

**SECTION 04 0100**  
**MAINTENANCE OF MASONRY**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Cleaning of exterior slate stone cladding surfaces.
- B. Replacement of damaged slate stone cladding units.
- C. Repointing and resealing of panel joints.

**1.02 RELATED REQUIREMENTS**

- A. Section 04 4200 - Exterior Stone Cladding.
- B. Section 04 4301 - Stone Masonry Veneer.

**1.03 REFERENCE STANDARDS**

- A. ACI 530/530.1/ERTA - Building Code Requirements and Specification for Masonry Structures and Related Commentaries; American Concrete Institute International; 2011.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene one week prior to commencing work of this section.
  - 1. Require attendance of parties directly affecting work of this section.
  - 2. Review conditions of installation, installation procedures, and coordination with related work.
- B. Scheduling:
  - 1. Perform cleaning and washing of masonry between the hours of 7 am to 7 pm only.

**1.05 SUBMITTALS**

- A. See Section 01 33 23 for submittal procedures.
- B. Shop Drawings: Indicate setting details of stone. Detail shoring, bracing, and temporary or permanent support.
- C. Product Data: Provide data on cleaning compounds.
- D. Samples: Submit four samples of stone units to illustrate matching color, texture and extremes of color range.
- E. Manufacturer's Instructions: For cleaning materials, indicate special procedures, conditions requiring special attention.

**1.06 QUALITY ASSURANCE**

- A. Comply with provisions of ACI 530/530.1/ERTA, except where exceeded by requirements of the contract documents.
  - 1. Maintain one copy of each document on project site.
- B. Restorer: Company specializing in masonry restoration with minimum three years of documented experience.

**1.07 MOCK-UP**

- A. Restore and repoint an existing masonry wall area sized 8 feet (2.40 m) long by 6 feet (2 m) high; include in mock-up area instances of sealants, mortar, accessories, wall openings, and flashings.
- B. Clean a 2 ft. by 2 ft. panel to determine extent of cleaning.
- C. Locate mock-up where directed by the COR.
- D. Acceptable panel and procedures employed will become the standard for work of this section.
- E. Mock-up may remain as part of the work.

### 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry neatly stacked and tied on pallets. Store clear of ground with adequate waterproof covering.

### 1.09 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

## PART 2 PRODUCTS

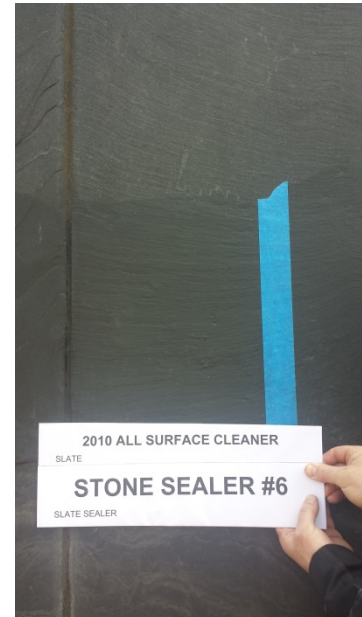
### 2.01 MANUFACTURERS

- A. Slate stone cleaning and sealing shall be equivalent or approved equal to the test locations shown below. For reference purposes: the test area was performed using a two-step process. Step #1 PROSOCO; 2010 Surface Cleaner ([www.prosoco.com](http://www.prosoco.com)). Step 2: Stone sealer #6 (provides a wet look when dry). Contractor must match the cleanliness & look of the test locations by performing a mock-up area per section 1.06 MOCK-UP for requirements.

**Before**



**After**



## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that surfaces to be cleaned and replaced are ready for work of this section.

### 3.02 PREPARATION

- A. Protect surrounding elements from damage due to restoration procedures.
- B. Separate areas to be protected from restoration areas using means adequate to prevent damage.
- C. Cover existing landscaping with tarpaulins or similar covers.
- D. Mask immediately adjacent surfaces with material that will withstand cleaning and restoration procedures.
- E. Close off adjacent occupied areas with dust proof and weatherproof partitions.
- F. Protect roof membrane and flashings from damage with 1/2 inch (13 mm) plywood laid on roof surfaces over full extent of work area and traffic route.

prevent runoff over adjacent surfaces unless those surfaces are impervious to damage from runoff.

H. Do not allow cleaning runoff to drain into sanitary or storm sewers.

### **3.03 REBUILDING**

- A. Remove damaged and deteriorated slate stone with care in a manner to prevent damage to any adjacent remaining materials.
- B. Support structure as necessary in advance of removing units.
- C. Install new units following procedures for new work specified in other section(s).
- D. Mortar Mix: Colored and proportioned to match existing work.
- E. Ensure that anchors are correctly located and built in.
- F. Install built in masonry and stone work to match and align with existing, with joints and coursing true and level, faces plumb and in line. Build in all openings, accessories and fittings.

### **3.04 REPOINTING**

- A. Perform repointing prior to cleaning masonry surfaces.
- B. Cut out loose or disintegrated mortar in joints to minimum 1/2 inch (6 mm) depth or until sound mortar is reached.
- C. Use hand tools only. Do not use power tools.
- D. When cutting is complete, remove dust and loose material by brushing.
- E. Premoisten joint and apply mortar. Pack tightly in maximum 1/4 inch (6 mm) layers. Form a smooth, compact concave joint to match existing.
- F. Moist cure for 72 hours.

### **3.05 RESTORATION CLEANING**

- A. Clean surfaces and remove large particles with wood scrapers or non-ferrous wire brush.
- B. Spray coat slate stone type masonry with Prosoco restoration cleaner, mixed into solution in accordance with manufacturer's instructions and identical to the test sample area.
- C. Provide a second application if required to match mock-up area.
- D. Allow sufficient time for solution to remain on masonry and agitate with soft fiber brush or sponge.
- E. Rinse from the bottom up with potable water applied at 400 psi (2 750 kPa) and at a rate of 4 gal/min (16 L/min).

### **3.06 AGING**

- A. Rub in new stone work to match, as close as possible, adjacent original work.
  - 1. Use carbon black in small amounts, rubbing in well with burlap rags.
- B. After each application, dust off surplus and wash down with low pressure hose. Allow surface to dry before proceeding with succeeding applications.
- C. Continue process until acceptance.

### **3.07 CLEANING**

- A. Immediately remove stains, efflorescence, or other excess resulting from the work of this section.
- B. Remove excess mortar, smears, and droppings as work proceeds and upon completion.
- C. Clean surrounding surfaces.

**END OF SECTION 04 0100**