

Government of the Democratic Socialist Republic of Sri Lanka

**Ministry of Public Administration, Home
Affairs, Provincial Councils & Local
Government**

**Greater Colombo Water and Wastewater
Management Improvement
Investment Programme[GCWWMIP]**

Funded by an ADB Loan No: 3030-SRI(SF)

BIDDING DOCUMENT
(Single Stage – Single Envelope)

Volume 2 of 4

**Condition Assessment and Urgent Repairs of Sewers
Lot A - 89km of Gravity Sewers with CCTV
Lot B - 8.2km of Force Mains with Special Device(SD)**

within

Colombo Municipal Council Area

ICB Contract No: GCWWMIP-P2/ADB/RQ/DSIDC/ICB-01/2019

July 2020

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Section 1 -Instructions to Bidders (ITB) ----- 1-1

This section specifies the procedures to be followed by Bidders in the preparation and submission of their Bids. Information is also provided on the submission, opening, and evaluation of bids and on the award of contract.

Given in Volume 1

Section 2 -Bid Data Sheet (BDS) ----- 2-1

This section consists of provisions that are specific to each procurement and supplement the information or requirements included in Section 1 - Instructions to Bidders.

Given in Volume 1

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This Section contains the criteria to determine the lowest evaluated bid and the qualifications of the Bidder to perform the contract.

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This Section contains the forms which are to be completed by the Bidder and submitted as part of his Bid.

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The general conditions shall be the Conditions of Contract for Construction, Multilateral Development Bank Harmonized Edition, June 2010, prepared by the Fédération Internationale des Ingénieurs-Conseil (FIDIC 2010 MDB version). These Conditions are subject to the variations and additions set out in Section 8 (Particular Conditions of Contract).

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This Section contains provisions which are specific to each contract and which modify or supplement the GCC. Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

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Section 9 -Contract Forms (COF)----- 9-1

This Section contains forms, which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

Given in Volume 1

Bill of Quantities

Preamble for Lot-A and Lot-B

1. General

The Contractor's attention is specifically directed to the Conditions of Contract, the Special Conditions and Specification and the Drawings, which are to be read in conjunction with the Bill of Quantities and the Preamble.

The Bills of Quantities have generally been prepared in accordance with the Civil Engineering Standard Method of Measurement, Fourth Edition (2012) (CESMM 4) with additions and amendments to suit to the local conditions.

"In so far as the text of an item description may conflict or be inconsistent with the CESMM4 code then the text of an item shall always prevail".

Therefore, any conflict of CESMM4 code given in Bills of Quantities will not be recognized as a basis of any claim.

2. Application of Preamble to Subsequent Work

The relevant clause of this Preamble shall be deemed to apply equally to work subsequently ordered for execution by the Contractor, either under Provisional Sum orders or variation orders, except where specifically varied therein.

3. Method of Measurement

The Works as executed will be measured for payment in accordance with the method adopted in the Bill of Quantities and under the item as therein set forth. The net measurement or weight of the finished work in place will always be taken, and except where otherwise stated or where separate items are provided, no allowance will be made for cutting, waste, laps, circular work, etc., and no deductions will be made for grout nicks, joggle holes, rounded arises or for shrinkage for fitting ironwork and the like.

Payment will be made for only those materials, which are specified and permanently installed in the works to the approval of the Engineer. Construction materials supplied and delivered to the site by the Contractor which become surplus to the requirements of the works shall become the property of the Contractor.

4. Units and Extension of Bills of Quantities

All sizes and quantities have been entered in the Bills of Quantities in Metric Units. Figures involving decimals, including sums of money are written in the British tradition, namely, with a full stop in the decimal position and commas between each successive group of three digits to the left of the decimal position.

The Bidder shall indicate the total amount for each item (i.e. the quantity multiplied by the rate) to the nearest cent when inserting the figures in the BOQ.

5. Rates and Sums to be for Work Complete

Notwithstanding any limits which may be implied by the wording of the individual items and/or explanation in this preamble it is to be clearly understood by the Contractor that the rates and sums which he enters in the Bills of Quantities shall be for the work finished complete in every respect, he shall be deemed to have taken full account of all requirements and obligations, whether expressed or implied, covered by all parts of the Contract, and to have priced the items herein accordingly. The rates and sums must therefore include for all incidental and contingent expenses and risks of every kind necessary to construct, complete and maintain the whole of the Works in accordance with the Contract. Full allowance shall be made in the rates and/or sums against the various items in the Bills of Quantities for all costs involved in the following *inter-alia*, which are referred to and/or specified herein except where separate items are provided.

- (1) All site investigations, which may be necessary;
- (2) All setting out and survey work;
- (3) All Temporary works; shoring, dewatering, barricading, fencing, watching, and lighting
- (4) Paying fees and giving notice to authorities;
- (5) Payment of all patent rights and royalties;
- (6) Reinstatement of the site;
- (7) Safety precautions and all measures to prevent and suppress fire and other hazards;
- (8) Interference to the works by persons, vehicles, and the like using the existing facilities;
- (9) Works in connection with the protection and safety of adjacent structures;
- (10) Supplying, maintaining and removing on completion Contractor's own accommodation, offices, stores, workshops, transport, welfare services and all charge in connection therewith; except those for which a separate BOQ item is provided;
- (11) Working in the dry except where otherwise permitted by the specification;
- (12) Maintaining access roads;
- (13) Supplying, maintaining and removing on completion material testing laboratory with equipment for Engineer's use.
- (14) The supply, inspection, sampling and testing of materials and of the Works under construction, including the provision and use of equipment;
- (15) Except where separate items are provided for bringing plant to the site and removing on completion, for providing, transporting to site, setting to work operating (including all fuel and consumable stores), maintaining and removing from the site upon completion all construction plant and equipment necessary for the execution of the work, including the cost of all tests and other requirements in respect to such plant and equipment;
- (16) The recruitment, bringing to and from the site, accommodating and feeding and all incidental costs and expenses involved in the provision of all necessary skilled and unskilled labour and supervision, except for whom a separate BOQ item is provided;
- (17) All statutory taxes and levy, surcharges etc. including stamp duty payable on the contract, which will have to be borne by the Contractor.

Note: Value Added Tax (VAT) as applicable to different items of work / supply etc. should not be built (included) in the rates since VAT as applicable from time to time during the period of the Contract is admissible and payable on the gross payments to the Contractor and to be reflected accordingly in summary page of the bill of quantities.

No claim will be considered for further payment in respect of any work or method of execution, which may be described in the Contract or is inherent in the construction of the work and detailed on the drawings on account of

- (1) any omission from the wording of the items or from a clause in the Preamble or
- (2) no mention of such work or method of execution having been in the Preamble

Items against which no rates or sum is entered by the Contractor, whether quantities are stated or not, will not be paid for when executed, but will be regarded as covered by other rates in the Bills of Quantities.

The quantities set out in the Bills of Quantities are the estimated quantities of the work and they shall not be taken as the actual and correct quantities of the works to be executed by the Contractor in fulfilment of his obligation under the contract.

The Contract Drawing provided for bidding purposes shall be as contained in the Bidding Documents and shall be used as a reference only. The Contractor should visualise the nature and type of work contemplated and to ensure that the rates and price quoted by him in the Bill of

Quantities have due consideration of the qualitative and quantitative variations, as may be found at the Site and complexities of work involved during actual execution / construction.

The quoted rates/prices for the work shall be deemed to include the cost of preparation, supply and delivery of all necessary drawings, prints (hard and soft copies), which the Contractor is required to provide in accordance with the Contract.

The Contractor shall be deemed to have taken into account all recognized holidays, festivals, religious and other customs in his Bid Prices and his Construction Programmes.

6. Rates and Sums to Bear Proper Relation to work Described

The rates and sums entered by the Contractor against all items in the Bills of Quantities must bear a proper relationship to the cost of carrying out the work described in the Contract; all on costs and similar charges which are applicable to the Contract as a whole are to be spread over all the rates in the Bills of Quantities, whilst those which are applicable only to particular sections of the Contract are only to be spread over items to which these sections refer.

However, the Contractor shall ascertain the exact nature and extent of work to be performed by reference to the Drawings, Specifications and Conditions of Contract as the case may be.

7. Provisional Sum Items

Provisional Sums will be dealt with as provided for in the Conditions of Contract.

Provisional Sums are represented by the words "Provisional Sum" or " P Sum" entered under the description.

The Bidder shall indicate a percentage figure and the amount in the appropriate BOQ item provided, based on the total sum of all such "Provisional Sums", to cover up his overhead costs, profits and any other related costs involved in executing the work under provisional sum items.

The total payment to the Contractor under this BOQ item will be assessed by applying the percentage rate indicated by Contractor on the actual total amount of Provisional Sums spent in the Contract.

8. Provisional Quantity Items

Certain items in the Bills of Quantities are designated "Provisional Quantity" in the description column to indicate that the quantities for the work covered by such items are the best possible estimates that can be made in advance of the execution of the work, or that the provision of such facilities as are described in the items may not in the event be required under the contract. All items so designated will be used only at the direction and discretion of the Engineer, and if not used either wholly or in part shall, as to the amount not used, be deducted from the Contract Price. Where such items consist of a sum, the Contractor shall enter a lump sum, which shall be the price for the work if executed, as distinct from a "Provisional Sum" as defined herein.

No claim will be entertained in respect of overhead charges or any other costs, which may allegedly result from the omission of all, or part of the work covered by such "Provisional Quantity" Items.

9. Payment of Items in a Monthly Basis

Payment under items, which are measured on a monthly basis will not be commenced until the full facilities described in the items and the specification have been provided to the satisfaction of the Engineer. Payment will continue until such time as the Engineer shall signify that facilities are no longer required.

Certain manpower inputs by the Contractor for certain specific positions will be paid under the BOQ items provided for this purpose. Any other manpower inputs by the Contractor will not be paid under these items.

10. Payment of Lump Sums for General Items

Lump Sum items stipulated in Bill No. 1 which are applicable for the entire duration of the Contract and where the Bidder includes additional items for complying with the general conditions etc. will be paid on the basis of a proportion of respective Lump Sum in the same ratio as the value of the Works completed bears to the Accepted Contract Amount less Provisional Sums and Contingencies and Day Works.

Lump Sum items stipulated in Bill No-1 which are related to a specific work will be paid on the basis of the proportion of actual work done to the total work of that specific item as assessed by the Engineer.

Items with quantities and units will be paid against number of units used and/or incorporated in the works.

11 Payment of Test and Completion Based Items

Payment under items, which are subject to test and handed over to relevant authorities etc, will not be commenced in full, until the full facilities described in the items and the specification have been provided and handed over to the satisfaction of the Engineer and relevant authorities. Payment will continue until such time as the Engineer shall signify that withholding are no longer required.

Supply and laying of pipe, 80% payment based on preliminary test. Balance 20% on completion.

Reinstatement 80% payment based on pipe preliminary test. Balance 20% on completion.

Mobilization, 40% on establishment of Contractor's office, stores, yards, etc. 30% on commencement of pipe laying. 30% commencement on trenchless pipe laying.

Demobilisation, 40% completion of all Contract works, dismantling of machinery and site offices. 60% on issue final certificate.

12. Protection of Work and Cleaning up on Completion

The Contractor shall allow, in his rates, for protecting completed work from subsequent operations, making good all damage to complete work, for clearing away all rubbish as it accumulates, and leaving the site in a tidy condition to the satisfaction of the Engineer.

13. Demolition, Removal and Dismantle of Existing Manhole

Rates for removal of all shall include (if not separately allowed) for the removal of all debris or other material from the area of the site and disposal of same in an approved location, spreading at least 100mm of topsoil over the site upon completion.

14. Supply, laying and fixing of Pipe

Linear meter (m) unit rate, shall be included for;

- (1) supplying all material require for pipe line including storing, transporting, placing;
- (2) laying and jointing of pipe
- (3) all short length and fittings
- (4) all loose collars, coupling and similar material including all joining material including gaskets, bolts and nuts for flange pipes;
- (5) excavation trenches, backfilling with excavated or imported material and shoring
- (6) Reinstatement of the road after completed of works
- (7) all barriers, lighting, warning signs and any other measures necessary to ensure complete safety around the area of the works,

- (8) Disposal of excavated material to disposal Location at **KERAWELAPITIYA** (25km away from site)

The measurement of pipe line shall be by linear meters(m), no deductions will be made for fittings, but not including valves, in line equipment's, or any length measured under separate item.

15. Supply of Reinforced Concrete Manhole, Chambers, Trust blocks, Marker post

Linear meter (m) unit rate, shall be included for;

- (1) supplying of unit (in suite or precast) including transporting, and placing.
- (2) all excavation and backfill as required; removing of water, support to side of excavation, backfilling with compaction, disposal of surplus materials;
- (3) forming holes or boxing out for pipes, bolts, frames for covers and other steel and pipe work;
- (4) building in parts, heavy duty DI man hole cover and frame, GPR ladder for man hole;
- (5) temporary / permanent reinstatement, back filling, surface finis to suit with existing surface type, Patton etc;
- (6) All temporary and permanent measures required to protect and support all existing pipes, cables and services, including all chambers, gullies and foundations thereto, or repair or replace them should they become damaged due to the Contractor's activities,
- (7) All work as per the detail drawings;

16. Providing Service / Lateral Connection

Linear meter (m) unit rate, shall be included for

- (1) Supply and laying of u PVC pipe including transporting, placing and encased with concrete;
- (2) all excavation and backfill as required; removing of water, support to side of excavation, backfilling with compaction, disposal of surplus materials;
- (3) temporary / permanent reinstatement, back filling, surface finis to suit with existing surface type, Patton etc;
- (4) all temporary and permanent measures required to protect and support all existing pipes, cables and services, including all chambers, gullies and foundations thereto, or repair or replace them should they become damaged due to the Contractor's activities,
- (5) all work as per the detail drawings;

17. Road Reinstatement

No separate rate is allowed for reinstatement road surfaces; however, any cost incurred to the Contractor shall be included in the particular work items to cover the following;
Temporary and permanent reinstatement done in accordance with specifications and the guidance of RDA or CMC, as appropriate.

18. Road Traffic & Safety Control

Monthly unit rate, shall be included for;

Make of all arrangement as specified in Volume 3 Section 6.3.1.18 of Employer's requirements

19. Assess Road Maintenance

Maintenance of Access Roads during the period of the Contract as specified in the Volume 3 Section 6, shall deemed to be included in other rates/amounts quoted by the Contractor

20. Tidiness of sites

Provide and maintenance of all requirements as specified in Volume 3 Section 6. 6.1.5., Engineer's Requirements, shall be deemed to be included in other rates/amounts quoted by the Contractor

21. Removal of Salvageable Items and Handover to Maligakanda CMC yard

Rates shall include cost of all activities related to safe dismantling/removal, safe storage at site on temporary basis, transportation and handing over to the CMC stores or yard as directed by the Engineer; CMC storage and yard are located within the Colombo City (Section 6.1 Employer's Requirements).

22. CCTV/SD Inspection Survey

The linear meter (m) unit rate, shall be included for;
All work specified in Volume 3 Section 6.3.5, Employer's Requirements.

23. Cleaning of Existing pipe line for rehabilitation

The linear meter (m) unit rate, shall be included for;
All work specified in Volume 3 Section 6.2 and 6.3 of Employer's requirements

24. Line Repair Length Up to 2m

Number Unit rate shall be included for,

- 1) Supplying of pipe (in suite or precast) including transport and placing.
- 2) All excavation and backfill as required, Dewatering, earth work support to side of excavation, backfilling with excavated material or approved imported material with compaction and removal of surplus material to , disposal Location at **KERAWELAPITIYA** (25km away from site)
- 3) Temporary/permanent reinstatement, backfilling, surface finishing to suit with existing surface type,
- 4) All temporary and permanent measures required to protect and support all pipes, cables and services, including all chambers, gullies and foundation thereto, or repair or replace them should they become damaged due to the contractor's activities,
- 5) All work specified in Volume 3 Section 6 of Employer's Requirement

25. Pre-inspection Sewers

Linear meter (m) unit rate, shall be included for;
All work specified in Volume 3 Section 6.2 and 6.3 of Employer's requirements.

26. CCTV/SD using Special Device of sewers

Linear meter (m) unit rate shall be included for;
All items required to complete CCTV/SD inspection of sewers as per details of specifications- and shall allow all cost such as equipment, instruments, plants, labour, material, expertise, opening and closing of covers of exposed manholes, hiring personnel, light cleaning of sewers, provision of safety gears to workers, safe disposal of debris etc.; including provision of water for cleaning, any bypass pumping/flow control and multiple attempts which may be required. As specified in Volume 3 Section 6.2 and 6.3 of Employer's requirements.

Further to above paragraph, in order to obtain all the information as specified in the section 6.3.5 (SD Inspection), If any other technology to be used to supplement the SD, cost for such technologies should also be included in the given linear meter (m) unit rate of condition assessment for Lot B work in the BOQ.

Progress payment shall be based on;

30% on completion of CCTV/SD inspection Survey

70% on submittal of inspection report and acceptance by the Engineer

27. Buried and incorrectly located Manholes /Maintenance holes

Rate to include for all items that are required to detect locations buried manholes, (*Cost of opening and closing of covers, hiring personnel, cleaning inside of manholes, safety gears shall be included in item*) The payment under this item is made purely for Identifying and Marking of locations as specified in Volume 3 Section 6.2 and 6.3 of Employer's requirements

28. Physical characteristic and conditions report of Manholes/ Maintenance holes

Physical characteristic and conditions report of Manholes/ Maintenance holes – Rates to include for cleaning of manholes and all labour, equipment, plants, materials, including expertise required to complete the works as per Employer's Requirement)

29. CCTV inspection and asset management database

Submittals including CCTV inspection and Asset management database. As specified in Volume 3 Section 6.2 and 6.3 of Employer's requirements.

30. Unit of Measurement

Metric units are used throughout the Bill of Quantities for measurement purposes unless otherwise indicated.

31 DAYWORK SCHEDULE**General**

Reference should be made to Clause 13.5 of the Conditions of Contract. Work shall not be executed on a day work basis except by written order of the Engineer. Bidders shall enter rates for day work items in schedules, which rates shall apply to any quantity of day work ordered by the Engineer.

The Bidders shall price all items in the day work schedule for Labour, Constructional Plant and Material.

Labour

The Bidder is to enter hereunder the individual rates for labour for skilled and unskilled workers and gangers employed on day works solely on the direction of the Engineer. The quantities given below are all provisional and these rates shall include to cover all costs of the Contractor including the amount of wages paid to such labour, transportation time, overtime, subsistence allowance, and any sums paid to or on behalf of such labour for social benefits in accordance with law of the country, as well as Contractor's profit, overheads, superintendence, liabilities and insurance and allowance to labour, timekeeping and clerical and office work, the use of consumable stores water, lighting and power use and repair of staging, scaffolding workshops and stores portable power tools, manual plant and tools; supervision by the Contractor's staff, foremen and other supervisory personnel; and charges incidental to the foregoing.

Constructional Plant

The Contractor shall be entitled to payments in respect of Constructional Plant already on Site and employed on Daywork at the rental rates entered by him in the "Schedule of Daywork Rates: Constructional Plant".

The rates shall be deemed to include due and complete allowance for depreciation, interest, indemnity and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumable, and all overhead profit and administrative costs related to the use of such plant. The cost of drivers, operators and assistants will be paid for separately as described under the section on Daywork Labour.

In calculating the payment due to the Contractor for Constructional Plant employed on day work, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the travelling time from the part of the site where the Constructional Plant was located when ordered by the Engineer to be employed on day work and the time for return journey thereto shall be included for payment.

Materials

The Contractor shall be entitled to payments in respect of materials used for day work at the rates entered by him in the "Schedule of Daywork Rates: Materials" together with an additional percentage payment on the basic rate to cover overhead charges and profit as follows:

- (a) the basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damages, losses, etc., and shall provide for delivery to store for stock piling at the Site as directed by the Engineer.

The contractor may allow an additional percentage payment on the actual cost of materials to allow for his handling and storage costs, overhead profit. The percentage mark-up cost shall be inserted by the Contractor in the appropriate item in the Daywork Schedule.

- (b) the cost of hauling materials for use on work ordered to be carried out as day work from the store or stockpile on the Site to the place where it is to be used will be paid in accordance with the terms for Labour and Constructional Plant.

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
		CLASS A - GENERAL ITEMS				
1.1		Contractual Requirements				
1.1.1	A120	Insurance Cover as per Sub Clause 18.1,18.2 and 18.3 of the Condition of the Contract	Item	sum		
1.1.2	A190	Workmen Compensation Insurance Cover as per Sub Clause 18.4 of the conditions of contract	Item	sum		
		Specified Requirements				
1.2		Accommodation / Facilities				
		Engineer's Facilities				
1.2.1	A 211.1	Provide main office for the Engineer's staff, as specified in Section 6-1.3.3.4 (para 74) of Employer Requirement	22	month		
1.2.2	A 211.2	Provide three(1) sub offices for the Engineer's staff , as specified in Section 6.1.3.3.4 (para 75) of Employer Requirement	50	month		
1.2.3	A 221.1	Provide and maintain vehicle (double cab on hired basis) for the use of the Engineer as specified in item i,ii,iii and iv of section 6.1.3.3.4 , clause 76(a)of Employer Requirement	56	vehicle month		
1.2.4	A 222	Provision of mobile phone facilities as specified in section 6.1.3.3.4 clause 76(b) of Employers Requirement	222	Phone month		
1.2.5	A211.4	Maintenance of Engineer's main office with the providing of services , paying of consumer bills as per Section 6.1.3.3.4 Clause 79 of Employer's Requirement	22	month		
1.2.6	A211.5	Maintenance of Engineer's three site offices office with the providing of services paying for consumer bills as per Section 6.1.3.3.4 Para 79 of Employer's Requirement.	50	office month		
1.2.7	A231.1	Provide office equipment for the use by the Engineer's staff at main field office as specified in the Section 6.1.3.3.4 Para 74 and 77 of Employer Requirement	Item	sum		
1.2.8	A231.2	Provide office equipment for the use by the Engineer's staff at sub - field offices as specified in the Section 6.1.3.3.4 Para 75 and 77 of Employer Requirement	Item	sum		
		Total carried Forward to Next Page				

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
		Total Brought Forward				
1.3		Attendance				
1.3.1	A 249.1	Engineering Assistant as per Section 6.1.3.3.4 Para 79 of Employer's Requirement	40	man month		
1.3.2	A 249.2	Assistant Quantity Surveyor -do-	22	man month		
1.3.3	A 249.4	Office helper as per Section 6.1.3.3.4 Para 79 of Employer's Requirement	40	man month		
1.3.4	A 249.5	Secretary as per Section 6.1.3.3.4 Para 79 of Employer's Requirement	44	man month		
		Contractor's Facilities				
1.4		Contractor's Site Management				
		The Contractor shall provide following key personnel as per Section 6.1.8.1 ,Para 206 of Employer's Requirement and rest of the personal should included in the Contractor's Markup				
1.4.1	A371	Provision of services of Project Manager as per Section 6.1.4.3.5 Para 105 of Employer's Requirement	22	man month		
1.4.2	A371	Provision of services of Condition Assessment Expert/ Quality Assurance/ Control Manager as per Section 6.1.5.1.1 Para 119 and 6.1.8.1 , Para 206 of Employer's Requirement	Item	sum		
1.4.3	A371	Provision of services of Environmental , safety Manager as per Section 6.1.5.3.2 Para 147 & 6.1.5.2.4 Para 154 and 6.1.8.1 , Para 206 of Employer's Requirement	22	man month		
1.4.4	A371	Provision of services of officer for Traffic Management Planning and Public Relations Office as per Section 6.1.1.7 Para 9 & EMP Section 6.5.C.5; 1 of Employer's Requirement	22	man month		
1.4.5	A371	Provision of Conducting the STD and HIV/AIDS Education Program as per Section 6.5.C.5; 14.2(b) in Employer's Requirement		Item		
1.4.6	A299	Supply of Gas detector for the use of the Engineer as specified in section 6.1.3.3.4 Para 76(c) of Employer Requirement	2	nr		
1.4.7	A299	Noise monitoring and reporting during construction as per the EMP Section 6.5.C.5: 22.2(a) in Employer's Requirement measures per location	22	nr		
1.4.8	A299	Dust (Air Quality) monitoring and reporting as per the EMP Section 6.5.C.5: 12.2(b) in Employer's Requirement measures per location	22	nr		
1.4.9	A279	Provide, fix and maintain Project Sign Board and information to public the Contractor shall provide, as specified in Volume 3 Section 6.1.3.1 Para 43 of Employer's requirements.	6	nr		
1.4.10	A299	Mobilization as specified in Volume 3 Section 6.1.2.1 Para 34 of Employer's requirements.	Item	sum		
1.4.11	A299	Demobilization as specified in Volume 3 Section 6.1.2.1 Para 35 of Employer's requirements.	Item	sum		
1.4.12	A299	Provide monthly progress report as specified in the Particular Condition of Contract.	22	mon		
		Total of Bill No 1 carried to Grand Summary				

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Bill No. 2 - SEWER CLEANING, CCTV INVESTIGATION AND CONDITION ASSESSMENT						
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		CLASS Y- SEWER AND WATER MAIN RENOVATION AND ANCILLARY WORKS				
2.1		Pre-inspection report				
2.1.1	Y199.1	Up to 300mm dia	77,676	m		
2.1.2	Y199.2	301mm to 600mm dia	5,788	m		
2.1.3	Y199.3	601mm to 1050mm dia	2,271	m		
2.1.4	Y199.4	1051mm to 1500mm dia	223	m		
2.1.5	Y199.5	non circular pipe 601mm to 1800mm	3,024	m		
2.2		Line Cleaning				
		Cleaning including removing all intrusions, roots, silts and any other materials.				
		Depth not exceeding 3m				
2.2.1	Y110.1	Up to 300mm dia	54,890	m		
2.2.2	Y110.2	non circular pipe 601mm to 1800mm	456	m		
		Depth exceeding 3m but not exceeding 6m				
2.2.3	Y110.3	Up to 300mm dia	18,276	m		
2.2.4	Y110.4	301mm to 600mm dia	3,967	m		
2.2.5	Y110.5	601mm to 1050mm dia	2,271	m		
2.2.6	Y110.6	1051mm to 1500mm dia	223	m		
2.2.7	Y110.7	non circular pipe 601mm to 1800mm	2,155	m		
		Depth exceeding 6m				
2.2.8	Y110.8	Up to 300mm dia	4,510	m		
2.2.9	Y110.9	301mm to 600mm dia	1,821	m		
2.2.10	Y110.10	non circular pipe 601mm to 1800mm	413	m		
2.3		Line Repair Length up to 2m (PQ)				
		Open cut Excavation for repair or pipe replacement, rate shall include for excavation, dewatering, backfilling, compaction , temporary/permanent reinstatement of road and all as specified.				
		Depth not exceeding 3m				
2.3.1	Y339.1	Up to 300mm dia	55	nr		
2.3.2	Y339.5	non circular pipe 601mm to 1800mm	1	nr		
		Total carried Forward to Next Page				

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
		Total Brought Forward				
		Depth exceeding 3m but not exceeding 6m				
2.3.3	Y339.6	Up to 300mm dia	19	nr		
2.3.4	Y339.7	301mm to 600mm dia	4	nr		
2.3.5	Y339.8	601mm to 1050mm dia	2	nr		
2.3.6	Y339.9	1051mm to 1500mm dia	1	nr		
2.3.7	Y339.10	non circular pipe 601mm to 1800mm	3	nr		
		Depth exceeding 6m				
2.3.8	Y339.11	Up to 300mm dia	5	nr		
2.3.9	Y339.12	301mm to 600mm dia	2	nr		
2.3.10	Y339.15	non circular pipe 601mm to 1800mm	1	nr		
2.4		Internal spot repairs (PQ)				
		Depth not exceeding 3m				
2.4.1	Y339.15	Up to 300mm dia	110	nr		
2.4.2	Y339.16	non circular pipe 601mm to 1800mm	1	nr		
		Depth exceeding 3m but not exceeding 6m				
2.4.3	Y339.17	Up to 300mm dia	37	nr		
2.4.4	Y339.18	301mm to 600mm dia	8	nr		
2.4.5	Y339.19	601mm to 1050mm dia	4	nr		
2.4.6	Y339.20	1051mm to 1500mm dia	1	nr		
2.4.7	Y339.21	non circular pipe 601mm to 1800mm	5	nr		
		Depth exceeding 6m				
2.4.8	Y339.22	Up to 300mm dia	9	nr		
2.4.9	Y339.23	301mm to 600mm dia	4	nr		
2.4.10	Y339.24	non circular pipe 601mm to 1800mm	1	nr		
2.4.11	Y339.25	Repairing and reconnection of damaged lateral sewer connections while doing the repair of main pipe, rate shall include for excavation, dewatering, backfilling, compaction , temporary/permenant reinstatement of roard and all as specified	20	No		
		Total carried Forward to Next Page				

BILLS OF QUANTITIES

Condition Assessment Using CCTV

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
		Total Brought Forward				
2.6		Identification of buried and incorrectly located Manholes /Maintenance holes				
2.6.1	Y790	Identification of buried manholes / maintenance holes (Provisional quantity), Rate shall include for cleaning, breaking and reinstatement of Surface around the manhole for the approval of Engineer.	150	nr		
2.6.2	Y790	Identification of manholes / maintenance holes not shown on drawings attached (Provisional quantity), Rate shall include for cleaning, breaking and reinstatement of Surface around the manhole for the approval of Engineer.	50	nr		
2.6.3	Y790	Raising of buried manholes / maintenance holes as per the details given in the drawing No. SD/11,using existing mahhole cover and frame. Rate shall include for cleaning, breaking,concreting and asphalt around the manhole for the approval of Engineer.	20	nr		
2.6.4	Y790	Rate for supply and installation of new manhole cover and frame,when existing MH cover and frame is damage(PQ)	20	nr		
2.7		Physical characteristic and conditions report of Manholes/ Maintenance holes				
2.7.1	Y720	The manholes / maintenance holes depth 2m or less from the existing ground level.	362	nr		
2.7.2	Y720	The manholes /maintenance holes of depth exceeding 2m but less than 3m from existing ground level.	868	nr		
2.7.3	Y720	The manholes /maintenance holes of depth exceeding 3m but less than 4m from existing ground level.	198	nr		
2.7.4	Y720	The manholes /maintenance holes of depth exceeding 4m but less than 5m from existing ground level.	200	nr		
2.7.5	Y720	The manholes /maintenance holes of depth exceeding 5m but less than 6m from existing ground level.	200	nr		
2.7.6	Y720	The manholes /maintenance holes of depth exceeding 6m from existing ground level.	146	nr		
2.8		Topographic survey of manholes				
2.8.1	Y790	Topographic survey of manholes and recording of invert and ground reduced level in meters MSL, of all manholes belong to defective sewers	1,974	nr		
2.9		CCTV inspection and asset management database				
2.9.1	Y999	Submittals and deliverable for CCTV inspection and Asset management database including all inspection soft ware with license for contract period and upon completion of contract all licenses shall be renewed and updated for another peroid of three (3) years as per Employer's Requirement 6.3.3	Item	sum		
		Total carried Forward to Next Page				

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
		Total Brought Forward				
2.1		CLASS L: PIPEWORK - SUPPORTS AND PROTECTION ANCILLARIES TO LAYING AND EXCAVATION				
		Beds and Surrounds (As per Clause 6.2A-3.7 of Section 6.2A - Specific Specifications - Network)				
		Beds and Surrounds (As per Clause 6.2A-3.7 of Section 6.2A - Specific Specifications - Network)				
		<u>"Type 1" Reinforced Concrete Surrounds including reinstatement of Concrete surface " as shown on Drawing No. GCWMP/GN/MIS/SD/07</u>				
2.10.1	L 552	Nominal bore: 200mm - 300mm(PQ)	4	m		
2.10.2	L 553	Nominal bore: 300mm - 600mm(PQ)	4	m		
		<u>"Type 2" Mass Concrete Surrounds including reinstatement of Concrete surface " as shown on Drawing No. GCWMP/GN/MIS/SD/07</u>				
2.10.3	L 542	Nominal bore: 200mm - 300mm(PQ)	4	m		
2.10.4	L 543	Nominal bore: 300mm - 600mm(PQ)	4	m		
		Total Bill No 2 carried to Grand Summary				

BILLS OF QUANTITIES

Condition Assessment Using CCTV

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Bill 4.0 Dayworks						
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		CLASS A - GENERAL ITEM - DAY WORKS				
		DAYWORK - LABOUR				
		The Tenderer is required to price the following rates to be applied to any dayworks ordered by the Employer. The rates are to be fully inclusive.				
		The rates quoted shall remain unchanged for the duration of the contract.				
5.1	A411.1	Foreman/Supervisor	10	day		
5.2	A411.2	Ganger / Charge hand	10	day		
5.3	A411.3	Skilled Labour	10	day		
5.4	A411.4	Semi-Skilled Labour	10	day		
5.5	A411.5	Unskilled Labour	10	day		
5.6	A411.19	Driver light vehicles	10	day		
5.7	A411.21	CCTV operator	10	hr		
		Sub total				
	A412	Add % increase on subtotal in item A411 for working on holidays and nights as directed by the Engineer	%			
A		TOTAL LABOUR				
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		DAYWORK - MATERIALS				
5.8	413.1	Concrete (Ready Mix) Grade 20	20	m ³		
5.9	413.4	Cement, Sulphur resistant	50	Kg		
5.10	413.5	Cement, ordinary Portland	50	Kg		
5.11	413.6	Aggregate base, dense graded (37.5 mm)	15	m ³		
5.12	413.8	Sand	10	m ³		
5.13	413.9	Quarry Dust	50	m3		
5.14	413.28	Cast Iron Manhole covers	10	No		
B		Total Material				

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		DAYWORK - Equipment				
		The Contractor is required to price the following rates per hour for equipment to be applied to any work ordered by the Engineer. It shall include for fuel and consumables, stores, repairs etc. and inclusive of driver / operator.				
5.15	A413.5	Mobile crane upto 5 tones capacity	10	hr		
5.16	A413.6	Dumper minimum capacity 1 Cu.m.	10	hr		
5.17	A413.7	Track mounted Backhoe Excavator 3/8 cu.m. capacity	10	hr		
5.18	A413.11	Lorry upto 5 Tones.	10	hr		
5.19	A413.14	Rammer for compaction	10	hr		
5.20	A413.15	Portable air compressor complete with hoses and pneumatic tools, minimum capacity 2.82 cu.m. (100cu.ft) per minute and pressure 70 kg/ sq.m (100 psi)	10	hr		
5.21	A413.16	Portable self-priming diesel engine driven centrifugal pump with hoses 75mm minimum delivery.	10	hr		
5.22	A413.17	Air operated diaphragm pump, minimum capacity 5 l/s against 15m head complete with pressure housing and suction and delivery housing etc.;	10	hr		
5.23	A413.18	Portable welding set 500A capacity complete with welding accessories.	10	hr		
5.24	A413.23	Pipe tapping machine (Trapping range 1/2", 3/4", 1" and 1 1/2 ")	10	hr		
5.25	A413.24	Pipe cutters with cutting discs etc;	10	hr		
5.26	A413.27	Water Bowser upto 1500G.	10	hr		
5.27	A413.28	Water Bowser upto 3000G.	10	hr		
5.28	A413.30	Flood light system with all necessary accessories for night working in roads	10	hr		
C		Total Equipment				
		Total Bill No 3 carried to Grand Summary (A + B + C)				

Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Summary						
Bill No	Lot - A, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)				ENGINEER'S ESTIMATE	
1	General Bill					
2	Sewer Cleaning, Investigation and Condition Assessment					
3	Provisional Sums					
4	Day works					
X	Sub Total (Bill 1 to 4)					
Y	Add 10% of (X) for Contingencies					
TENDER PRICE (X + Y)						

Note: * Above proposal with necessary modification for repairs plus price escalations
 * Quantity of Internal & External Repairs have been changed as per the experience of previous project

Lot- B, Condition Assessment of 8.2 kilometres of Force Sewer mains within Colombo Municipal Council Area(District 2B)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		CLASS A - GENERAL ITEMS				
1.1		Contractual Requirements				
1.1.1	A120	Insurance Cover as per Sub Clause 18.1,18.2 and 18.3 of the Condition of the Contract	Item	sum		
1.1.2	A190	Workmen Compensation Insurance Cover as per Sub Clause 18.4 of the conditions of contract	Item	sum		
		Specified Requirements				
1.2		Accommodation / Facilities				
		Engineer's Facilities				
1.2.1	A 211	Provide a sub Field offices for the Engineer's staff , as specified in Section 6.1.3.3.4 (para 75) of Employer Requirement	16	office month		
1.2.2	A 221.1	Provide and maintain vehicle (double cab on hired basis) for the use of the Engineer as specified in item I,iii and iv of section 6.1.3.3.4 , clause 76(a)of Employer Requirement	8	vehicle month		
1.2.3	A 222	Provision of mobile phone facilities as specified in section 6.1.3.3.4 clause 76(b) of Employers Requirement	16	Phone month		
1.2.4	A 211.4	Maintenance of Engineer's site offices office with the providing of services paying for consumer bills as per Section 6.1.3.3.4 Para 79 of Employer's Requirement.	16	office month		
1.2.5	A 231.2	Provide office equipment for the use by the Engineer's staff at sub offices as specified in the Section 6.1.3.3.4 Para 75 and 77 of Employer Requirement	Item	sum		
1.3		Attendance				
1.3.1	A 249	Engineering Assistant as per Section 6.1.3.3.4 Para 79 of Employer's Requirement	16	man month		
1.3.2	A 249	Office helper as per Section 6.1.3.3.4 Para 79of Employer's Requirement	16	man month		
		Total carried Forward to Next Page				

Lot- B, Condition Assessment of 8.2 kilometres of Force Sewer mains within Colombo Municipal Council Area(District 2B)

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		Total Brought Forward				-
		Contractor's Facilities				
1.4		Contractor's Site Management				
		The Contractor shall provide following key personnel as per Section 6.1.8.1 ,Para 206 of Employer's Requirement and rest of the personal should included in the Contractor's Markup				
1.4.1	A371	Provision of services of Project Manager as per Section 6.1.4.3.5 Para 105 of Employer's Requirement	8	man month		
1.4.2	A371	Provision of services of Condition Assessment Expert/ Quality Assurance/ Control Manager as per Section 6.1.5.1.1 Para 119 and 6.1.8.1 , Para 206 of Employer's Requirement	Item	sum		
1.4.3	A371	Provision of services of Environmental , safety Manager as per Section 6.1.5.3.2 Para 147 & 6.1.5.2.4 Para 154 and 6.1.8.1 , Para 206 of Employer's Requirement	8	man month		
1.4.4	A371	Provision of services of officer for Traffic Management Planning and Public Relations Office as per Section 6.1.1.7 Para 9 & EMP Section 6.5.C.5; 1 of Employer's Requirement	8	man month		
1.4.5	A299	Dust (Air Quality) monitoring and reporting as per the EMP Section 6.5.C.5: 12.2(b) in Employer's Requirement measures per location	8	nr		
1.4.6	A279	Provide, fix and maintain Project Sign Board and information to public the Contractor shall provide, as specified in Volume 2 Section 6.1.3.1 Para 43 of Employer's requirements.	4	nr		
1.4.7	A299	Mobilization as specified in Volume 3 Section 6.1.2.1 Para 34 of Employer's requirements.	Item	sum		
1.4.8	A299	Demobilization as specified in Volume 3 Section 6.1.2.1 Para 35 of Employer's requirements.	Item	sum		
1.4.9	A299	Provide As Built Drawings as specified in Volume 3 Section 6.1.7 of Employer's requirements.	Item	sum		
1.4.10	A299	Provide monthly progress report as specified in the Particular Condition of Contract.	8	man month		
		Total of Bill No 1 carried to Grand Summary				-

Lot- B, Condition Assessment of 8.2 kilometres of Force Sewer mains within Colombo Municipal Council Area(District 2B)

Bill No. 2 - FORCE SEWER MAINS SD INVESTIGATION AND CONDITION ASSESSMENT						
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		CLASS Y- SEWER AND WATER MAIN RENOVATION AND ANCILLARY WORKS				
2.1		Pre-inspection report				
2.1.1	Y199.1	500mm dia	5,180	m		
2.1.2	Y199.2	600mm dia	865	m		
2.1.3	Y199.4	1100mm dia	2,100	m		
2.2		Condition Assessment of Force sewer mains using Special Devices				
		Depth exceeding 3m but not exceeding 6m				
2.2.1	Y199.1	500mm dia	5,180	m		
2.2.2	Y199.2	600mm dia	865	m		
2.2.3	Y199.4	1100mm dia	2,100	m		
2.3		CLASS L: PIPEWORK - SUPPORTS AND PROTECTION ANCILLARIES TO LAYING AND EXCAVATION				
		Depth exceeding 3m but not exceeding 6m				
2.3.1	L999.1	Provision for making access point of 500mm dia. main line to insert SD,including supply and inatalling of Tapping sleeve,Tees, valve,flange ended short piece of pipes and tapping machine and necessary civil work, not limited to excavation,backfilling, shoring and reinstatement	1	Nr		
2.3.2	L999.2	Provision for making access point of 600mm dia. main line to insert SD,including supply and inatalling of Tapping sleeve,Tees, valve,flange ended short piece of pipes and tapping machine and necessary civil work, not limited to excavation,backfilling, shoring and reinstatement	1	Nr		
2.3.3	L999.3	Provision for making access point of 1100mm dia. main line to insert SD,including supply and inatalling of Tapping sleeve,Tees, valve,flange ended short piece of pipes and tapping machine and necessary civil work, not limited to excavation,backfilling, shoring and reinstatement	1	Nr		
2.4		Line Repair Length up to 5m (PQ)				
		Open cut Excavation for repair or pipe replacement, rate shall include for pipe material, excavation, dewatering, backfilling, compaction , temporary/permenant road reinstatement of roard and all as specified.				
2.4.1	Y339.1	451mm to 600mm dia	2	nr		
2.5		Supply only Ductile Iron sewer pipe, 6.0m long socket spigots in accordance with Section 6.3.5.8 of Employer's Requirement, (exact pipe dimension should obtain from site investigation)				
2.5.1		DN 500mm	4	nr		
2.5.2		DN 600mm	2	nr		
2.5.3		DN 700mm	2	nr		
2.5.4		DN 1100mm	2	nr		
2.6		Supply only Ductile Iron Mechanical coupling in accordance with Section 6.3.5.9 of Employer's Requirement, (exact pipe dimension should obtain from site investigation)				

Lot- B, Condition Assessment of 8.2 kilometres of Force Sewer mains within Colombo Municipal Council Area(District 2B)

2.6.1		DN 500mm	8	nr		
2.6.2		DN 600mm	4	nr		
2.6.3		DN 700mm	4	nr		
2.6.4		DN 1100mm	4	nr		
2.7	SD inspection and asset management database					
2.7.1	Y999	Submittals and deliverable for SD inspection and Asset management database including all inspection soft ware with license for contract period and upon completion of contract all licenses shall be renewed and updated for another peroid of three (3) years as per Employer's Requirement 6.3.5	Item	sum		
		Total Bill No 2 carried to Grand Summary				

Lot- B, Condition Assessment of 8.2 kilometres of Force Sewer mains within Colombo Municipal Council Area(District 2B)

Summary		
Lot- B, Condition Assessment of 8.2 kilometres of Force Sewer mains within Colombo Municipal Council Area(District 2B) - Option 1		ENGINEER'S ESTIMATE
1	General Bill	
2	Sewer Cleaning, Investigation and Condition Assessment by using Special Devices	
X	Sub Total (Bill 1 to 3)	
Y	Add 10% of (X) for Contingencies	
TENDER PRICE (X + Y)		

Note:

- * Above price Above proposal with necessary modification for repairs plus price escalations
- * add few item for supplying only material for Future repairs

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		CLASS A - GENERAL ITEMS				
1.1		Contractual Requirements				
1.1.1	A120	Insurance Cover as per Sub Clause 18.1,18.2 and 18.3 of the Condition of the Contract	Item	sum		
1.1.2	A190	Workmen Compensation Insurance Cover as per Sub Clause 18.4 of the conditions of contract	Item	sum		
		Specified Requirements				
1.2		Accommodation / Facilities				
		Engineer's Facilities				
1.2.1	A 211.1	Provide main office for the Engineer's staff, as specified in Section 6-1.3.3.4 (para 74) of Employer Requirement	22	month		
1.2.2	A 211.2	Provide three(1) sub offices for the Engineer's staff , as specified in Section 6.1.3.3.4 (para 75) of Employer Requirement	66	month		
1.2.3	A 221.1	Provide and maintain vehicle (double cab on hired basis) for the use of the Engineer as specified in item i,ii,iii and iv of section 6.1.3.3.4 , clause 76(a)of Employer Requirement	64	vehicle month		
1.2.4	A 222	Provision of mobile phone facilities as specified in section 6.1.3.3.4 clause 76(b) of Employers Requirement	238	Phone month		
1.2.5	A211.4	Maintenance of Engineer's main office with the providing of services , paying of consumer bills as per Section 6.1.3.3.4 Clause 79 of Employer's Requirement	22	month		
1.2.6	A211.5	Maintenance of Engineer's three site offices office with the providing of services paying for consumer bills as per Section 6.1.3.3.4 Para 79 of Employer's Requirement.	66	office month		
1.2.7	A231.1	Provide office equipment for the use by the Engineer's staff at main field office as specified in the Section 6.1.3.3.4 Para 74 and 77 of Employer Requirement	Item	sum		
1.2.8	A231.2	Provide office equipment for the use by the Engineer's staff at sub - field offices as specified in the Section 6.1.3.3.4 Para 75 and 77 of Employer Requirement	Item	sum		
1.3		Attendance				
1.3.1	A 249.1	Engineering Assistant as per Section 6.1.3.3.4 Para 79 of Employer's Requirement	56	man month		
1.3.2	A 249.2	Assistant Quantity Surveyor -do-	22	man month		
1.3.3	A 249.4	Office helper as per Section 6.1.3.3.4 Para 79of Employer's Requirement	40	man month		
1.3.4	A 249.5	Secretary as per Section 6.1.3.3.4 Para 79of Employer's Requirement	44	man month		
		Total carried Forward to Next Page				

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		Total Brought Forward				
		Contractor's Facilities				
1.4		Contractor's Site Management				
		The Contractor shall provide following key personnel as per Section 6.1.8.1 ,Para 206 of Employer's Requirement and rest of the personal should included in the Contractor's Markup				
1.4.1	A371	Provision of services of Project Manager as per Section 6.1.4.3.5 Para 105 of Employer's Requirement	22	man month		
1.4.2	A371	Provision of services of Condition Assessment Expert/ Quality Assurance/ Control Manager for Lot A as per Section 6.1.5.1.1 Para 119 and 6.1.8.1 , Para 206 of Employer's Requirement	Item	sum		
1.4.3	A371	Provision of services of Condition Assessment Expert/ Quality Assurance/ Control Manager for Lot B as per Section 6.1.5.1.1 Para 119 and 6.1.8.1 , Para 206 of Employer's Requirement	Item	sum		
1.4.4	A371	Provision of services of Environmental , safety Manager as per Section 6.1.5.3.2 Para 147 & 6.1.5.2.4 Para 154 and 6.1.8.1 , Para 206 of Employer's Requirement	22	man month		
1.4.5	A371	Provision of services of officer for Traffic Management Planning and Public Relations Office as per Section 6.1.1.7 Para 9 & EMP Section 6.5.C.5; 1 of Employer's Requirement	22	man month		
1.4.6	A371	Provision of Conducting the STD and HIV/AIDS Education Program as per Section 6.5.C.5; 14.2(b) in Employer's Requirement		Item		
1.4.7	A299	Supply of Gas detector for the use of the Engineer as specified in section 6.1.3.3.4 Para 76(c) of Employer Requirement	2	nr		
1.4.8	A299	Noise monitoring and reporting during construction as per the EMP Section 6.5.C.5: 22.2(a) in Employer's Requirement measures per location	22	nr		
1.4.9	A299	Dust (Air Quality) monitoring and reporting as per the EMP Section 6.5.C.5: 12.2(b) in Employer's Requirement measures per location	22	nr		
1.4.10	A279	Provide, fix and maintain Project Sign Board and information to public the Contractor shall provide, as specified in Volume 3 Section 6.1.3.1 Para 43 of Employer's requirements.	6	nr		
1.4.11	A299	Mobilization as specified in Volume 3 Section 6.1.2.1 Para 34 of Employer's requirements.	Item	sum		
1.4.12	A299	Demobilization as specified in Volume 3 Section 6.1.2.1 Para 35 of Employer's requirements.	Item	sum		
1.4.13	A299	Provide monthly progress report as specified in the Particular Condition of Contract.	22	mon		
		Total of Bill No 1 carried to Grand Summary				

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Bill No. 2 - SEWER CLEANING, CCTV INVESTIGATION AND CONDITION ASSESSMENT						
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
					(LKR)	(LKR)
	CLASS Y- SEWER AND WATER MAIN RENOVATION AND ANCILLARY WORKS					
2.1	Pre-inspection report					
2.1.1	Y199.1	Up to 300mm dia	77,676	m		
2.1.2	Y199.2	301mm to 600mm dia	11,833	m		
2.1.3	Y199.3	601mm to 1050mm dia	2,271	m		
2.1.4	Y199.4	1051mm to 1500mm dia	2,323	m		
2.1.5	Y199.5	non circular pipe 601mm to 1800mm	3,024	m		
2.2	Line Cleaning					
		Cleaning including removing all intrusions, roots, silts and any other materials.				
		Depth not exceeding 3m				
2.2.1	Y110.1	Up to 300mm dia	54,890	m		
2.2.2	Y110.2	non circular pipe 601mm to 1800mm	456	m		
		Depth exceeding 3m but not exceeding 6m				
2.2.3	Y110.3	Up to 300mm dia	18,276	m		
2.2.4	Y110.4	301mm to 600mm dia	3,966	m		
2.2.5	Y110.5	601mm to 1050mm dia	2,271	m		
2.2.6	Y110.6	1051mm to 1500mm dia	2,322	m		
2.2.7	Y110.7	non circular pipe 601mm to 1800mm	2,155	m		
		Depth exceeding 6m				
2.2.8	Y110.8	Up to 300mm dia	4,510	m		
2.2.9	Y110.9	301mm to 600mm dia	1,820	m		
2.2.10	Y110.10	non circular pipe 601mm to 1800mm	413	m		
2.3	Line Repair Length up to 2m (PQ)					
	Open cut Excavation for repair or pipe replacement, rate shall include for excavation, dewatering, backfilling, compaction , temporary/permanent reinstatement of road and all as specified.					
		Depth not exceeding 3m				
2.3.1	Y339.1	Up to 300mm dia	55	nr		
2.3.2	Y339.2	non circular pipe 601mm to 1800mm	1	nr		

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		Total carried Forward to Next Page				
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		Total Brought Forward				
		Depth exceeding 3m but not exceeding 6m				
2.3.4	Y339.3	Up to 300mm dia	19	nr		
2.3.5	Y339.4	301mm to 600mm dia	4	nr		
2.3.6	Y339.5	601mm to 1050mm dia	2	nr		
2.3.7	Y339.6	1051mm to 1500mm dia	1	nr		
2.3.8	Y339.7	non circular pipe 601mm to 1800mm	3	nr		
		Depth exceeding 6m				
2.3.9	Y339.8	Up to 300mm dia	5	nr		
2.3.10	Y339.9	301mm to 600mm dia	2	nr		
2.3.11	Y339.10	non circular pipe 601mm to 1800mm	1	nr		
2.4	Internal spot repairs (PQ)					
		Depth not exceeding 3m				
2.4.1	Y339.11	Up to 300mm dia	110	nr		
2.4.2	Y339.12	non circular pipe 601mm to 1800mm	1	nr		
		Depth exceeding 3m but not exceeding 6m				
2.4.3	Y339.13	Up to 300mm dia	37	nr		
2.4.4	Y339.14	301mm to 600mm dia	8	nr		
2.4.5	Y339.15	601mm to 1050mm dia	4	nr		
2.4.6	Y339.16	1051mm to 1500mm dia	1	nr		
2.4.7	Y339.17	non circular pipe 601mm to 1800mm	5	nr		
		Depth exceeding 6m				
2.4.8	Y339.18	Up to 300mm dia	9	nr		
2.4.9	Y339.19	301mm to 600mm dia	4	nr		
2.4.10	Y339.20	non circular pipe 601mm to 1800mm	1	nr		
2.4.11	Y339.25	Repairing and reconnection of damaged lateral sewer connections while doing the repair of main pipe, rate shall include for excavation, dewatering, backfilling, compaction , temporary/permanent reinstatement of road and all as specified	20	No		
		Total carried Forward to Next Page				

BILLS OF QUANTITIES

Condition Assessment Using CCTV

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
		Total Brought Forward				
2.6		Identification of buried and incorrectly located Manholes /Maintenance holes				
2.6.1	Y790	Identification of buried manholes / maintenance holes (Provisional quantity), Rate shall include for cleaning, breaking and reinstatement of Surface around the manhole for the approval of Engineer.	150	nr		
2.6.2	Y790	Identification of manholes / maintenance holes not shown on drawings attached (Provisional quantity), Rate shall include for cleaning, breaking and reinstatement of Surface around the manhole for the approval of Engineer.	50	nr		
2.6.3	Y790	Raising of buried manholes / maintenance holes as per the details given in the drawing No. SD/11,using existing mahhole cover and frame. Rate shall include for cleaning, breaking,concreting and asphalt around the manhole for the approval of Engineer.	20	nr		
2.6.4	Y790	Rate for supply and installation of new manhole cover and frame,when existing MH cover and frame is damage(PQ)	20	nr		
2.7		Physical characteristic and conditions report of Manholes/ Maintenance holes				
2.7.1	Y720	The manholes / maintenance holes depth 2m or less from the existing ground level	362	nr		
2.7.2	Y720	The manholes /maintenance holes of depth exceeding 2m but less than 3m from existing ground level.	868	nr		
2.7.3	Y720	The manholes /maintenance holes of depth exceeding 3m but less than 4m from existing ground level.	198	nr		
2.7.4	Y720	The manholes /maintenance holes of depth exceeding 4m but less than 5m from existing ground level.	200	nr		
2.7.5	Y720	The manholes /maintenance holes of depth exceeding 5m but less than 6m from existing ground level.	200	nr		
2.7.6	Y720	The manholes /maintenance holes of depth exceeding 6m from existing ground level.	146	nr		
2.8		Topographic survey of manholes				
2.8.1	Y790	Topographic survey of manholes and recording of invert and ground reduced level in meters MSL, of all manholes belong to defective sewers	1,974	nr		
2.1		CCTV inspection and asset management database				
2.9.1	Y999	Submittals and deliverable for CCTV inspection and Asset management database including all inspection soft ware with license for contract period and upon completion of contract all licenses shall be renewed and updated for another peroid of three (3) years as per Employer's Requirement 6.3.3	Item	sum		
		Total carried Forward to Next Page				

BILLS OF QUANTITIES

Condition Assessment Using CCTV

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Bill No. 3 - FORCE SEWER MAINS SD INVESTIGATION AND CONDITION ASSESSMENT						
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
					(LKR)	(LKR)
3.1		CLASS Y- SEWER AND WATER MAIN RENOVATION AND ANCILLARY WORKS				
3.1		Condition Assessment of Force sewer mains using Special Devices				
		Depth exceeding 3m but not exceeding 6m				
3.1.1	Y199.1	500mm dia	5,180	m		
3.1.2	Y199.2	600mm dia	865	m		
3.1.4	Y199.4	1100mm dia	2,100	m		
3.2		CLASS L: PIPEWORK - SUPPORTS AND PROTECTION ANCILLARIES TO LAYING AND EXCAVATION				
		Depth exceeding 3m but not exceeding 6m				
3.2.1	L999.1	Provision for making access point of 500mm dia. main line to insert SD,including supply and inatalling of Tapping sleeve,Tees, valve,flange ended short piece of pipes and tapping machine and necessary civil work, not limited to excavation,backfilling, shoring and reinstatement	1	Nr		
3.2.2	L999.2	Provision for making access point of 600mm dia. main line to insert SD,including supply and inatalling of Tapping sleeve,Tees, valve,flange ended short piece of pipes and tapping machine and necessary civil work, not limited to excavation,backfilling, shoring and reinstatement	1	Nr		
2.3.2	L999.2	Provision for making access point of 700mm dia. main line to insert SD,including supply and inatalling of Tapping sleeve,Tees, valve,flange ended short piece of pipes and tapping machine and necessary civil work, not limited to excavation,backfilling, shoring and reinstatement	1	Nr		
3.2.3	L999.3	Provision for making access point of 1100mm dia. main line to insert SD,including supply and inatalling of Tapping sleeve,Tees, valve,flange ended short piece of pipes and tapping machine and necessary civil work, not limited to excavation,backfilling, shoring and reinstatement	1	Nr		
3.3		Line Repair Length up to 5m (PQ)				
		Open cut Excavation for repair or pipe replacement, rate shall include for pipe material, excavation, dewatering, backfilling, compaction , temporary/permanent road reinstatement of road and all as specified.				
3.3.1	Y339.1	451mm to 600mm dia	3	nr		

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		Total carried Forward to Next Page				
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
		Total Brought Forward				
3.4		Supply only Ductile Iron sewer pipe, 6.0m long socket spigots in accordance with Section 6.3.5.8 of Employer's Requirement, (exact pipe dimension should obtain from site investigation)				
3.4.1		DN 500mm	4	nr		
3.4.2		DN 600mm	2	nr		
3.4.3		DN 700mm	2	nr		
3.4.4		DN 1100mm	2	nr		
3.5		Supply only Ductile Iron Mechanical coupling in accordance with Section 6.3.5.9 of Employer's Requirement, (exact pipe dimension should obtain from site investigation)				
3.5.1		DN 500mm	8	nr		
3.5.2		DN 600mm	4	nr		
3.5.3		DN 700mm	4	nr		
3.5.4		DN 1100mm	4	nr		
3.6		SD inspection and asset management database				
3.6.1	Y999	Submittals and deliverable for SD inspection and Asset management database including all inspection soft ware with license for contract period and upon completion of contract all licenses shall be renewed and updated for another period of three (3) years as per Employer's Requirement 6.3.5	Item	sum		
		Total Bill No 2 carried to Grand Summary				

BILLS OF QUANTITIES

Condition Assessment Using CCTV

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Bill 5.0 Dayworks						
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
CLASS A - GENERAL ITEM - DAY WORKS						
DAYWORK - LABOUR						
The Tenderer is required to price the following rates to be applied to any dayworks ordered by the Employer. The rates are to be fully inclusive.						
The rates quoted shall remain unchanged for the duration of the contract.						
5.1	A411.1	Foreman/Supervisor	10	day		
5.2	A411.2	Ganger / Charge hand	10	day		
5.3	A411.3	Skilled Labour	10	day		
5.4	A411.4	Semi-Skilled Labour	10	day		
5.5	A411.5	Unskilled Labour	10	day		
5.6	A411.19	Driver light vehicles	10	day		
5.7	A411.21	CCTV operator	10	hr		
Sub total						
	A412	Add % increase on subtotal in item A411 for working on holidays and nights as directed by the Engineer	%			
A		TOTAL LABOUR				
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
DAYWORK - MATERIALS						
5.8	413.1	Concrete (Ready Mix) Grade 20	20	m ³		
5.9	413.4	Cement, Sulphur resistant	50	Kg		
5.10	413.5	Cement, ordinary Portland	50	Kg		
5.11	413.6	Aggregate base, dense graded (37.5 mm)	15	m ³		
5.12	413.8	Sand	10	m ³		
5.13	413.9	Quarry Dust	50	m3		
5.14	413.28	Cast Iron Manhole covers	10	No		
B		Total Material				

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate (LKR)	Amount (LKR)
					(LKR)	(LKR)
		DAYWORK - Equipment				
		The Contractor is required to price the following rates per hour for equipment to be applied to any work ordered by the Engineer. It shall include for fuel and consumables, stores, repairs etc. and inclusive of driver / operator.				
5.15	A413.5	Mobile crane upto 5 tones capacity	10	hr		
5.16	A413.6	Dumper minimum capacity 1 Cu.m.	10	hr		
5.17	A413.7	Track mounted Backhoe Excavator 3/8 cu.m. capacity	10	hr		
5.18	A413.11	Lorry upto 5 Tones.	10	hr		
5.19	A413.14	Rammer for compaction	10	hr		
5.20	A413.15	Portable air compressor complete with hoses and pneumatic tools, minimum capacity 2.82 cu.m. (100cu.ft) per minute and pressure 70 kg/ sq.m (100 psi)	10	hr		
5.21	A413.16	Portable self-priming diesel engine driven centrifugal pump with hoses 75mm minimum delivery.	10	hr		
5.22	A413.17	Air operated diaphragm pump, minimum capacity 5 l/s against 15m head complete with pressure housing and suction and delivery housing etc.;	10	hr		
5.23	A413.18	Portable welding set 500A capacity complete with welding accessories.	10	hr		
5.24	A413.23	Pipe tapping machine (Trapping range 1/2", 3/4", 1" and 1 1/2 ")	10	hr		
5.25	A413.24	Pipe cutters with cutting discs etc;	10	hr		
5.26	A413.27	Water Bowser upto 1500G.	10	hr		
5.27	A413.28	Water Bowser upto 3000G.	10	hr		
5.28	A413.30	Flood light system with all necessary accessories for night working in roads	10	hr		
C		Total Equipment				
		Total Bill No 3 carried to Grand Summary (A + B + C)				

Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area(District 3, 4 ,5 & 2A)

BILLS OF QUANTITIES

Item No.	CESMM4 Code No.	Description	Quantity	Unit	Rate	Amount
					(LKR)	(LKR)
Summary						
	Lot - A+Lot B, Condition Assessment and Urgent repairs of 89 kilometres of Sewer lines and 8.2 km of Force sewer main within Colombo Municipal Council Area					
1	General Bill					
2	Sewer Cleaning, Investigation and Condition Assessment					
3	Condition Assessment of Force sewer mains using Special Devices					
4	Provisional Sums					
5	Day works					
X	Sub Total (Bill 1 to 4)					
Y	Add 10% of (X) for Contingencies					
TENDER PRICE (X + Y) without VAT						

Note:

- * Above pr Above proposal with necessary modification for repairs plus price escalations
- * Quantity of Internal & External Repairs have been changed as per the experience of previous project
- * add few item for supplying only material for Future repairs