

625-R-194 GABIONS

(Revised 04-25-21)

The Standard Specifications are revised as follows:

SECTION 625, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

**SECTION 625 – ~~BLANK~~GABIONS AND REVET MATTRESSES**

**625.01 Description**

*This work shall consist of riprap filled wire mesh baskets, constructed in accordance with 105.03.*

**625.02 Submittals**

*The Contractor shall submit the following information to the Engineer at least 15 days prior to commencing gabion or revet mattress construction.*

- (a) Type and source of basket material.*
- (b) Type and source of fastening and miscellaneous materials.*
- (c) Source of riprap.*
- (d) Construction method and sequence.*
- (e) A copy of the basket manufacturer’s material and installation recommendations and instructions.*

**MATERIALS**

**625.03 Materials**

*Materials shall be in accordance with the following:*

<i>Geotextile .....</i>	<i>918.02</i>
<i>Riprap.....</i>	<i>904.04*</i>
<i>Twisted Wire Mesh Gabions and Revet Mattresses .....</i>	<i>ASTM A975</i>
<i>Welded Wire Fabric Gabions and Revet Mattresses .....</i>	<i>ASTM A974</i>

*\* Riprap shall be uniform riprap A in accordance with 904.04(f).*

**(a) Baskets, Fasteners, Spiral Binders, Lacing Wire and Stiffeners**

*Where metallic coating is specified, metallic coated gabion or revet mattress baskets may be fabricated from either twisted or welded wire mesh in accordance with ASTM A974 Style 1, 2, 3 or 4 or in accordance with ASTM A975 Style 1, 2 or 4.*

*Where PVC coating is specified, PVC coated gabion or revet mattress baskets may be fabricated from either twisted or welded wire mesh in accordance with ASTM A974 Style 5 or in accordance with ASTM A975 Style 3.*

*The Contractor may select baskets for the coating type specified from either of the mesh types listed above. The selected-mesh type shall be used throughout a gabion or revet mattress structure. Baskets shall be prefabricated by the manufacturer and assembled in the field. Fabrication of baskets on site from stock materials will not be permitted.*

*Fasteners, spiral binders, lacing wire and stiffeners shall be of the same style and*

shall satisfy the same requirements as those for the selected baskets.

A type A certification in accordance with 916 shall be provided for all components used in assembly of the baskets, including fasteners, spiral binders, lacing wire and stiffeners.

The results of the following shall be shown on the certification, as applicable.

<i>Property</i>	<i>Test Standard</i>
<i>Diameter of metallic coated wire</i>	
<i>Diameter of PVC coated wire</i>	
<i>Mechanical properties</i>	<i>ASTM A974, SECTION 7</i>
<i>Physical properties</i>	<i>ASTM A974, SECTION 8</i>
<i>Dimensional tolerances</i>	<i>ASTM A974, SECTION 9</i>

<i>Property</i>	<i>Test Standard</i>
<i>Mesh characteristics</i>	<i>ASTM A975, SECTION 6</i>
<i>Mechanical properties</i>	<i>ASTM A975, SECTION 7</i>
<i>Physical properties</i>	<i>ASTM A975, SECTION 8</i>
<i>Dimensional tolerances</i>	<i>ASTM A975, SECTION 9</i>

**(b) Soil Anchor Stakes**

Soil anchor stakes for revet mattresses shall be in accordance with the revet mattress manufacturer's recommendations.

A type C certification in accordance with 916 shall be provided for the soil anchor stakes.

**CONSTRUCTION REQUIREMENTS**

**625.04 Construction**

Excavation for gabion or revet mattress basket foundations shall be as shown on plans and in accordance with 203.08 and 206.01 through 206.09. Excavation for toe walls or cut-off walls shall be made to the neat lines as shown on the plans.

Where required, geotextile fabric shall be placed in accordance with 616.11 on the foundation prior to basket placement. Baskets shall be founded on the geotextile lined bed and laid to the lines and dimensions specified.

Gabion and revet mattress baskets shall be placed as shown on the plans. Baskets shall be assembled, connected and filled in accordance with the manufacturer's recommendations and these specifications.

Riprap shall be placed in close contact in the baskets so that maximum fill is obtained. Vertically exposed faces of the baskets shall be hand filled with larger aggregate.

*Aggregate shall be placed in 12 in. lifts so as to minimize basket distortion and damage to basket coating. Fill height differential between adjacent baskets shall not exceed 12 in. during construction. Twisted wire baskets shall be overfilled by 1 in. to 2 in. to allow for settlement. Welded wire baskets do not require overfilling. The baskets may be machine filled with sufficient handwork as required to accomplish the requirements herein.*

**625.05 Method of Measurement**

*Gabion and revet mattress baskets will be measured by the cubic yard of riprap required to fill the baskets in place. Geotextiles will be measured in accordance with 616.12.*

**625.06 Basis of Payment**

*Gabion and revet mattress baskets will be paid for at the contract unit price per cubic yard. Geotextiles will be paid in accordance with 616.13. Excavation of rock that is not identified within the limits of the foundation will be paid for in accordance with 104.03.*

*Payment will be made under:*

<b>Pay Item</b>	<b>Pay Unit Symbol</b>
<i>Gabions, Metallic Coated .....</i>	<i>CYS</i>
<i>Gabions, PVC Coated .....</i>	<i>CYS</i>
<i>Revet Mattress, Metallic Coated .....</i>	<i>CYS</i>
<i>Revet Mattress, PVC Coated .....</i>	<i>CYS</i>

*The cost of furnishing the wire mesh baskets, spiral binders, lacing wire, stiffeners, tie and connecting wire, selvages, riprap material for filling the wire mesh baskets, soil anchor stakes for the wire mesh baskets, and all labor, materials and equipment required to furnish and install gabions or revet mattresses shall be included in the cost of the pay item.*

*The cost of excavation for foundations shall be included in the cost of the gabion or revet mattress pay items.*