

PART 1 - GENERAL

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| 1.1 Description            | .1 | This section specifies the salvage of existing materials, the supply and placement of stone materials for the construction of the rock protection at le Goulet.  |
| 1.2 Related Sections       | .1 | Section 01 45 01 - Weigh Scales  |
| 1.3 Existing Haul Roads    | .1 | It is important that persons intending to bid on this work visits the site and ascertain what preparatory work will be required for the following:<br>.1 Access to site via Public Roads;<br>.2 Access to Site via Wharf Road and access to the beach. |
|                            | .2 | The contractor will be solely responsible for construction and maintenance of haul roads, which will be incidental to the work.  |
|                            | .3 | The contractor will be responsible to make good any damage to public or private roads and structures.  |
| 1.4 Measurement Procedures | .1 | Measurement for payment for <b>Core Stone, Filter Stone, and Armour Stone</b> is per tonne for material supplied and placed.   |
|                            | .2 | Mobilization/demobilization of equipment will be considered incidental to the work.  |
|                            | .3 | Haulage will be incidental to the work.  |
|                            | .4 | Excavation of toe will be incidental to the work.  |
|                            | .5 | Construction and maintenance of haul roads will not be measured for payment.   |
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PART 2 - PRODUCTS

- 2.1 Materials
- .1 Core stone, Filter Stone, Armour Stone materials:
    - .1 To be granitic or basaltic rock that is of approved quality, sound, hard, dense, angular, resistant to weathering and salt water, free from overburden, spoils, and organic material. Free from cracks, seams or other defects which may impair durability; relative density (former specific gravity) minimum 2.64 t/m<sup>3</sup>; slate, shale, and sandstone not acceptable. There will be no intermixing of different colours or types of rock when stone is obtained from different sources.
      - .1 The rock, when tested by the Micro Deval test method in accordance with MTO LS-618, shall a Micro Deval loss of not greater than 35%.
      - .2 When tested by the freeze Thaw test method in accordance with MTO LS-614, the rock material shall have Freeze Thaw loss not greater than 15%.
  - .2 Quarried stone individual rock is to be angular, and greatest dimensions of each stone is not to exceed two times least dimension.
    - .1 Core Stone:
      - .1 Core Stone to be in range of 0.2 kg to 100 kg, or as indicated on plan, R25 (DOT).
    - .2 Filter Stone:
      - .1 Stone sizes to be in range of 200-500 kg, R250 (DOT).
    - .3 Armour Stoe:
      - .1 Stone sizes to be in range of 2tonnes to 4 tonnes.
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PART 3 - EXECUTION

3.1 Preparation

- .1 Haul roads: construct and maintain access to the work site.
- .2 Remove ice and snow that may affect placement of core or filter rock.

3.2 Core

- .1 Place core material to lines, grades and dimensions as indicated on the plan.
- .2 Execute work in a manner to protect core material from storm and erosion damage. Replacement of material lost due to storm or erosion damage will be the contractor's responsibility.
- .3 Notwithstanding 3.1.2, do not extend core material more than 5 metres beyond Filter Stone protection.
- .4 Core stone can be placed by end dumping. However, the contractor shall note that due to the side slopes of the breakwater, some shaping may be necessary.

3.3 Filter Layer

- .1 Place Filter Stone over the entire face of the core to the lines and grades and dimensions shown on the plan.
  - .2 Place each unit individually using a crane or other mechanical means to the lines and grades and dimensions shown on the plan. Do not dump the armour units. Commence placing at the toe of the slope, and proceed up the slope. Place each unit so that it is stable, secure on slope and supported by units below. Control placement of armour units so as to produce a uniform and continuous cover.
  - .3 Place each stone in stable position.
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- 3.4 Toe Protection .1 Excavate seabottom to lines and grades shown on the plan to toe-in the core stone and the filter rock protection.
- .2 Place toe protection stone to lines, grades and dimensions as indicated or as directed by Department Representative.
- 3.5 Protection .1 Take into account anticipated weather conditions and degree of exposure of site and tidal conditions in setting requirements for protection.
- .2 Schedule and carry out construction so that each phase of work is not left longer than necessary.
- .3 Replacement of core stone and filter and armour stone lost due to storm or tidal erosion will be the responsibility of the Contractor.
- 3.6 Inspection .1 Provide excavator sweep of harbour in front of channel bottom or diving inspection to prove no stones have been placed in the channel.
- 3.7 Tolerances .1 Completed component layers to be within following tolerances of lines and grades as indicated:
- .1 Core stone: plus or minus 100mm.
- .2 Filter Stone layer: plus or minus 300mm.