

Special Specification 5050

Stone Masonry (Facade Masonry)



1. DESCRIPTION

This Item will govern for the construction of stone and brick masonry walls composed of approved stone or brick and lime-cement mortar.

2. MATERIALS

Unless otherwise shown on the plans, the Contractor will supply materials.

- 2.1 **Stone and Brick.** The stone will be sound and durable stone, free from structural defects, uniform in color and texture, and will be clean of earth, clay, oil or other foreign substances. Stones will be of the type and thickness shown on the plans.
- 2.2 **Concrete.** Concrete will be Class A, in accordance with Item 421, "Hydraulic Cement Concrete."
- 2.3 **Cement.** Cement will be Type II or Type III hydraulic cement and will conform to the pertinent requirements of DMS-4600, "Hydraulic Cement."
- 2.4 **Sand.** Sand will be free of deleterious or organic matter and will conform to the grading requirements for Grade 1 Fine Aggregate, Section 421.2.6.2.
- 2.5 **Lime.** Hydrated lime will conform to A.S.T.M. C-207, Type S.
- 2.6 **Water.** Mixing water will conform to the requirements of Item 421 "Hydraulic Cement Concrete," Section 421.2.5.
- 2.7 **Concrete Masonry Unit.** Concrete Masonry Units(CMU) blocks will be of size and type indicated on the plans and shall be free of cracks and other defects.
- 2.8 **Masonry Wall Tie.** Masonry Wall Ties shall be installed using the type and spacing specified in the plans.

3. CONSTRUCTION METHODS

- 3.1 **General.** The Contractor will submit samples of the stone and brick which are show the complete color range to the Engineer for approval.

The Contractor will be responsible for verifying all dimensions incidental to this work and will promptly report any discrepancies to the Engineer.

The stone masonry will be constructed in accordance with these specifications, in conformity with the form, dimensions, and design shown on plans, and to the lines and grades established by the Engineer.

- 3.2 **Mortar.** Mortar will be mixed in the proportions by volume of 1 part Portland cement, 1 part hydrated lime, and 4 parts of sand; or, 1 part of Type II masonry cement and 3 parts of sand.

- 3.2.1. Water content in the mortar mix will be the amount required to obtain a workable plastic mortar and used within 1 hr. after mixing. Mortar not used within that time will be discarded (re-tempering will not be permitted). The mortar boxes will be cleaned at the end of each day's work.
- 3.3. **Structure Wall.** Structural wall shall be built behind façade masonry, as indicated in the plans according to the guidance provided in the plans.
- 3.3.1. When structure wall is to be constructed from CMU blocks, mortar shall be supplied according to 3.2. and contain horizontal joints no greater than $\frac{3}{4}$ " and vertical joints no greater than 1". Mortar for CMU walls will not be required to contain colorant additive, but will not be rejected if colorant is used unless CMU wall surface is to be left exposed at project completion.
- 3.3.2. Masonry Wall Ties shall be installed according to manufactures specifications.
- 3.4. **Workmanship.** Masonry must be set by competent, experienced masons. Each stone will be cleaned, sponged, and drenched with clean water just before setting. Each stone will be set in a full bed of plastic mortar.
- 3.4.1. Face joints of Stone may vary from 1/4 in. to 1/2 in. in thickness. Joints will be uniform and raked out 3/4 in. deep for face pointing. Where necessary to prevent crushing mortar, small lead pads the thickness of the joint and set 1 in. back of the face will be used. Wood wedges will not be allowed. Joints not pointed at the time the stone is laid will be thoroughly wet with clean water and filled with mortar. The mortar will be well driven into the joints and finished with an approved pointing tool. The wall will be kept wet while the pointing is being done.
- 3.4.2. After the pointing is completed and the mortar set, all showing surfaces will be cleaned of loose mortar and cement stains. Just prior to the completion of the contract, the showing surfaces will again be cleaned in a manner satisfactory to the Engineer.

4. MEASUREMENT

This Item will be measured by the sq. ft. of surface area, complete in place. The Structural Wall and Masonry Wall Ties are not included in the measurement of the stone wall, but will be subsidiary to this Item. Only accepted work will be included, and the dimensions used for measurement will be those shown on the plans or ordered in writing by the Engineer.

5. PAYMENT

The work performed and materials furnished, when required, in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Stone Masonry (Façade Masonry)."

This is a plans quantity measurement item. The quantity to be paid is the quantity shown in the proposal unless modified by Article 9.2, "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

This price will be full compensation for furnishing and hauling all materials; for all freight involved; for preparing and placing all materials, including stone masonry façade and structural wall; and for all labor, tools, equipment, anchoring appurtenances, and incidentals necessary to complete the work.