

## SECTION 611 BRICK MASONRY

**611.01 Description.** This work consists of constructing brick masonry.

### MATERIALS.

**611.02 Portland Cement.** Portland cement shall conform to the requirements of [Section 801](#).

**611.03 Fine Aggregate.** Fine aggregate shall conform to the requirements of [Section 818](#).

**611.04 Water.** Water shall conform to the requirements of [Section 803](#).

**611.05 Hydrated Lime.** Hydrated lime shall conform to the requirements of [Section 802](#).

**611.06 Brick.** Brick shall be new, whole brick of best quality, of uniform and dense structure, free from lumps of lime, laminations, cracks, checks, soluble salt, or other defects that in any way impair their strength, durability, appearance, or usefulness for the purpose intended. All brick shall conform to requirements of AASHTO M 114 for Grade SW brick. The Contractor must submit samples for approval when the masonry is exposed to general view.

### CONSTRUCTION METHODS.

**611.07 Excavation.** Excavation shall be made to the required depth when necessary, to expose the existing foundation on which the brick masonry is to be placed.

**611.08 Mixing Mortar.** Portland cement mortar shall be mixed in the proportion of one part portland cement to three parts fine aggregate, to which shall be added hydrated lime not to exceed 10% of the cement by weight. The fine aggregate, portland cement, and lime shall first be mixed dry in an approved manner until the mixture assumes a uniform color, after which water shall be added as the mixing continues until the mortar attains such consistency as can be easily handled and spread with a trowel. The mortar shall be so placed to form a firm bond. Mortar that is not used within 30 minutes after water has been added shall be wasted. Re-tempering of mortar will not be permitted.

**611.09 Placing Bricks.** Bricks shall be laid by means of the shove-joint method so as to thoroughly bed them into the mortar. Buttered or plastered joints will not be permitted. All brick headers and stretchers shall be so arranged as to thoroughly bond the mass with alternate courses breaking joints. All joints shall be completely filled with mortar and shall be finished properly as the work progresses. Joints shall be not less than 30 (6 mm) and not more than 20 (13 mm) in thickness. No spalls or bats shall be used except for shaping irregular openings or when unavoidable to finish out a course, in which case, full bricks shall be placed at the corners and bats shall be placed in the interior of the course. Competent bricklayers shall be employed on work of this class.

**611.10 Cleaning.** Brick masonry which is to be exposed after completion of the structure, shall be thoroughly cleaned of all mortar, scars, or spots, and shall present a surface showing the natural color of the bricks. Efflorescence may be partly removed by water. The wall shall be first washed down with water, then treated with a solution of three parts hydrochloric acid to 100 parts of water, and finally washed thoroughly again with water.

**611.11 Backfilling.** The excavated areas which are not occupied by the brick masonry shall be backfilled to the required elevation with suitable material which shall be tamped in layers of not more than 60 (150 mm), until firm and solid. No backfill shall be made prior to approval.

**611.12 Method of Measurement.** The quantity of brick masonry placed and accepted will be measured by the square foot (square meter).

**611.13 Basis of Payment.** The quantity of brick masonry will be paid for at the Contract per square foot (square meter). Price and payment will constitute full compensation for excavating and backfilling; for furnishing and placing all materials; for the disposal of surplus materials; and for all labor, equipment, tools, and incidentals required to complete the work, including cleaning.