit:
   1. Nominal Size: 2 1/2 inches by 18 inches (63 mm by 455 mm)
   2. Color: Carbon
   3. Color: French Gray
   4. Color: Intaglio
   5. Color: Vellum
   6. Color: Parchment
PART 3 EXECUTION

3.1 EXAMINATION
A. Do not begin installation until substrates have been properly prepared in conformance with ASTM C 1780 for the backup wall system indicated on the Drawings.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION
A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION
A. Install in accordance with manufacturer's instructions.
B. Install manufactured stone masonry veneer in accordance with NCMA Installation Guide for Adhered Manufactured Stone Veneer, ASTM C 1780 and applicable Codes.
C. Install/Apply Related Materials in accordance with type of substrate and manufactured stone veneer manufacturer's installation instructions.
D. General:
   2. Walls: Provide with Blended Color / Texture specified.
   3. Special Shapes: Color to match stones specified.
      a. Provide Stones manufactured specifically for installation at corners where located on the Drawings.
      b. Install Quoins on corners as indicated on the Drawings.
   4. Mortar Joints
      a. Style:
         1) Tight Fit joints.
         2) Standard 1/2 inch tooled
         3) Wide joint
         4) Wide Overgrout
      b. Strike all grout joints flush.
      c. Tool all grout joints.
      d. Overgrout all grout joints.
   5. Stone Direction:
      a. Random placement
      b. Horizontal placement
      c. Vertical placement
   6. Windows, Doors & Wall Openings:
      a. Butt field stones to wall opening.
      b. Install specified trim stones where located on the Contract Drawings.
   7. Sills: Install Sills where located on the Drawings.
E. Seal all joints at wall openings and penetrations with a sealant approved for use with masonry products.
F. Flashing: Coordinate with Flashings specified in Section 07 62 00 - Sheet Metal Flashing and Trim.
G. Rainscreen: Coordinate with Rainscreens specified in Section 07 27 00 - Air Barriers.

1. Light Fixture Stones:
   1. Nominal Size: 8 inches by 10 inches by 1 7/8 inches (203 mm by 254 mm by 47 mm).
   2. Nominal Size: 9 1/2 inches by 15 inches by 1 7/8 inches (242 mm by 381 mm by 47 mm).
   3. Nominal Size: As shown on Contract Drawings.
   8. Provide 4 inch by 1 1/2 inch (102 mm by 38 mm) UL approved metal octagon extension box.

K. Receptacle Stones:
   1. Single Receptacle Nominal Size: 6 inches by 8 inches by 1 7/8 inches (152 mm by 203 mm by 48 mm).
   2. Color: Gray.
   5. Color: Taupe.
   6. Electrical Box: 4 inch by 1 1/2 inch (102 mm by 38 mm) UL approved metal octagon extension box supplied by others.
3.4 FIELD QUALITY CONTROL
A. Manufacturer's Field Services: Provide periodic site visits as requested by Architect. Report any discrepancies to the Contractor with copies to the Architect within 24 hours of each visit.

3.5 CLEANING
A. Clean manufactured masonry in accordance with manufacturer's installation instructions

3.6 PROTECTION
A. Protect finished work from rain and work on either side of the wall during and for 48 hours following installation.
B. Protect installed products until completion of project.
C. Clean prior to project closeout.
D. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION