

## **PART 1 - GENERAL**

### **1.1 DESCRIPTION**

- .1 This section specifies requirements for supplying and placing rip-rap protection for erosion protection at locations and to dimensions indicated on drawings or designated by Departmental Representative.

## **PART 2 - PRODUCTS**

### **2.1 STONE**

- .1 Rip-rap shall consist of clean, hard, durable rock, having a density not less than 2.6 tonnes/m<sup>3</sup>. The rock material, if subjected to the Los Angeles Abrasion Test (ASTM C131), shall have a loss not greater than 35%. When tested for soundness, five cycles of magnesium sulphate (ASTM C88), the rock material shall have a loss of not greater than 15%.
- .2 Stones for use in rip-rap shall consist of clean, hard, durable rock, free of cracks. Rock subject to marked deterioration by water or weather will not be accepted. Only those stones approved by the Departmental Representative shall be used.
- .3 Stones shall meet the following size distribution for use intended.
  - .1 Class I in accordance with Item 417.02 of City of St. John's Department of Engineering Specifications Book (latest edition).

## **PART 3 - EXECUTION**

### **3.1 EXCAVATION**

- .1 Rip-rap - Hand Laid: on slopes to be rip-rapped the slopes shall be fine graded to a uniform surface. Depressions shall be filled and thoroughly compacted.

### **3.2 RIP-RAP HAND LAID**

- .1 The placing of stones and the backfilling and tamping of trenches shall be as required under Section 31 23 10.