3-Part Specification

Section 04 4120

NEW ENGLAND THIN & BUILDING NATURAL STONE VENEER

This specification section has been prepared to assist design professionals in the preparation of project specifications. It follows guidelines established by the Construction Specifications Institute (CSI) and therefore may be used with most master specification systems with minor editing.

Edit carefully to suit project requirements.

Notes to the specifier are contained in boxes and hidden text and should be deleted from the final copy.

Revise footer to suit project requirements.

STONEYARD®
2 Spectacle Pond Road
Littleton, MA 01460 USA

Tel: 978-742-9800
Fax: 978-742-9898
Email: sales@Stoneyard.com
Web: www.Stoneyard.com

SECTION 04 4120

NEW ENGLAND STONE VENEER

** NOTE TO SPECIFIER ** STONEYARD®; natural stone veneer.

This section is based on the products of STONEYARD®, which is located at:

2 Spectacle Pond Road
Littleton, Massachusetts 01460
Tel: 978-742-9800
Fax: 978-742-9898
E-mail: sales@stoneyard.com
Internet: www.Stoneyard.com

[Click Here] for additional information.
Stoneyard™ specializes in all-natural New England thin stone veneer; an architectural building material which can be LEED certified. Our products are made from both quarried and weathered or aged natural cleft, real stones that feature earth tones from such states as Connecticut, Rhode Island, Vermont, Maine, New Hampshire and Massachusetts.

Our Boston Blend is a dense Quartzitic conglomerate consisting of Granite, Quartzite and Feldspar, which has been subjected to heat and pressure creating an incredibly hard and dense material, which weighs 15-20% less than all granite. It contains brown, gray, tan, beige, white, blue, black and many other colors. It has a density of 153 lbs per cubic foot.

Our veneer stone is available in five distinct shapes: Round, Ledgestone, Ashlar, Square & Rectangular, and Mosaic in matching full thickness 3-5 inch anchored veneer and thin 1.0 inch adhered veneer (which weighs less than 14 lbs per sq ft).

We are a third generation company delivering the traditional building stone of New England to a nationwide audience through our network of local dealers. Our showroom is open Monday to Friday and we invite architects, masons, and project owners to evaluate our offerings online 24 hours a day at www.Stoneyard.com.

PART 1 GENERAL

1.1 SECTION INCLUDES

** NOTE TO SPECIFIER ** Delete items below not required for the project.

1.A. Stone cladding, siding and veneer of interior and exterior walls as indicated.
1.B. Stone water features.
1.C. Stone stair risers.
1.D. Stone fireplaces.
1.E. Stone chimney.
1.F. Stone signs.
1.G. Stone columns.
1.H. Stone accent trim and shapes.

1.2 RELATED SECTIONS

** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.

2.A. Section 04 22 00 - Unit Masonry Assemblies (Concrete Unit Masonry): Masonry supporting walls.

2.B. Section 05 40 00 - Cold-Formed Metal Framing: Formed steel-framed supporting walls.

2.C. Section 05 50 00 - Metal Fabrications: Galvanized shelf angles, structural supports, anchors and other built-in components for building into natural thin veneer stone.

2.D. Section 06 11 00 - Wood Framing: Wood frame supporting walls.

2.E. Section 06 16 00 - Sheathing: Wood frame supporting walls.

2.F. Section 07 90 00 - Joint Sealers (Joint Protection): Sealant and joint filler for perimeter and control joints.

2.G. Section 09 24 00 - Portland Cement Plaster (Portland Cement Plastering): Metal lath and scratch coat back-up over supporting walls.

2.H. Section 09 63 40 - Stone Flooring: Natural thin veneer stone used for flooring.

1.3 REFERENCES

** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.

3.A. ASTM C91 - Standard Specification for Masonry Cement.

3.B. ASTM C144 – Standard Specification for Aggregate Masonry Mortar.

3.C. ASTM C150 - Standard Specification for Portland Cement.

3.D. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes.

3.E. ASTM C270 - 08a Standard Specification for Mortar for Unit Masonry.

3.F. ASTM C847 - Standard Specification for Metal Lath.

3.G. ASTM C979 - 05 Standard Specification for Pigments for Integrally Colored Concrete.

3.H. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.

3.I. ACI-530.1-95/ ASCE 6-95/TMS 602-95 -The Specification for Masonry Structures.

3.J. ANSI A118.4 Latex Portland Cement Mortar

1.4 SUBMITTALS

4.A. Submit under provisions of Section 01 33 00 Submittal Procedures.

4.B. Product Data:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

4.C. Selection Samples: Submit mortar color samples.

4.D. Verification Samples: Submit 2 manufacturer's full-size samples of natural veneer stone for each pattern specified.

** NOTE TO SPECIFIER ** Delete selection samples if colors have already been selected.

1.5 QUALITY ASSURANCE

** NOTE TO SPECIFIER ** Include qualification requirements. Delete if not required.

5.A. Stone Producer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
** NOTE TO SPECIFIER ** Include qualification requirements. Delete if not required.

5.B. Stone Installer Qualifications: Company specializing in performing Work of this section with minimum five years documented experience.
** NOTE TO SPECIFIER ** Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

5.C. Mock-Up: Provide a mock-up for evaluation of stone, mortar color and application workmanship.

5.C.1. Finish areas designated by Architect.
5.C.2. Do not proceed with remaining work until Architect approves workmanship, color, and sheen.
5.C.3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

6.A. Store stone on pallets or wooden crates. Pallet shall be shrink-wrapped.

1.7 PROJECT CONDITIONS

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

7.B. Hot and Cold Weather Requirements: ACI 530.1/ASCE 6/TMS 602.

7.C. Air Temperature: 40 degrees F or above during installation.

7.D. Mortar Mixing Water: Heat mortar mixing water when air temperature falls below 50 degrees F.

PART 2 PRODUCTS

2.1 MANUFACTURERS

1.A. Acceptable Manufacturer: STONEYARD® located at:
2 Spectacle Pond Road; Littleton, MA 01460;
Tel: 978-742-9800; Fax: 978-742-9898;
Email: sales@stoneyard.com;
Web: www.stoneyard.com

** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

1.B. Substitutions: Not permitted.

1.C. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

2.2 NATURAL VENEER STONE

** NOTE TO SPECIFIER ** STONEYARD® produces all natural New England stone veneer products available in 5 shapes, 9 colors and 2 thickness options.
2.A. Physical Characteristics: Boston Blend.
2.A.1. Fieldstone: Collected stone from farms and fields in Massachusetts, Connecticut, Rhode Island, New Hampshire, Vermont, and Maine.
2.A.2. Color and Veining Range: Earth tones of brown, tan, gray, buff, pink, yellow, white, and black.
2.A.3. Density: 153.0 pcf.
2.A.4. Bulk Specific Gravity: 2.46.
2.A.5. Water Absorption: 0.54 percent.
2.A.6. Modulus of Rupture Perpendicular: 1,854 psi.
2.A.7. Modulus of Rupture Parallel: 2,692 psi.
2.A.8. Compressive Strength Perpendicular: 19,958 psi.
2.A.9. Compressive Strength Parallel: 17,307 psi.

** NOTE TO SPECIFIER ** Delete size(s), type(s) and shape(s) not required.
2.B. Sizes and Shapes:
2.B.1. Natural Stone Veneer. Broad range of colors including brown, tan, gray, buff, pink, yellow, white and black.
2.B.2. Natural aged and split faces. Commonly used as an architectural stone siding for interior and exterior veneer applications.
2.B.3. Adhered Thin Veneer - 1.0 inch thick (plus or minus 0.25 inches). Lightweight (less than 14 lbs per square foot), natural stone, does not require a supporting masonry

shelf. Used for interior or exterior applications such as siding, fireplaces, chimneys, water features and fireplaces:

2.B.3.a. Flats.

2.B.3.b. Pre-Cut Corners for the appearance of full depth stone

2.B.3.c. Boston Blend Round Thin Veneer:

2.B.3.c.1) Natural weathered faces

2.B.3.c.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.c.3) Facing area: 0.25 to 1.25 sf

2.B.3.c.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.d. Boston Blend Roughly Square & Rectangular Thin Veneer:

2.B.3.d.1) Primarily natural weathered faces with some split faces

2.B.3.d.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.d.3) Heights: 3 to 11 inch

2.B.3.d.4) Lengths: 3 to 16 inch

2.B.3.d.5) Facing area: 0.25 to 1.25 sf

2.B.3.d.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.e. Boston Blend Mosaic Thin Veneer:

2.B.3.e.1) Primarily natural weathered faces with some split faces

2.B.3.e.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.e.3) Facing area: 0.25 to 1.25 sf

2.B.3.e.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.f. Boston Blend Ledgestone Thin Veneer:

2.B.3.f.1) 100 percent split face

2.B.3.f.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.f.3) Heights: 1 to 4 inch

2.B.3.f.4) Lengths: 4 to 12 inch

2.B.3.f.5) Facing area: 0.05 to 0.50 sf

2.B.3.f.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.g. Boston Blend Ashlar Thin Veneer:

2.B.3.g.1) 100 percent split face

2.B.3.g.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.g.3) Heights: 3 to 7 inch

2.B.3.g.4) Lengths: 4 to 14 inch

2.B.3.g.5) Facing area: 0.10 to 1.0 sf

2.B.3.g.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.h. Greenwich Gray Roughly Square & Rectangular Thin Veneer:

2.B.3.h.1) Primarily natural weathered faces with some split faces

2.B.3.h.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.h.3) Heights: 3 to 11 inch

2.B.3.h.4) Lengths: 3 to 16 inch

2.B.3.h.5) Facing area: 0.25 to 1.25 sf

2.B.3.h.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.i. Greenwich Gray Mosaic Thin Veneer:

2.B.3.i.1) Primarily natural weathered faces with some split faces

2.B.3.i.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.i.3) Facing area: 0.25 to 1.25 sf

2.B.3.i.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.j. Greenwich Gray Ledgestone Thin Veneer:

2.B.3.j.1) 100 percent split face

2.B.3.j.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.j.3) Heights: 1 to 4 inch
2.B.3.j.4) Lengths: 4 to 12 inch
2.B.3.j.5) Facing area: 0.05 to 0.50 sf
2.B.3.j.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.k. Greenwich Gray Ashlar Thin Veneer:
2.B.3.k.1) 100 percent split face
2.B.3.k.2) Thickness: 1.0 inch (plus or minus 0.25 inch).
2.B.3.k.3) Heights: 3 to 7 inch
2.B.3.k.4) Lengths: 4 to 14 inch
2.B.3.k.5) Facing area: 0.10 to 1.0 sf
2.B.3.k.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.l. Colonial Tan Roughly Square & Rectangular Thin Veneer:
2.B.3.l.1) Primarily natural weathered faces with some split faces
2.B.3.l.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.l.3) Heights: 3 to 11 inch
2.B.3.l.4) Lengths: 3 to 16 inch
2.B.3.l.5) Facing area: 0.25 to 1.25 sf
2.B.3.l.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.m. Colonial Tan Mosaic Thin Veneer:
2.B.3.m.1) Primarily natural weathered faces with some split faces
2.B.3.m.2) Thickness: 1.0 inch (plus or minus 0.5 inch)
2.B.3.m.3) Facing area: 0.25 to 1.25 sf
2.B.3.m.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.n. Colonial Tan Ledgestone Thin Veneer:
2.B.3.n.1) 100 percent split face
2.B.3.n.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.n.3) Heights: 1 to 4 inch
2.B.3.n.4) Lengths: 4 to 12 inch
2.B.3.n.5) Facing area: 0.05 to 0.50 sf
2.B.3.n.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.o. Colonial Tan Ashlar Thin Veneer:
2.B.3.o.1) 100 percent split face
2.B.3.o.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.o.3) Heights: 3 to 7 inch
2.B.3.o.4) Lengths: 4 to 14 inch
2.B.3.o.5) Facing area: 0.10 to 1.0 sf
2.B.3.o.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.p. Vineyard Granite Roughly Square & Rectangular Thin Veneer:
2.B.3.p.1) Primarily natural weathered faces with some split faces
2.B.3.p.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.p.3) Heights: 3 to 11 inch
2.B.3.p.4) Lengths: 3 to 16 inch
2.B.3.p.5) Facing area: 0.25 to 1.25 sf
2.B.3.p.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.q. Vineyard Granite Mosaic Thin Veneer:
2.B.3.q.1) Primarily natural weathered faces with some split faces
2.B.3.q.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.q.3) Facing area: 0.25 to 1.25 sf
2.B.3.q.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.r. Vineyard Granite Ledgestone Thin Veneer:

2.B.3.r.1) 100 percent split face
2.B.3.r.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.r.3) Heights: 1 to 4 inch
2.B.3.r.4) Lengths: 4 to 12 inch
2.B.3.r.5) Facing area: 0.05 to 0.50 sf
2.B.3.r.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.s. Vineyard Granite Ashlar Thin Veneer:
2.B.3.s.1) 100 percent split face
2.B.3.s.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.s.3) Heights: 3 to 7 inch
2.B.3.s.4) Lengths: 4 to 14 inch
2.B.3.s.5) Facing area: 0.10 to 1.0 sf
2.B.3.s.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.t. Newport Mist Round Thin Veneer:
2.B.3.t.1) Natural faces
2.B.3.t.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.t.3) Facing area: 0.25 to 1.25 sf
2.B.3.t.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.u. Newport Mist Roughly Square & Rectangular Thin Veneer:
2.B.3.u.1) Primarily natural weathered faces with some split faces
2.B.3.u.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.u.3) Heights: 3 to 11 inch
2.B.3.u.4) Lengths: 3 to 16 inch
2.B.3.u.5) Facing area: 0.25 to 1.25 sf
2.B.3.u.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.v. Newport Mist Mosaic Thin Veneer:
2.B.3.v.1) Primarily natural weathered faces with some split faces
2.B.3.v.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.v.3) Facing area: 0.25 to 1.25 sf
2.B.3.v.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.w. Newport Mist Ledgestone Thin Veneer:
2.B.3.w.1) 100 percent split face
2.B.3.w.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.w.3) Heights: 1 to 4 inch
2.B.3.w.4) Lengths: 4 to 12 inch
2.B.3.w.5) Facing area: 0.05 to 0.50 sf
2.B.3.w.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.x. Newport Mist Ashlar Thin Veneer:
2.B.3.x.1) 100 percent split face
2.B.3.x.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.x.3) Heights: 3 to 7 inch
2.B.3.x.4) Lengths: 4 to 14 inch
2.B.3.x.5) Facing area: 0.10 to 1.0 sf
2.B.3.x.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.y. Oyster Bay Roughly Square & Rectangular Thin Veneer:
2.B.3.y.1) Primarily natural weathered faces with some split faces
2.B.3.y.2) Thickness: 1.0 inch (plus or minus 0.25 inch)
2.B.3.y.3) Heights: 3 to 11 inch
2.B.3.y.4) Lengths: 3 to 16 inch
2.B.3.y.5) Facing area: 0.25 to 1.25 sf

2.B.3.y.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.z. Oyster Bay Mosaic Thin Veneer:

2.B.3.z.1) Primarily natural weathered faces with some split faces

2.B.3.z.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.z.3) Facing area: 0.25 to 1.25 sf

2.B.3.z.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.aa. Oyster Bay Ledgestone Thin Veneer:

2.B.3.aa.1) 100 percent split face

2.B.3.aa.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.aa.3) Heights: 1 to 4 inch

2.B.3.aa.4) Lengths: 4 to 12 inch

2.B.3.aa.5) Facing area: 0.05 to 0.50 sf

2.B.3.aa.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.ab. Oyster Bay Ashlar Thin Veneer:

2.B.3.ab.1) 100 percent split face

2.B.3.ab.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.ab.3) Heights: 3 to 7 inch

2.B.3.ab.4) Lengths: 4 to 14 inch

2.B.3.ab.5) Facing area: 0.10 to 1.0 sf

2.B.3.ab.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.ac. Coastal Sand Roughly Square & Rectangular Thin Veneer:

2.B.3.ac.1) Primarily natural weathered faces with some split faces

2.B.3.ac.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.ac.3) Heights: 3 to 11 inch

2.B.3.ac.4) Lengths: 3 to 16 inch

2.B.3.ac.5) Facing area: 0.25 to 1.25 sf

2.B.3.ac.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.ad. Coastal Sand Mosaic Thin Veneer:

2.B.3.ad.1) Primarily natural weathered faces with some split faces

2.B.3.ad.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.ad.3) Facing area: 0.25 to 1.25 sf

2.B.3.ad.4) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.ae. Coastal Sand Ledgestone Thin Veneer:

2.B.3.ae.1) 100 percent split face

2.B.3.ae.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.ae.3) Heights: 1 to 4 inch

2.B.3.ae.4) Lengths: 4 to 12 inch

2.B.3.ae.5) Facing area: 0.05 to 0.50 sf

2.B.3.ae.6) Pre-cut corners present full size stone shape in a thin veneer

2.B.3.af. Coastal Sand Ashlar Thin Veneer:

2.B.3.af.1) 100 percent split face

2.B.3.af.2) Thickness: 1.0 inch (plus or minus 0.25 inch)

2.B.3.af.3) Heights: 3 to 7 inch

2.B.3.af.4) Lengths: 4 to 14 inch

2.B.3.af.5) Facing area: 0.10 to 1.0 sf

2.B.3.af.6) Pre-cut corners present full size stone shape in a thin veneer

**2.B.4. Anchored Building Veneer 3-5 inch thick. All natural New England Stone Veneer. Weighs approximately 56 lbs per sf. Requires a supporting masonry shelf. Commonly used for exterior architectural stone siding and veneer:

2.B.4.a. Depth 3.0 – 5.0 inch thick
2.B.4.b. Coverage approximately 35 sf per ton
2.B.4.c. Boston Blend Round Sawn Back Building Veneer:
    2.B.4.c.1) Natural weathered faces
    2.B.4.c.2) Sawn back
    2.B.4.c.3) Depth: 3.0 to 4.0 inch
    2.B.4.c.4) Coverage: approximately 43 sf/ton
    2.B.4.c.5) Facing area Small: 0.05 to 0.25 sf
    2.B.4.c.6) Facing area Regular: 0.25 to 1.0 sf
2.B.4.d. Boston Blend Roughly Square & Rectangular Building Veneer:
    2.B.4.d.1) Primarily natural weathered faces with some split faces
    2.B.4.d.2) Depth: 3.0 to 5.0 inch
    2.B.4.d.4) Facing area Regular: 0.25 to 1.25 sf
    2.B.4.d.5) Facing area Large: 1.0 to 2.25 sf
2.B.4.e. Boston Blend Mosaic Building Veneer:
    2.B.4.e.1) Primarily natural weathered faces with some split faces
    2.B.4.e.2) Depth: 3.0 to 5.0 inch
    2.B.4.e.3) Facing area Regular: 0.50 to 2.0 sf
    2.B.4.e.4) Facing area Large: 1.0 to 3.0 sf
2.B.4.f. Boston Blend Ledgestone Building Veneer:
    2.B.4.f.1) 100 percent split face
    2.B.4.f.2) Top and bottom mix of sawn and natural cleft
    2.B.4.f.3) Depth: 3.0 to 5.0 inch
    2.B.4.f.4) Heights: 1.0 to 4.0 inch
    2.B.4.f.5) Lengths: 4.0 to 16.0 inch
2.B.4.g. Boston Blend Ashlar Building Veneer:
    2.B.4.g.1) 100 percent split face
    2.B.4.g.2) Top and bottom mix of sawn and natural cleft
    2.B.4.g.3) Depth: 3.0 to 5.0 inch
    2.B.4.g.4) Heights: 3.0 to 8.0 inch
    2.B.4.g.5) Lengths: 4.0 to 16.0 inch
2.B.4.h. Greenwich Gray Roughly Square & Rectangular Building Veneer:
    2.B.4.h.1) Primarily natural weathered faces with some split faces
    2.B.4.h.2) Depth: 3.0 to 5.0 inch
    2.B.4.h.3) Facing area Regular: 0.25 to 1.25 sf
2.B.4.i. Greenwich Gray Mosaic Building Veneer:
    2.B.4.i.1) Primarily natural weathered faces with some split faces
    2.B.4.i.2) Depth: 3.0 to 5.0 inch
    2.B.4.i.3) Facing area Regular: 0.5 to 2.0 sf
2.B.4.j. Greenwich Gray Ledgestone Building Veneer:
    2.B.4.j.1) 100 percent split face
    2.B.4.j.2) Top and bottom mix of sawn and natural cleft
    2.B.4.j.3) Depth: 3.0 to 5.0 inch
    2.B.4.j.4) Heights: 1.0 to 4.0 inch
    2.B.4.j.5) Lengths: 4.0 to 16.0 inch
2.B.4.k. Greenwich Gray Ashlar Building Veneer:
    2.B.4.k.1) 100 percent split face
    2.B.4.k.2) Top and bottom mix of sawn and natural cleft
    2.B.4.k.3) Depth: 3.0 to 5.0 inch
    2.B.4.k.4) Heights: 3.0 to 8.0 inch

2.B.4.k.5) Lengths: 4.0 to 16.0 inch
2.B.4.l. Colonial Tan Roughly Square & Rectangular Building Veneer:
2.B.4.l.1) Primarily natural weathered faces with some split faces
2.B.4.l.2) Depth: 3.0 to 5.0 inch
2.B.4.l.3) Facing area Regular: 0.25 to 1.25 sf
2.B.4.m. Colonial Tan Mosaic Building Veneer:
2.B.4.m.1) Primarily natural weathered faces with some split faces
2.B.4.m.2) Depth: 3.0 to 5.0 inch
2.B.4.m.3) Facing area Regular: 0.5 to 2.0 sf
2.B.4.n. Colonial Tan Ledgestone Building Veneer:
2.B.4.n.1) 100 percent split face
2.B.4.n.2) Top and bottom mix of sawn and natural cleft
2.B.4.n.3) Depth: 3.0 to 5.0 inch
2.B.4.n.4) Heights: 1.0 to 4.0 inch
2.B.4.n.5) Lengths: 4.0 to 16.0 inch
2.B.4.o. Colonial Tan Ashlar Building Veneer:
2.B.4.o.1) 100 percent split face
2.B.4.o.2) Top and bottom mix of sawn and natural cleft
2.B.4.o.3) Depth: 3.0 to 5.0 inch
2.B.4.o.4) Heights: 3.0 to 8.0 inch
2.B.4.o.5) Lengths: 4.0 to 16.0 inch
2.B.4.p. Vineyard Granite Roughly Square & Rectangular Building Veneer:
2.B.4.p.1) Primarily natural weathered faces with some split faces
2.B.4.p.2) Depth: 3.0 to 5.0 inch
2.B.4.p.3) Facing area Regular: 0.25 to 3.0 sf
2.B.4.q. Vineyard Granite Mosaic Building Veneer:
2.B.4.q.1) Primarily natural weathered faces with some split faces
2.B.4.q.2) Depth: 3.0 to 5.0 inch
2.B.4.q.3) Facing area Regular: 0.50 to 2.0 sf
2.B.4.r. Vineyard Granite Ledgestone Building Veneer:
2.B.4.r.1) 100 percent split face
2.B.4.r.2) Top and bottom mix of sawn and natural cleft
2.B.4.r.3) Depth: 3.0 to 5.0 inch
2.B.4.r.4) Heights: 1.0 to 4.0 inch
2.B.4.r.5) Lengths: 4.0 to 16.0 inch
2.B.4.s. Vineyard Granite Ashlar Building Veneer:
2.B.4.s.1) 100 percent split face
2.B.4.s.2) Top and bottom mix of sawn and natural cleft
2.B.4.s.3) Depth: 3.0 to 5.0 inch
2.B.4.s.4) Heights: 3.0 to 12.0 inch
2.B.4.s.5) Lengths: 4.0 to 16.0 inch
2.B.4.t. Newport Mist Round Sawn Back Building Veneer:
2.B.4.t.1) Natural faces
2.B.4.t.2) Sawn back
2.B.4.t.3) Depth: 3.0 to 4.0 inch
2.B.4.t.4) Coverage: approximately 43 sf/ton
2.B.4.t.5) Facing area Regular: 0.25 to 1.0 sf
2.B.4.u. Newport Mist Roughly Square & Rectangular Building Veneer:
2.B.4.u.1) Primarily natural weathered faces with some split faces
2.B.4.u.2) Depth: 3.0 to 5.0 inch

2.B.4.u.3) Facing area Regular: 0.25 to 1.25 sf
2.B.4.v. Newport Mist Mosaic Building Veneer:
2.B.4.v.1) Primarily natural weathered faces with some split faces
2.B.4.v.2) Depth: 3.0 to 5.0 inch
2.B.4.v.3) Facing area Regular: 0.50 to 2.0 sf
2.B.4.w. Newport Mist Ledgestone Building Veneer:
2.B.4.w.1) 100 percent split face
2.B.4.w.2) Top and bottom mix of sawn and natural cleft
2.B.4.w.3) Depth: 3.0 to 5.0 inch
2.B.4.w.4) Heights: 1.0 to 4.0 inch
2.B.4.w.5) Lengths: 4.0 to 16.0 inch
2.B.4.x. Newport Mist Ashlar Building Veneer:
2.B.4.x.1) 100 percent split face
2.B.4.x.2) Top and bottom mix of sawn and natural cleft
2.B.4.x.3) Depth: 3.0 to 5.0 inch
2.B.4.x.4) Heights: 3.0 to 8.0 inch
2.B.4.x.5) Lengths: 4.0 to 16.0 inch
2.B.4.y. Oyster Bay Roughly Square & Rectangular Building Veneer:
2.B.4.y.1) Primarily natural weathered faces with some split faces
2.B.4.y.2) Depth: 3.0 to 5.0 inch
2.B.4.y.3) Facing area Regular: 0.25 to 1.25 sf
2.B.4.z. Oyster Bay Mosaic Building Veneer:
2.B.4.z.1) Primarily natural weathered faces with some split faces
2.B.4.z.2) Depth: 3.0 to 5.0 inch
2.B.4.z.3) Facing area Regular: 0.50 to 2.0 sf
2.B.4.aa. Oyster Bay Ledgestone Building Veneer:
2.B.4.aa.1) 100 percent split face
2.B.4.aa.2) Top and bottom mix of sawn and natural cleft
2.B.4.aa.3) Depth: 3.0 to 5.0 inch
2.B.4.aa.4) Heights: 1.0 to 4.0 inch
2.B.4.aa.5) Lengths: 4.0 to 16.0 inch
2.B.4.ab. Oyster Bay Ashlar Building Veneer:
2.B.4.ab.1) 100 percent split face
2.B.4.ab.2) Top and bottom mix of sawn and natural cleft
2.B.4.ab.3) Depth: 3.0 to 5.0 inch
2.B.4.ab.4) Heights: 3.0 to 8.0 inch
2.B.4.ab.5) Lengths: 4.0 to 16.0 inch
2.B.4.ac. Coastal Sand Roughly Square & Rectangular Building Veneer:
2.B.4.ac.1) Primarily natural weathered faces with some split faces
2.B.4.ac.2) Depth: 3.0 to 5.0 inch
2.B.4.ac.3) Facing area Regular: 0.25 to 3.0 sf
2.B.4.ad. Coastal Sand Mosaic Building Veneer:
2.B.4.ad.1) Primarily natural weathered faces with some split faces
2.B.4.ad.2) Depth: 3.0 to 5.0 inch
2.B.4.ad.3) Facing area Regular: 0.25 to 3.0 sf
2.B.4.ae. Coastal Sand Ledgestone Building Veneer:
2.B.4.ae.1) 100 percent split face
2.B.4.ae.2) Top and bottom mix of sawn and natural cleft
2.B.4.ae.3) Depth: 3.0 to 5.0 inch
2.B.4.ae.4) Heights: 3.0 to 5.0 inch

2.B.4.ae.5) Lengths: 8.0 to 12.0 inch

2.B.4.af. Coastal Sand Ashlar Building Veneer:

2.B.4.af.1) 100 percent split face

2.B.4.af.2) Top and bottom mix of sawn and natural cleft

2.B.4.af.3) Depth: 3.0 to 5.0 inch

2.B.4.af.4) Heights: 4.0 to 12.0 inch

2.B.4.af.5) Lengths: 4.0 to 16.0 inch

2.3 ACCESSORIES

** NOTE TO SPECIFIER ** Edit the following three paragraphs to suit the project requirements. Delete if not required. Use paragraph A when thin masonry veneer is installed over metal siding or open stud back-up; Use paragraph B for use over wood sheathing or existing concrete or masonry back-up.

3.A. Expanded Metal Lath Paper Backed: ASTM C847; galvanized, self-furring mesh minimum 2.5 lb, backed with paper.

3.B. Expanded Metal Lath: ASTM C847, galvanized, self-furring, minimum 2.5 lb or 18 gauge.

3.C. Lath Anchorage: Tie wire, nails, screws and other metal supports, galvanized, of type and size to suit application and to rigidly secure materials in place.

3.D. Setting buttons or shims: Lead or plastic.

** NOTE TO SPECIFIER ** Edit the following two paragraphs to suit the project requirements. Delete if not required. Use paragraph D with wood sheathing. Use paragraph E with concrete or masonry without lath.

3.E. Building Paper: ASTM D226, No. 30 asphalt saturated felt.

3.F. House Wrap: Air/vapor barrier polymeric membrane as specified in Section _____.

3.G. Concrete Bonding Agent: Water-based polyvinyl acetate type or concrete adhesive emulsion formulated for use as an admixture.

3.H. Joint Sealants and Joint Fillers: As specified in Section 07 90 00.

2.4 ADHERED MASONRY VENEER INSTALLATION MATERIALS AND ACCESSORIES

4.A. Air and Water Barrier Membrane: LATICRETE® Air & Water Barrier ** to be thin, cold applied, single component liquid and load bearing. Waterproofing Membrane to be non-toxic, non-flammable, and non-hazardous during storage, mixing, application and when cured:

4.A.1. Air Barrier Test (AC 212): Pass
4.A.2. Air Permeance (ASTM E2178): Pass
4.A.3. Elongation @ break (ASTM D751): 20-30%
4.A.4. 7 day Tensile Strength (ANSI A118.10): >265 psi (1.8 MPa)
4.A.5. 7 day Shear Bond Strength (ANSI A118.10): >200 psi (1.4 MPa)
4.A.6. 28 Day Shear Bond Strength (ANSI A118.4): >214 psi (1.48 – 2.4 MPa)
4.A.7. Service Rating (TCA/ASTM C627): Extra Heavy
4.A.8. Total VOC Content: < 0.05 mg/m^3

4.B. Epoxy Waterproofing Flashing Mortar: LATAPOXY® Waterproof Flashing Mortar to be 3 component epoxy, trowel applied specifically designed for use under adhered masonry veneer:

4.B.1. Breaking Strength (ANSI A118.10): 450-530 psi (3.1-3.6 MPa)
4.B.2. Waterproofness (ANSI A118.10): No Water penetration
4.B.3. 7 day Shear Bond Strength (ANSI A118.10): 110-150 psi (0.8-1 MPa)
4.B.4. 28 Day Shear Bond Strength (ANSI A118.10): 90-120 psi (0.6–0.83 MPa)
4.B.5. 12 Week Shear Bond Strength (ANSI A118.10): 110-130 psi (0.8-0.9 MPa)
4.B.6. Total VOC Content: <3.4 g/L

4.C. Cementitious backer board units: size, thickness and installation as specified by cement backer board manufacturer, complying with ANSI A118.9. ***SPECIFIER Design Option***

4.D. Latex-Portland Cement Mortar for leveling beds and scratch/plaster coats: LATICRETE MVIS Premium Mortar Bed to meet the following physical requirements:

4.D.1. Compressive Strength (ANSI A118.4 Modified): >4000 psi (27.6 MPa)
4.D.2. Water Absorption (ANSI A118.6): ≤ 5%
4.D.3. Service Rating (TCA/ASTM C627): Extra Heavy
4.D.4. Smoke & Flame Contribution (ASTM E84 Modified): 0
4.D.5. Total VOC Content: < 0.05 mg/m^3

4.E. Latex Portland Cement Mortar: MVIS Hi Bond Veneer Mortar ** to be weather, frost, shock resistant, non-flammable and meet the following physical requirements:

4.E.1. Compressive strength (ANSI A118.4): >2500 psi (17.2 MPa)
4.E.2. Bond strength (ANSI A118.4): >450 psi (3.1 MPa)
4.E.3. Smoke & Flame Contribution (ASTM E84 Modified): 0
4.E.4. Total VOC Content: < 0.05 mg/m^3

4.F. Latex Portland Cement Pointing Mortar / Grout: MVIS Pointing Mortar ** to be weather, frost and shock resistant, as well as meet the following physical requirements:

4.F.1. Compressive Strength (ASTM C91): 3500 psi (24.1 MPa)
4.F.2. Smoke & Flame Contribution (ASTM E84 Modified): 0
4.F.3. Total VOC Content: < 0.00 mg/m^3

4.G. Expansion and Control Joint Sealant: MVIS Silicone Sealant to be a one component, neutral cure, exterior grade silicone sealant and meet the following requirements:

4.G.1. Tensile Strength (ASTM C794): 280 psi (1.9 MPa)
4.G.2. Hardness (ASTM D751; Shore A): 25 (colored sealant) /15 (clear sealant)
4.G.3. Weather Resistance (QUV Weather-ometer): 10000 hours (no change)

4.H. Spot Bonding Epoxy Adhesive: LATAPOXY 310 Stone Adhesive (Standard or Rapid Grade) for installing adhered masonry veneer, brick and stone over vertical and overhead surfaces shall be high strength, high temperature resistant, non-sag and shall meet the following physical requirements:

4.H.1. Thermal Shock Resistance (ANSI A118.3): >1000 psi (6.9 MPa)
4.H.2. Water Absorption (ANSI A118.3): 0.1 %
4.H.3. Compressive Strength (ANSI A118.3): >8300 psi (57.2 MPa)
4.H.4. Shear Bond Strength (ANSI A118.3 Modified): >730 psi (5 MPa)

** NOTE TO SPECIFIER ** Edit applicable adhered masonry veneer installation accessories.

** GREENGUARD Indoor air Quality Certified® Product

PART 3 EXECUTION

3.1 EXAMINATION

1.A. Do not begin installation until the backing structure is plumb, bearing surfaces are level and substrates are clean and properly prepared.

1.B. If substrate preparation is the responsibility of another installer, notify the Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

2.A. Clean surfaces thoroughly prior to installation.

2.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 OF ADHERED MASONRY THIN VENEER - MORTARED OR DRY STACK JOINTS

Specifier Notes: The following paragraphs cover typical thin veneer installation with mortared joints. Edit the following as required.

3.A. **General:** Install in accordance with current versions of American National Standards Institute, Inc. (ANSI) "**A108 American National Standard Specifications for Installation of Ceramic Tile**" and TCNA "**Handbook for Ceramic Tile Installation.**" Cut and fit adhered masonry veneer neatly around corners, fittings, and obstructions. Perimeter pieces to be

minimum half unit of stone. Maintain masonry courses to uniform dimensions. Form vertical and horizontal joints of uniform thickness. Install divider strips at junction of flooring and dissimilar materials.

3.B. **Pre-float Method:** Over clean, dimensionally stable and sound concrete or masonry substrates, apply thick-bed mortar as scratch/leveling coat in compliance with current revision of A108.1A (1.0, 1.4 & 5.1). Float surface of scratch/leveling coat plumb, true and allow mortar to set until firm. For installation of adhered masonry veneer follow Direct Adhere Method (§ 3.3 D).

Use the following LATICRETE System Materials:
LATICRETE® MVIS Premium Mortar Bed

3.C. **Lath & Plaster Method:** Install cleavage membrane / water resistive barrier complying with current revision of ANSI A108.02 (3.8 Membrane or cleavage membrane). Install metal lath complying with the current revision of ANSI A108.01 (3.3 Requirements for lathing and portland cement plastering), ANSI A108.02 (3.6 Metal lath) and A108.1A (1.0 – 1.2, 1.4, & 5.1). Apply latex-portland cement mortar as scratch/leveling coat over wire lath, concrete or masonry in compliance with current revision of ANSI A108.01 (3.3.5.1) and A108.1A (1.4). Float surface of scratch/leveling coat plumb, true and allow mortar to set until firm. For installation of adhered masonry veneer follow Direct Adhere Method (§ 3.3 D).

Use the following LATICRETE System Materials:
LATICRETE® MVIS Premium Mortar Bed

3.D. **Direct Adhere Method to Install Masonry Veneer:** Install latex portland cement mortar in compliance with current revisions of ANSI A108.02 (3.11), A108.1B and ANSI A108.5. Use the appropriate trowel notch size to ensure proper bedding of the adhered masonry veneer, selected so that 100% coverage of the back surface of the Thin Adhered Veneer is achieved. Work the latex portland cement mortar into good contact with the substrate and comb with notched side of trowel. Spread only as much latex portland cement mortar as can be covered while the mortar surface is still wet and tacky. When installing large format (>8” x 8”/200mm x 200mm) units, spread latex portland cement mortar onto the back of (i.e. ‘back-butter’) each piece/unit in addition to troweling latex portland cement mortar over the substrate. Beat each piece/unit into the latex portland cement mortar with a beating block or rubber mallet to insure 100% full bedding and flatness. Allow installation to set until firm. Clean excess latex portland cement mortar from adhered masonry veneer face and joints between pieces.

3.D.A. **Pattern Bond:**

3.D.A.1. Layout work in advance and distribute color range of stone uniformly over total work area.
3.D.A.2. Lay stone with face exposed.
3.D.A.3. Take care to avoid concentration of any one color to any one wall surface.
3.D.A.4. Maintain uniform joints, as stone allows.
3.D.A.5. Do not use stacked vertical joints.

Use the following LATICRETE System Materials:
LATICRETE® MVIS Hi-Bond Veneer Mortar

3.E. **Pointing/Grouting Joints (NOTE: Stacked Stone Installations to omit pointing of mortar joints)**
NOTE TO SPECIFIER: specify color for each type/color of adhered masonry veneer and trim unit:

Polymer Fortified Pointing Mortar - for joint widths ≥1/16”(1.5mm) and ≤1” (25mm]); Allow Thin Adhered veneer to cure a minimum of 24 hours @ 70° F (21°C). Verify joints are free of dirt, debris, wedges or spacers. Sponge or wipe dust/dirt off veneer face and remove any water standing in joints. Surface temperature must be between 40-90° F (4-32°C). Pour approximately 4 quarts (3.8 L) of clean, potable water into a clean mixing container. Add a 50 lb. (22.7 kg) bag of LATICRETE Pointing Mortar to the container while mixing. Mix by hand or with a slow speed mixer to a smooth, stiff consistency. Install latex fortified cement grout/pointing mortar in compliance with current revisions of ANSI A108.1A (7.0), ANSI A108.02 (4.5) and ANSI A108.10. Dampen dry surfaces with clean water.

Place LATICRETE MVIS Pointing Mortar into a high quality masonry mortar pointing bag. Carefully bag the pointing mortar into the joints. Once the mortar has become stiff in the joint, (“thumb-print dry”) typically 15-20 minutes after pointing @ 70° F (21°C), using a striking or joint tool, strike the mortar joints to the desired finish/contour. Remove excess mortar using a masonry brush or sponge. Do not over wash the mortar joint.

Higher temperatures may require faster time to initial cleaning; wider joints or lower temperatures may require a longer time to initial cleaning. Allow joints to become firm. Inspect joint for pinholes/voids and repair them with freshly mixed grout/pointing mortar. Within 24 hours, check for remaining haze and remove it with warm soapy water and a nylon scrubbing pad, using a circular motion, to lightly scrub surfaces and dissolve haze/film. Do not use acid cleaners on latex portland cement grout/pointing mortar less than 10 days old.

Use the following LATICRETE System Materials:
LATICRETE® MVIS pointing Mortar

3.F. **Expansion and Control Joints:** Provide control or expansion joints as located in contract drawings and in full conformity, especially in width and depth, with architectural details.

3.F.1. Substrate joints must carry through, full width, to surface of adhered masonry veneer.
3.F.2. Install expansion joints in adhered masonry veneer work over construction/cold joints or control joints in substrates.
3.F.3. Install expansion joints where adhered masonry veneer abut restraining surfaces (such as perimeter walls, curbs, columns), changes in plane and corners.
3.F.4. Joint width and spacing depends on application and should be determined by the project design team.
3.F.5. Joint width: ≥ ⅛” (3mm) and ≤ 1” (25mm).
3.F.6. Joint width: depth ~2:1 but joint depth must be ≥ ⅛” (3mm) and ≤ ½” (12mm).
3.F.7. Layout (field defined by joints): 1:1 length: width is optimum but must be ≤ 2:1.
Remove all contaminants and foreign material from joint spaces/surfaces, such as dirt, dust, oil, water, frost, setting/pointing materials, sealers and old sealant/backer. Use LATICRETE Latasil™ 9118 Primer for underwater and permanent wet area applications,

or for porous stone (e.g. limestone, sandstone etc…) installations. Install appropriate backing material (e.g. closed cell backer rod) based on expansion joint design and as specified in § 07920. Apply masking tape to face of adhered masonry veneer, brick or stone veneer. Use caulking gun, or other applicator, to completely fill joints with sealant. Within 5-10 minutes of filling joint, 'tool' sealant surface to a smooth finish. Remove masking tape immediately after tooling joint. Wipe smears or excess sealant off the face of adhered masonry veneer or other absorptive surfaces immediately.

Use the following LATICRETE System Materials:
LATICRETE® MVIS Silicone Sealant
LATICRETE Latasil 9118 Primer

3.G. **Adjusting:** Correction of defective work for a period of one (1) year following substantial completion, return to job and correct all defective work. Defective work includes, without limitation, adhered masonry veneer units stones broken in normal abuse due to deficiencies in setting bed, loose grout/pointing mortar, and all other defects which may develop as a result of poor workmanship.

3.G.A. Control and Expansion Joints:
3.G.A.1. Keep joints open and free of debris.
3.G.A.2. Coordinate control joints as specified in Section 07 90 00 for sealant performance.

3.G.B. Sealant Recesses:
3.G.B.1. Provide open joints 3/4 inch deep and 1/4 inch wide, where masonry meets doors, windows, and other exterior openings.
3.G.B.2. Coordinate sealant joints as specified in Section 07 90 00 for sealant performance.

3.G.C. Cutting and Fitting:
3.G.C.1. Cut and fit thin veneer stone for chases, pipes, conduit, sleeves, grounds, and other penetrations and adjacent materials.
3.G.C.2. Coordinate with other work to provide correct size, shape, and location.

3.G.D. During progress of the work, cover top of unfinished stone masonry work for protection from weather.

3.4 INSTALLATION BUILDING VENEER

4.A. Install building veneer stone and mortar in accordance with manufacturer's instructions and ACI 530.1/ASCE 6/TMS 602.

4.B. Maintain masonry courses to uniform dimensions. Form vertical and horizontal joints of uniform thickness.

3.5 CLEANING

5.A. Keep face of stone free of mortar as work progresses.

5.B. If residual mortar is on face of stone, allow to dry partially and brush mortar off surface and sponge off residue.

5.C. When work is completed and mortar has set for 2 to 3 days, clean surface from top to bottom using mild masonry detergent acceptable to natural stone manufacturer.

5.D. Do not use harsh cleaning materials or methods that could damage stone.

5.E. Do not use metal brushes or acids for cleaning.

3.6 PROTECTION

6.A. Protect installed natural stone veneer to ensure that, except for normal weathering, stone will be without damage or deterioration at time of Substantial Completion.

6.B. Touch-up, repair, or replace damaged stone before Substantial Completion.

END OF SECTION

This specification was prepared by STONEYARD®. Comments for improvements should be addressed to:

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New England Natural Thin Stone Veneer