

SECTION 04531

MASONRY TUCK POINTING

PART 1 - GENERAL

1. DESCRIPTION

- 1.1 This section specifies requirements for tuck pointing (pointing) of existing brick masonry and stone (cast stone) elements on the building.
- 1.2 The purpose of this project is to remove the loose grout and replace with new; cut out and remove cracked or damaged mortar and replace with new; in order to maintain the integrity of the exterior masonry skin.
- 1.3 Match the color of the existing mortar. This contractor shall prepare a mock-up of the proposed grout, showing a finished look – color and finish.
- 1.4 Cleaning the wall prior to the start of the work. This process will help identify damaged or deteriorated areas.
- 1.5 During the construction phase, all precaution shall be taken to protect any other building surfaces, pedestrians, and automobiles.

2. RELATED WORK

- 2.1 Mortars: Refer to Section 04100
- 2.2 Cleaning
- 2.3 Caulking: Refer to Section 07000

3. APPLICABLE PUBLICATIONS

- 3.1 Publications listed below form a part of this specification to extent referenced. Publications are referenced in the text by basic designation only.
- 3.2 American Society for Testing and Materials (ASTM):
 - C67-07Brick and Structural Clay Tile, Sampling and Testing
 - C216-07 Facing Brick (Solid Masonry Units Made from Clay or Shale)
 - C270-07 Mortar for Unit Masonry

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PART 2 - PRODUCTS

2.1 TUCK POINTING

MORTAR

As per appendix X3 of ASTM C270.

2.2 REPLACEMENT MASONRY UNITS

- a. Face Brick:
 - 1. ASTM C216, Grade SW, Type FBS. Brick shall be classified slightly efflorescent or better when tested in accordance with ASTM C67.
 - 2. Face brick (if required to be replaced) shall match facing brick of the existing building (color, size and texture) that is being tuck pointed.
- b. Cast Stone / Stone.
 - 1. Tuck pointing work shall include the joints in the accent stone and windowsills, ect.

PART 3 - EXECUTION

3.1 CUT OUT OF EXISTING MORTAR JOINTS

- a. Cut out existing mortar joints (both bed and head joints) and remove by means of a toothing chisel or a special pointer's grinder, to a uniform depth of to 19 mm (3/4-inch), or until sound mortar is reached. Take care to not damage edges of existing masonry units to remain.
- b. Remove dust and debris from the joints by brushing, blowing with air or rinsing with water. Do not rinse when temperature is below freezing.

3.2 JOB CONDITIONS

- a. Protection: Protect newly pointed joints from rain, until pointed joints are sufficiently hard enough to prevent damage.

3.3 All masonry surfaces shall be washed with pressurized water, approximately 1000 PSI, to remove all dust, dirt and residue from surface areas, leaving the surface in a reasonably clean, bright form.

3.4 A careful inspection of all mortar joints shall be completed and joints that are found to be void, open or defective shall be cut back to a depth 1/4-inch deeper than the width of the joints, or to sound backing. All cut mortar joints and face masonry shall be cleaned with air and/or water pressure to remove any loose or foreign residue.

3.5 Defective mortar joints that have been cut and cleaned shall then be pointed (filled and tightly packed) with a non-staining, non-shrinking, Type "N", masonry pointing mortar, colored and tooled to match the adjacent joints in appearance as closely as possible.

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3.6 INSTALLATION OF TUCKPOINTING MORTAR

- a. Immediately prior to application of mortar, dampen joints to be tuck pointed. Prior to application of pointing mortar, allow masonry units to absorb surface water.
- b. Tightly pack mortar into joints in thin layers, approximately 6 mm (1/4-inch) thick maximum.
- c. Allow layer to become "thumbprint hard" before applying next layer.
- d. Pack final layer flush with surfaces of masonry units. When mortar becomes "thumbprint hard", tool joints.

3.7 TOOLING OF JOINTS

- a. Tool joints in patch work with a jointing tool to match the existing surrounding joints.

3.8 The perimeter of all door frames (masonry-to-frame joints) shall have all existing fill materials removed, the joint surface area shall be cleaned of all foreign residue and resealed with a polyurethane rubber sealant, tooled to a watertight condition. Color of new sealant shall match the adjacent door trim or adjacent mortar joints as closely as possible.

3.9 At the steel lintels above the windows, cut out the existing sealant to allow for water trapped at the lintels to escape.

3.10 The vertical head joints between the water tables stones shall be cut back to a depth of approximately 1/2-inch, cleaned of all dust, dirt and loose debris. All joints shall have bond breaker tape or foam backer rod installed to prevent three-sided adhesion. The joints shall then be resealed utilizing a polyurethane sealant, Masterseal NP1 or equal. New sealant shall be tooled to a neat, uniform appearance and shall match the original material in color as closely as possible.

3.11 Upon completion of the previously outlined work, all exterior masonry surfaces shall be given **one (1)** application of a transparent, penetrating siloxane water repellent solution. This material shall be applied in strict accordance with manufacturer's recommendations.

3.12 REPLACEMENT OF MASONRY UNITS (IF REQUIRED – ADDITIONAL COST)

- a. Cut out mortar joints surrounding masonry units that are to be removed and replaced.
 1. Units removed may be broken and removed, providing surrounding units to remain are not damaged.
 2. Once the units are removed, carefully chisel out the old mortar and remove dust and debris.
 3. If units are located in exterior wythe of a cavity or veneer wall, exercise care to prevent debris falling into cavity.
- b. Dampen surfaces of the surrounding units before new units are placed.
 1. Allow existing masonry to absorb surface moisture prior to starting installation of the new replacement units.
 2. Butter contact surfaces of existing masonry and new replacement masonry units with mortar.
 3. Center replacement masonry units in opening and press into position.

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4. Remove excess mortar with a trowel.
5. Point around replacement masonry units to ensure full head and bed joints.
6. When mortar becomes "thumbprint hard", tool joint

3.13 CLEANING

- a. Clean exposed masonry surfaces on completion.
- b. Remove mortar droppings and other foreign substances from wall surfaces.
- c. First wet surfaces with clean water, then wash down with a solution of soap-less detergent specially prepared for cleaning brick.
- d. Brush with stiff fiber brushes while washing, and immediately thereafter hose down with clean water.
- e. Free clean surfaces from traces of detergent, foreign streaks or stains. Protect materials during cleaning operations including adjoining construction.
- f. Use of muriatic acid for cleaning is prohibited.