



## Gabion-Faced (M.S.E.) Wall Product Specification

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### 1.0 MECHANICALLY STABILIZED EARTH WALL MATERIALS

#### 1.1 Welded wire fabric for soil reinforcement.

Reinforcing mesh shall be steel welded wire fabric conforming to ASTM A-185 (AASHTO M 55), except that weld shear testing will be required on all welded wire mat configurations. Galvanizing shall be applied after the wire fabric is fabricated in accordance with ASTM A-123 (AASHTO M 111). A minimum coating of 2.0 oz/ft<sup>2</sup> (605 g/m<sup>2</sup>) shall be applied.

### 2.0 GABION MATERIALS

#### 2.1 Basket mesh

Use a 9 ga (W1.7 x W1.7) galvanized wire fabric conforming to ASTM A-185 (AASHTO M 55). Make a weld at each connection that has minimum shear strength of 800 lbf (3560 newtons). A minimum coating of 0.90 oz.ft<sup>2</sup> (270 g/m<sup>2</sup>) shall be applied.

#### 2.2 Permanent fasteners

##### 2.2.1 Lacing Wire

Furnish nominal-sized 13.5 ga (2.2-millimeter) diameter wire of the same type, strength, and coating as the basket mesh.

##### 2.2.2 Spiral Binders

Form with wire having at least the same diameter, type, strength, and coating as the basket mesh.

##### 2.2.3 Internal Connecting Wire

Furnish Galvanized Pre-Formed stiffeners (9 ga min.).

Overlapping ring wire fastener. Manufacture overlapping ring wire fastener (hog ring) from 0.12 inch galvanized wire of high tensile strength equal to 260,000 to 280,000 psi. Galvanizing shall conform to ASTM A641, Class 3 Coating. When closed the number of wires to be confined, the free ends of the ring fastener shall overlap a minimum of 1 inch. The pull-apart resistance obtained along the longest axis of the ring (or against the overlap) shall be 600 lbf minimum.

#### 2.3 Revet Mattresses (less than 0.3 meter in the vertical dimension).

Fabricate the mesh from nominal-sized 2.2-millimeter or greater diameter wire.

### 2.3 Welded Wire Mesh

Weld each connection to obtain a minimum average weld shear strength of 1300 newtons with no value less than 1000 newtons.

Fabricate revet baskets in the dimensions required with a dimension tolerance of  $\pm 5$  percent in length and width and  $\pm 10$  percent in height. Where the length of the basket exceeds 0.5 times its width, equally divide the basket into cells less than or equal to 0.5 times the basket width using diaphragms of the same type and size mesh as the mattress panels. Prefabricate each basket with the necessary panels and diaphragms secured so they rotate into place

#### 2.3.1 Welded Wire Mesh for Galvanized-Coated Baskets

Weld each connection to obtain minimum average weld shear strength of 2,600 newtons with no value less than 2000 newtons. Fabricate gabion baskets in the dimensions required with a dimension tolerance of  $\pm 5$  percent. Where the length of the basket exceeds 1.5 times its width, equally divide the basket into cells less than or equal to the basket width using diaphragms of the same type and size mesh as the basket panels. Prefabricate each basket with the necessary panels and diaphragms secured so they rotate into place.