

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Section 35 31 24 – Stone production
- .2 Section 35 31 25 – Placement of stone

**1.2 APPLICATION**

- .1 This section handles with the supply and with the implementation of the granular basis under timber cribwork

**1.3 REFERENCES**

- .1 ASTM International
  - .1 ASTM C117-13, Standard Test Method for Material Finer Than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing.
  - .2 ASTM C127-12, Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate.
  - .3 ASTM C136-13, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- .2 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
  - .2 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.
- .3 U.S. Environmental Protection Agency (EPA)/Office of Water
  - .1 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

**1.4 ACTION/INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for gabion mattresses and include product characteristics, performance criteria, physical size, finish and limitations.

**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Replace defective or damaged materials with new.

## **Part 2            Products**

### **2.1                MATERIALS**

- .1    Mattress material to following requirements:
  - .1        The stone for filling behind the Berlin wall will consist of particles hard, resistant and exempt from clods of clay, from organic matters and from quite different harmful substance. It has to be resistance in the deterioration and in the destruction in conditions of frost thaw, of exhibition in the water and has to be of a quality which ensures the continuity of the structure in the weather conditions in which it must be used.
  - .2        Relative density: to ASTM C127, 2.65
  - .3        Caliber : clean stone 200 – 50 mm
  - .4        The size grading of the stone must be spread as:
    - .1            D85 : 175 mm
    - .2            D50 : 140 mm
    - .3            D15 : 70 mm
  - .5        Quality of materials in compliance with NQ 2560-114

## **Part 3            Execution**

### **3.1                EXAMINATION**

- .1    Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for gabion mattresses installation in accordance with manufacturer's written instructions.
  - .1        Visually inspect substrate in presence of Departmental Representative.
  - .2        Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3        Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

### **3.2                PREPARATION**

- .1    Environmental Protection:
  - .1        Provide erosion and sediment control measure to prevent migration of suspended sediments in downstream areas and erosion of on-site soils/sediments during execution of Work in accordance with Section 01 35 43 - Environmental Procedures.
- .2    Dredge, in accordance with Section 35 20 23 - Dredging area where mattress is to be placed to solid bedrock.
- .3    Inspect area using divers and determine that soft material has been removed.
- .4    Sound area in presence of Departmental Representative before placing mattress material, and record elevation of bottom on which mattress to be placed.

### **3.3 PLACEMENT**

- .1 Ensure that no frozen material is used in placing.
- .2 Do not place mattress material until bottom area has been reviewed by Departmental Representative.
- .3 Place mattress materials to dimensions as indicated.
- .4 Prevent segregation in placing of material sizes.
- .5 Do not place material during weather judged unsuitable by Departmental Representative.
- .6 Place material immediately prior to planned placement of timber cribs.
- .7 Level top surface of mattress to specified grade.
  - .1 Use sweep beam suspended from barge as screed to level surface of each mattress layer.
  - .2 Other methods of levelling may be employed subject to review of Departmental Representative.

### **3.4 TOLERANCES**

- .1 Surface of mattress to be parallel with elevation as indicated with mean elevation of surface within 75 mm of elevations as indicated.
- .2 Establish mean elevation from spot elevations taken at 0.5 m intervals.
  - .1 Do not allow spot elevation to differ more than 100 mm from mean.

### **3.5 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse/recycling or elimination in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

**END OF SECTION**