

Hulhudhoomeedhoo Sewerage Project, Maldives

SECTION 4 (Part B)

Preamble to Bill of Quantities and Bill of Quantities

December 2015

PREAMBLE TO BILL OF QUANTITIES

A. Preamble

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General Conditions of Contract, Technical Specifications and Tender Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
3. The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, labour, supervision, materials, transportation, installation/erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The rates and prices shall be quoted entirely in Maldivian Rufeya.
5. A rate or price shall be entered against each item in the Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities and no separate payment shall be made for such un-priced items.
6. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided but required for completion of contract works, the cost shall be deemed to be distributed among the rates and prices entered for the related items of Work. Only properly executed variation orders shall be recognized for additional payment for items not entered in the Bill of Quantities.
7. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. The Bidder shall refer to the relevant sections of the Contract Documents to fully understand the item requirements before entering rates or prices against each item in the Bill of Quantities.
8. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Employer for nominated sub-contractors or other specified purposes.

9. Errors will be corrected by the Employer for arithmetic errors pursuant to Clause 23 of the Instructions to Bidder.
10. Rock is defined as all materials which, in the opinion of the Engineer, require pricing out by the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal.
11. It shall be the Bidder's Responsibility to thoroughly examine the site before preparing his Bid, and to determine from such site examination and thorough examination of the Drawings and Specifications the full scope of work for each item in the Bill of Quantities with due allowance for contingencies.
12. Bidders shall attach to their Bid an itemized breakdown of all estimated taxes included in their Bids, for each unit price and for the total bid price.
Tax rates should be obtained from Customs and other appropriate authorities.
13. For all materials and equipment that has to be supplied from outside of Maldives, Bidder shall provide sufficient information on the point of origin, country of origin, cost of shipping, insurance, FOB and CIF rates of all these items.

14.14. UNITS OF MEASUREMENT

The following units of measurement and abbreviations are used.

Unit	Abbreviation	Unit	Abbreviation
Millimetre	mm	Kilogram	Kg
Meter	m	Metric Ton (1,000 kg)	T
Square Millimeter	mm ² or Sq mm	Lump sum	LS
Square Metre	m ² or sq. m	Number	Nr.
Hectare	Ha	Hour	Hr.
Cubic Metre	m ³ or cu m	Week	Wk.
Litre	l	Month	Mon.

METHOD OF MEASUREMENT

1. General

The rates for General Items which are not included in the Bill No.1, shall be deemed to be included in the Contractor's rate for the execution of the Works. Payment to the Contractor will be pro rata to the percentage of the contract value for the work completed and certified by the Engineer. The Contractor shall provide a breakdown of each rate he has quoted. The breakdown shall clearly indicate the percentage apportioned for material costs, taxes on material, labour, transportation costs, overheads and profit.

2. Pipe Laying

Payment for installation of gravity sewer pipes will be based on the linear measurement of pipes laid and tested in compliance with the Specifications, between the outer faces of manholes, inspection chambers or Pumping Stations.

The depth is measured from the original ground level to the invert of the pipe.

The linear rate should include all for necessary supervision, labour, equipment, surveying, line and level guides, road cutting, excavation, keeping the trench free from standing water, supporting the trench sides to prevent collapse, pipe bedding material, supplying pipes and pipe specials, jointing materials, pipe laying and jointing, transport of materials, backfilling, compaction, temporary reinstatement of the surface, etc. The contractor shall limit the width of the trench to the minimum possible.

The pipe laying measurement items refer to different nominal pipe diameters to allow for different trench widths. These also allow for different depths of pipe laid allowing for different quantities and methods of excavation, backfill and trench shoring, etc.

3. Inspection Chambers and Manholes

Payment for inspection chambers shall be based on the number installed. Payment for Manholes will be for different diameters of manholes and different depth of manholes. The depth is measured from the ground level to the invert of the lowest pipe. The rate shall include for the 160mm OD stub pipe to be fixed to the manhole for jointing to the sewer pipe.

The rate for the basic structure will include all necessary supervision, labour, equipment, surveying, line and level guides, road cutting, excavation, keeping the trench free from standing water, supporting the trench sides to prevent collapse, sub-base material, pipe jointing, benching, levelling course for base transport of materials, backfilling, compaction, temporary reinstatement of the surface, etc.

4. Effluent Sea Outfall

The Contractor's rate shall include for the supply and installation of 355mm OD fusion welded HDPE pipe to include all necessary excavation, pipe welding, bedding and trench filling, concrete surround, stainless steel straps, rubber wrap around the pipe so that there is no contact between the pipe and the concrete anchor blocks, from the sewage treatment plant discharge chamber to the effluent diffuser outlet, to be located 15m below mean sea level. Rock anchors shall have to be used in the last stretch of 25m to hold the pipe in position. The rate will also include for a 45 degree upturned bend to be welded at the discharge end of the pipe.

The Contractor will allow in his rate for all required diving equipment and safeguards for undertaking a detailed inspection of the proposed sewage effluent sea outfall site to assess the condition of the shore line and reef below sea level to prepare his methodology for installation for fixing the effluent outfall securely in place. The contractor shall be provided with the data collected during the design stage.

5. Disposal Pump Station

The contractor shall design, supply, install, test and commission a disposal pump station according to Section 8 of Bid Documents- Employer's Requirements

6. Provisional Sums

Provisional sums are provided for dealing with unexpected expenditures. These sums will only be used with the approval of the Employer and following agreement between the Engineer and the contractor on rates of all provisional items.