

**Part 1 General****1.1 PRODUCTS INSTALLED BUT NOT SUPPLIED UNDER THIS SECTION**

- .1 Contractor to supply rip-rap material.

**1.2 MEASUREMENT AND PAYMENT**

- .1 Payment for geotextile soil stabilization under the rip-rap will be considered incidental and will not be measured or paid for separately.
- .2 Payment for Rip-Rap will be considered incidental and will not be measured or paid for separately.

**1.3 REFERENCE STANDARDS**

- .1 Government of Northwest Territories – Department of Transportation (GNWT-DOT).
  - .1 GNWT-DOT Specifications, Division 4 – Structures, Section 4 – Hand Placed and Random Riprap [13 Dec 96].

**1.4 NORTHWEST TERRITORY - TRANSPORTATION STANDARD**

- .1 Comply with GNWT-DOT Specifications, Division 4 – Structures, Section 4 – Hand Placed and Random Riprap.
- .2 This section takes precedence over contradictory statements made within any of the referenced GNWT-DOT Specifications sections.

**Part 2 Products****2.1 STONE**

- .1 Stone to be approved by Departmental Representative and the ESO prior to delivery to site.
- .2 No angular or blast rock to be used around culverts.
- .3 Hard, with relative density (formally specific gravity) not less than 2.65 dense, durable quarry stone, free from seams, cracks or other structural defects, to meet following size distribution for use intended:
  - .1 Random rip-rap:
    - .1 0-15% of total volume of stones with nominal size less than 100 mm.
    - .2 15-50% of total volume of stones with nominal size less than 200 mm.
    - .3 100% of total volume of stones with nominal size of 350 mm or less.

**2.2 GEOTEXTILE FILTER**

- .1 Geotextile soil stabilization: in accordance with Section 31 32 19.16- Geotextile soil stabilization.

**Part 3          Execution****3.1              PLACING**

- .1      Where rip-rap is to be placed on slopes, excavate trench at toe of slope to dimensions as indicated.
- .2      Fine grade area to be rip-rapped to uniform, even surface. Fill depressions with suitable material and compact to provide firm bed.
- .3      Place geotextile on prepared surface in accordance with Section 31 32 19.16- Geotextile soil stabilization and as indicated. Avoid puncturing geotextile. Vehicular traffic over geotextile not permitted.
- .4      Place rip-rap to thickness and details as indicated.
- .5      Place stones in manner approved by Departmental Representative to secure surface and create a stable mass. Place larger stones at bottom of slopes.
- .6      Rip-rap to be machine or hand placed as appropriate for location and conditions of placement or as directed by the Departmental Representative.
- .7      Machine placing:
  - .1          Place rip-rap using suitable equipment.
  - .2          Do not run equipment on finished rip-rap surfaces.
- .8      Hand placing:
  - .1          Use larger stones for lower courses and as headers for subsequent courses.
  - .2          Stagger vertical joints and fill voids with rock spalls or cobbles.
  - .3          Finish surface evenly, free of large openings and neat in appearance.

**END OF SECTION**