SECTION M.11
MASONRY FACING
CEMENT AND DRY RUBBLE MASONRY
BRICK
MORTAR

M.11.01--Masonry Facing: The materials for this work shall conform to the following requirements:

1--Masonry Facing Stone: This stone shall be of the kind specified in the proposal or on the plans and shall be of a size, quality and color acceptable to the Engineer. The stone shall be hard and durable, resistant to weathering action, reasonably fine grained, and free from structural defects that would impair its strength or durability. Preferably, the stone shall be from a quarry the product of which is known to be of satisfactory quality. Stone shall be of such character that it may be truly cut to such lines and surfaces, either plain or curved, as may be required. Any stone having defects which have been repaired with cement or other materials will be rejected. Samples of stone shall be submitted when required. Masonry facing stone shall be of two grades: dimensioned masonry stone and ashlar masonry stone.

(a) Dimensioned Masonry Stone: Dimensioned masonry stone shall be dressed to true size and shape, in conformity with the requirements of the plans or as ordered. General details and controlling dimensions will be shown on the plans. The Contractor shall prepare such additional detail drawings as he may require for his guidance, and all such drawings shall be approved by the Engineer before construction is started.

(b) Ashlar Masonry Stone: Ashlar masonry stone shall be of such sizes and shapes as to produce the general effect shown on the plans.

Surface Finish: For the purpose of these specifications, the finishes of exposed surfaces of masonry facing stone are defined as follows:

Sawed Face: Exposed surfaces shall be true planes with a tolerance of 5 mm from a straightedge placed on the surface in any direction. All saw-faced stone shall be sandblasted to remove rust stains. Where impractical to saw, the surface shall be six-cut. Face arises of all exposed surfaces shall be true and out of wind.

Six-Cut: Exposed surfaces shall be true planes with a tolerance of 5 mm from a straightedge placed on the exposed surface in any direction. The exposed surface shall be finished with a tool having six blades to the 25 mm.

Four-Cut: Same surface tolerance as for six-cut; exposed surfaces to be finished with a tool having four blades to the 25 mm.

Fine-Pointed: Projections on fine-pointed finished surfaces shall not exceed 12.5 mm. Exposed edges shall be pitched to true lines.

Rough-Pointed: Projections on rough-pointed finished surface may vary from 12.5 mm to 25 mm. Exposed edges shall be pitched to true lines.

Split-Face: Exposed surfaces shall have face edges pitched to line and shall have no projection of more than 38 mm above the plane of the edges.

Rock-Face or Quarry Face: Exposed surfaces shall be freshly split granite; they shall have no projection of more than 75 mm. Hollow faces will not be permitted. They shall be pitched to straight and true lines and shall have a chiseled draft on all edges if so indicated on the plans.

Exposed surfaces of face stone shall be given the surface finish indicated on the plans.

2--Vacant:

M.11.02--Cement Rubble Masonry and Dry Rubble Masonry: The materials for this work shall conform to the following requirements:

1--Masonry Stone: This stone shall be of approved quality, sound, durable and free from structural defects or imperfections tending to destroy its resistance to the weather. The individual pieces shall be roughly rectangular in shape, with at least one fairly even face, and shall have a volume of not less than 0.12 m^3, except where smaller pieces are required for closure or where the character of the construction makes the use of smaller pieces necessary.

M.11.03--Brick Masonry: The materials for this work shall conform to the following requirements:

Brick: The brick for use other than the construction of catch basins, manholes and drop inlets shall conform to the requirements of AASHTO M 114, Grading SW.

The brick shall have a fine-grained, uniform, and dense structure, free from lumps of lime, laminations, cracks, checks, soluble salts, or other defects which may in any way impair their strength, durability, appearance, or usefulness for the purpose intended. Bricks shall emit a clear, metallic ring when struck with a hammer.

M.11.04--Mortar: Mortar shall be composed of one part portland cement and two parts, by volume, of surface dry fine aggregate. Hydrated lime, in an amount not to exceed 1.8 kg of lime to each bag of cement, may be added at the option of the Engineer. Cement and hydrated lime shall conform to the following requirements:

(a) Portland cement, Types I, II or IS, and water shall conform to the requirements of Article M.03.01.

(b) Hydrated lime shall conform to the requirements of ASTM C 6.

(c) For laying stone, precast units, or for shotcrete, fine aggregate shall conform to Grading A, table below. In all other respects, it shall conform to the requirements of Article M.03.01-2.

(d) For pointing stone or the precast units and for laying brick or sealing pipe joints, the fine aggregate shall conform to Grading B, table below. In all other respects it shall conform to the requirements of Article M.03.01-2.

Table of Gradation, Fine Aggregate for Mortar

Square Mesh Sieves	**Grading**	
	A	B
	Percentage Passing by mass	
Pass 9.5 mm	100	
Pass 4.75 mm	95-100	
Pass 2.36 mm	80-100	100
Pass 1.18 mm	50-85	
Pass 600 µm	25-60	
Pass 300 µm	10-30	10-40
Pass 150 µm	2-10	0-10