

## **Part 1            General**

### **1.1            MEASUREMENT METHOD**

- .1    The Contractor shall, within ten (10) days after receiving an acceptance notice for the contract, provide cost breakdown for global units items.
- .2    The Contractor shall provide, within ten (10) days after receiving an acceptance notice for the contract, a list of equipment and the hourly rates for each of the equipment available for the works.
- .3    The Contractor shall, within ten (10) days after receiving an acceptance notice for the contract, provide a list of hourly rates for his staff.
- .4    The lump sum price and unit prices will include, but not limited to, leasing, equipment installation, equipment, tools, labour, administrative costs, profit, funding, expenditure for work not specifically defined either in the plan, or specifications or any other tender documents, but considered necessary so as to conform to best practices.
- .5    The method used to measure labour, tools or materials for the contract will be as follows:
  - .1    Lump sum works:
    - .1    **Item 1 - Mobilization and demobilization**
      - .1    This item will be measured as a global unit and will include all costs related to the transportation and handling of all floating and ground equipment, material and construction of facilities.
    - .2    **Item 2 - Site organization**
      - .1    This item will be measured as a global unit and will include, but not be limited to, the following:
        - .1    Surety and administrative charges;
        - .2    Investigation, planning, management and supervision;
        - .3    Permits and request for authorization (municipal, provincial and federal);
        - .4    Management of general waste that is not included in other items;
        - .5    Connection and disconnection of temporary services (electricity, water, etc.);
        - .6    Bills for temporary public services (electricity, telephone, Internet, water, etc.);
        - .7    Supply and construction of temporary fences around construction sites and dismantling them around the different areas (construction site, assembly, storage, etc.);
        - .8    Temporary installations at construction sites;
        - .9    Tidiness at the construction site and final cleaning;
        - .10    Security services, signallers, guards, etc.;
        - .11    All components under section 01 of the specifications. It also includes works indicated in the plans and

specifications for which payment was not designated in another measured item.

- .12 All necessary safety equipment for work performed near water.

- .2 This item will be paid in proportion of completed work, following bid form costs.

.3 **Item 3 – Demolition, Removal and Excavation**

- .1 This item will be measured as a global unit and will be distributed according to the articles cited below. It will include all labour, machineries, transportation needed to perform demolition, removal and excavation works in accordance with the excavation limits indicated on plans.

The cost of disposing of off site demolition, removal and excavation materials is also includes in this item.

.1 **Chaining 0+015 to 0+120**

- .1 Bituminous pavement:

The bituminous pavement shall be complexly removed and evacuated from the site in accordance with the requirements of the competent authorities. This item will be paid following a global unit.

- .2 Granular material and riprap:

excavation of granular materials and riprap will be measured as a global unit and will include the evacuation out of site of all materials in accordance with the requirements of the competent authorities excepted for round stones (400 to 1000 mm of diameter) which will be sorted, stored and re-used again to build shoreline protection.

- .3 Excavation and disposal of contaminated soils:

This item will be measured as a global unit and will include the excavation and disposal of contaminated soils to an authorized landfill site. The volume of contaminated soils is \_\_\_\_ cubic meters.

.2 **Chaining 0+120 to 0+355**

- .1 Concrete and steel:

This item will be measured as a global unit and will include cuts in reinforced concrete, the upgrading of materials from demolition such as concrete walls, slab, concrete base of lighting bollards and reinforced steel.

- .2 Granular materials and riprap:

Excavation of granular materials and riprap will be measure as a global unit and will includes the evacuation out of site of all materials in accordance with the requirements of the competent authorities excepted for round stones (400 to 1000 mm of diameter) which will be sorted, stored and re-used again to build shoreline protection.

.3 Stone 8-12 t:

In relationship with the item 3.2.2 – Granular materials and riprap, a quantity of stone of 2130 metric tonnes with be sorted, stored and re-used into the new breakwater. This stone is located between chaining 0+260 to 0+355.

This item will be measured as a global unit and will include the sort, storage of this stone (2130 metric tonnes) and the put in place into work according to the indications on plan.

The cost for the excavation work are included into item 3.2.2 – Granular materials and riprap.

.4 Stone 5-8 t:

In relationship with the item 3.2.2 – Granular materials and riprap, a quantity of stone of 1417 metric tonnes will be sorted, stored and re-used into new breakwater. This stone is located between chaining 0+260 to 0+355.

This item will be measured as a global unit and will included the sort, storage of this stone (1417 metric tonnes) and the put in place into work according to the indications on plan.

The cost for the excavation work are already included into item 3.2.2 – Granular materials and riprap.

.5 Excavation and disposal of contaminated soils:

This item will be measured as a global unit and will be include the excavation and disposal of contaminated soils to an authorized landfill site. The volume of contaminated soils is \_\_\_\_ cubic meters.

.3 Chaining 0+355 to 0+434

.1 Concrete and steel:

This item will be measured as a global unit and will be include cuts in reinforced concrete, cuts in steel profiles and reinforced steel, the upgrading of materials from demolition work such as concrete cope wall, curbs, concrete wall,

beams, slab, concrete bases for bollard and lighting, concrete columns and various steel elements.

.2 Granular materials and riprap (stones and dolos):

The excavation of granular materials and riprap (stones and dolos) will be paid as a global unit and will include the evacuation out of site of all materials in accordance with the requirements of the competent authorities.

.3 Excavation and disposal of contaminated soils and non-contaminated soils:

The excavation carried out consists of removing the first 500 mm of fill below the concrete slab into cells (1-2-3-4).

Materials to be excavated is a mixture of soil with fine to coarse particules (greater than 25 mm of diameter). This coarse particules are not considered as contaminated soils.

The excavation work will imply a sort of soil on the site in order to extract coarse particules with fine particules before the disposal to an authorized landfill. The quantity of granular material is 370 metric cubes to be sifted.

This item will be divided in two parts which the item (A) will be paid in metric tonne weighing in the technical landfill site authorized for contaminated soil and the item (B) shall be part as global unit for non-contaminated soil.

A) Contaminated soils (300 metric tonnes):  
metric tonnes.

B) Non-contaminated soil: global unit.

.4 Chaining 0+434 to 0+540

.1 Concrete and steel – Cells 6-7-8 and dolphin:

This item will be measured as a global unit and include cuts in reinforced concrete, cuts in steel pieces as piles, steel sheet piling, profiles and reinforced steel as well as the upgrading of materials coming from demolition as : copewall, slab, concrete bases for lighting and bollards, various steel elements and dolos.

.2 Granular materials and riprap (stones and dolos):

The excavation of granular materials and riprap (stones and dolos) will be paid as a global unit and include the evacuation and the disposal of materials in accordance with the requirements of the competent authorities.

- .5 Temporary workplate (optional)  
The contractor has the possibility to develop a temporary workplate according to the indications and limits on sheet C14/15. This temporary workplate shall be totally removed before the construction of the land development, sheet C13/15.  
This item will be paid as a global unit if realized, and will include all materials, the removal and the disposal out of site of all materials after works.
- .6 Land development  
This item will be paid as a global unit and include the demolition of the old cribwork and service building including electrical accessories and underground ducts, the removal of bituminous pavement, the excavation of fills, the levelling, the new granular fill (quarry-run, MG 112 and MG 20), new concrete curbs, landscaping as new bituminous pavement and this the limits indicated on plan.  
This item will include the disposal of materials out of site to an authorized landfill site.
- .7 Shoreline protection  
This item will be measured as a global unit and will include geotextile – type 1, the handling and the placing of round stones recovered.
- .8 Soils characterization tests
- .1 Cells 1-2-3-4:  
This item will be measured as a global unit and will include the characterization of fill into each cell and the analysis of the specific parameters listed in section 01 74 25 – Solid waste and dry materials after the removal of the first layer of 500 mm of fill.  
The cost will only include a single intervention in the process of sampling and analysis.
- .2 Sector affected by hydrocarbons:  
This item will be measured as a global unit and will include the sampling and the analysis of soils within the area considered as potentially contaminated in hydrocarbons C10-C50 as indicated in section 01 74 25 – Solid waste and dry materials and this, after the removal of the first layer of 350 mm of fill.  
The cost will only include a single intervention in the process of sampling and analysis.
- .3 Embankment of the approach:

This item will be measured as a global unit and will include the sampling of the embankment at each 25 meters after the removal of the first layer of 350 mm of soil under concrete slab. The analysis will be done on the specific parameters listed in section 01 74 25 – Solid waste and dry materials.

The cost will only include a single intervention in the process of sampling and analysis.

.9 Buoy

This item will be measured as a global unit and will include the purchase, the handling, the installation and the removal of buoys, the winter storage, the re-installation as well as the final removal after final completion of work.

.10 Geotextile (type 2)

This item will be measured as a global unit and include the purchase, the handling and the installation of the geotextile (type 2) as indicated on plan.

**Part 2**

**Unit price works**

**2.1**

**POSTE 4 – VARIOUS CATEGORIES OF STONES**

Each item shall be measured at the metric tonne incorporated into work and will be include, the purchase, transportation, equipments and labour to do the placing of each categories of stone indicated below and, as indicated on plan and specifications.

Each item will also include the production of stone in quarry, transportation, weighing and the installation into work.

- .1 Stone 8 to 12 (metric tonne)
- .2 Stone 6 to 10 (metric tonne)
- .3 Stone 5 to 8 (metric tonne)
- .4 Stone 3 to 5 (metric tonne)
- .5 Stone 2 to 4 (metric tonne)
- .6 Stone 1 to 3 (metric tonne)
- .7 Stone 800 to 1200 kg (metric tonne)
- .8 Stone 600 to 1000 kg (metric tonne)
- .9 Stone 500 to 800 kg (metric tonne)
- .10 Stone 300 to 500 kg (metric tonne)
- .11 Stone 200 to 400 kg (metric tonne)
- .12 Stone 100 to 300 kg (metric tonne)
- .13 Quarry-Run

**END OF SECTION**