



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF PORTS & HIGHWAYS
ROAD DEVELOPMENT AUTHORITY

CHINESE DEVELOPMENT BANK FUNDED
IMPROVEMENT AND REHABILITATION OF PRIORITY ROAD PROJECT 1 (PRP1)

AGREEMENT FOR
CIVIL WORK CONTRACTS

CONTRACT NO. RDA/RNIP/PRP1/PACKAGE-A (C1A, C2A, C3, C6A & C8)

Component Ref. No.	Name of the Road
RDA/RNIP/PRP1/C1A	Improvement & Rehabilitation of B141 Beliattā - Tangalle Road (7.47 km) Improvement & Rehabilitation of Bopale Junction - Kiri Ibbanara - Udamauara Road (8.5 km) Construction of a flyover at Siribopura Junction
RDA/RNIP/PRP1/C2A	Improvement & Rehabilitation of B363 Pelawatta - Kankotiyawatta - Thiniyawala - Morawaka Road (47 km)
RDA/RNIP/PRP1/C3	Improvement & Rehabilitation of B421 Thiruwanketiya - Agalawatta Road (33.45 km)
RDA/RNIP/PRP1/C6A	Improvement & Rehabilitation of A026 Kandy - Mahiyangana - Padiyathalawa Road (20.5 km)
RDA/RNIP/PRP1/C8	Improvement & Rehabilitation of B184 Kalkudah Road (5.63 km) Improvement & Rehabilitation of B185 Kalkudah - Valachchenai Road (4.42 km)

BETWEEN

THE ROAD DEVELOPMENT AUTHORITY
OF SRI LANKA

AND

THE CHINA NATIONAL AERO TECHNOLOGY INTERNATIONAL
ENGINEERING CORPORATION (CATIC-ENG) OF CHINA

W. T. I. N. TISSERA
Project Director (CDB - PRP 3)
Road Development Authority

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True Copy
Pages 01 - 112*

VOLUME 5

Preamble to the Bill of Quantities
Priced Bill of Quantities and Schedules

21 DECEMBER 2010

SCOPE OF WORK

SCOPE OF WORKS

- 1.1 The works involve the rehabilitation of the existing road with improvement to the road geometry together with improvement to longitudinal drainage, the widening, repairing or reconstruction of existing culverts & bridges and construction of new culverts, bridges and flyovers as required.

The contractor is required to carry out the design of all components of the work in the contract.

The contractor is required to carry out improvements to the geometry of the road within the existing Right of Way (ROW) unless otherwise specified. The topographical survey, level survey and cross section survey necessary for this work is also required to be carried out by the contractor. The proposed improvements to the geometry require the approval of the Engineer.

A road condition investigation consisting of visual inspection, DCP testing & trial pits with materials testing is required to be done by the contractor. Based on this investigation, sections of road that require rehabilitation over and above the pavement thickness shown in the bid documents is to be identified by the contractor. The additional thickness of condition proposed (if any) require the approval of the Engineer.

The contractor will design bridges and culverts identified for widening and reconstruction. The contractor will also design all protection works in the form of gabion walls, retaining walls, toe walls, etc. These designs require the approval of the Engineer.

The contractor will prepare the working drawings resulting from the above and submit same to the Engineer for approval. The contractor will set out the centre line in accordance with the approved drawings.

The Work will be carried out within the existing ROW unless otherwise specified and will include, inter alia, the following :

- Rehabilitation works will generally consist of raising the flooding sections, widening the carriageway to the required standard where possible within the ROW, rebuilding the shoulders to the required width on either side, strengthening the base and constructing hot mix asphalt concrete overlays comprising profile correction course where required and a wearing course.
- In the case of heavily distressed or deformed sections of the existing road, rehabilitation will involve the reconstruction of the pavement from sub-grade level or any other level as per the instructions of the Engineer.
- Shoulders will be rehabilitated with granular material and in urban areas the shoulder will be constructed as raised pedestrian walks or covered drains as directed by the Engineer.
- Longitudinal drainage works will involve the provision/rehabilitation of lined drains in either masonry or concrete in hilly sections, where erosion is a concern; unlined longitudinal drains will generally be constructed/rehabilitated in rural sections.
- Transverse drainage improvements will involve the extension of existing culverts; replacement of existing damaged culverts; the provision of new culverts as per the Engineers instruction.
- Similarly, narrow structurally sound bridge will be widened to the required width and damaged bridges will be reconstructed.

- Both longitudinal and transverse subsoil drainage will be introduced in areas of high water table affecting sub grade support.
 - Protection works in the form of gabion, masonry or concrete retaining walls or toe walls may also be required to stabilize cut slopes or embankments where localized earthworks are involved.
- 1.2 The scope of the works will also address the following issues:
- Provision and maintenance of facilities for the Engineer including office accommodation, vehicles, fully equipped materials testing laboratory for the works etc.
 - Provision & maintenance of facilities for the employer including office accommodation and vehicles.
 - Implementing and managing site safety
 - Implementing and maintaining traffic management along the project.
 - Protection of the environment and mitigating potential hazards.
 - Maintaining access to adjacent properties.
 - Locating and removing of mines and UXO (if applicable).
- 1.3 The contractor will be required to generally maintain the road section covered by the Contract during construction of the Works to ensure the safety of the public and residents along the road and minimum disruption to flow of traffic to the satisfaction of the Engineer.
- If the Contractor fails to maintain the road to ensure the safety of road users, the public and residents along the road and minimum disruption to flow of traffic to the satisfaction of the Engineer, the Engineer shall be entitled to employ a sub-contractor to carry out the required works and pay for such work done and recover the cost from the Contractor. The Engineer may, without prejudice to any other method of recovery, deduct such cost from any money due or which may become due to the Contractor and such deduction shall not relieve the Contractor of any of his obligations under the Contract.
- 1.4 The scope of work is deemed to include any other item of work that may be required to be carried out for the proper completion of the Works in all respects in accordance with the provisions of the Contract.
- 1.5 The quality control in the contract will be required to be carried out in accordance with the technical specifications.

Preamble to the Bill of Quantities

PREAMBLE TO BILL OF QUANTITIES

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.

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 who shall reimburse the Employer any money that was paid to the Contractor for the supply and delivery to site of the surplus materials.

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) Temporary 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) The supply, inspection, sampling and testing of materials and of the Works under construction, including the provision and use of equipment;
- (14) 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;
- (15) 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;
- (16) All statutory taxes and levy, surcharges etc. including stamp duty payable on the contract, which will have to be borne by the Contractor.

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 fulfillment of his obligation under 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.

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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 "PS" 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 provisional, 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 facilities described in the items and the Specification has 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 related to 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. 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.

12. Demolition

The rates and prices for demolition shall include for;

- (1) The activities prior to the demolition, including further surveys, investigations.
- (2) Providing adequate supports to the adjacent structures and the structure to be demolished, including the shoring, propping needling etc.
- (3) Removal of all debris as directed, and recover the salvaged material.
- (4) Making good of all works disturbed or damaged.
- (5) Diverting or disconnecting any existing service lines which could be affected.

13. Site Clearance

Rates for site clearance shall include (if not separately allowed) for the removal of all trees, shrubs, boulders or other debris 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. Earthworks

(1) Excavation in all Material except Rock

The rates and prices for excavations shall be for all types of material encountered except rock including ground conditions above or below water level. The Contractor must make due allowance for the possibility of permission not being granted to the use of explosives for blasting and other operations.

- (a) For structures, volume of material excavated measured as the product of the horizontal area of the base of permanent work to be constructed and the mean depth below ground level, or measured as the volume to be occupied by permanent work below ground level, whichever is the greater.

In no case shall any of the following quantities be included in the measurement for payment.

- (1) Quantity outside the vertical planes of neat outline of foundation structures unless shown otherwise on the drawings.
 - (2) Quantity of excavation and/or backfill for water supply pipe lines, sewer pipelines, and storm drainage except as allowed for in pipeline construction as specified.
 - (3) Quantity of any excavation performed prior to the taking of measurements of the undisturbed natural ground.
 - (4) Quantity of any material re-handled, except where the drawings indicate or the Engineer directs the excavation after embankment has been placed.
 - (5) Removal of slides, cave-ins, silting or filling due to the action of the elements or weather and/or carelessness of the Contractor.
- (b) For unsuitable material, volume of excavated material shall be measured as volume of material (below base of the permanent works) directed to be removed by the Engineer. However, this does not include removal of material rendered unsuitable due to contractor's method of excavation.

No allowance is made for bulking or for any extra transport required due to bulking. The rates shall include, if separate items are not provided but not by way of limitation, for:

- (1) excavation to the correct depth and preserving the bottoms of excavations in a state suitable for the reception of concrete or other foundation work, and no payment will be made for any concrete or any bedding required for filling over-excavated volumes or disturbed areas to the net dimensions as indicated on the Drawings,

- (2) any additional excavation required for shuttering, working space, temporary or permanent shoring, and subsequent refilling and ramming and disposal of surplus and back fills behind structures,
- (3) provision of storage areas for the temporary storage of any material required for back filling which cannot be stored alongside the excavation for any reason, together with the cost of transporting, loading including disposal of surplus and unloading such material and all other charges incurred in this respect,
- (4) trimming the bottoms of excavations including bottoming to falls, and trimming to sloping surfaces where required or indicated on the Drawings,
- (5) taking all precautions by supporting faces of excavation to ensure the safety of the workmen and to prevent damage to adjacent walls, building and all other structures and services, including permanent and/or temporary shoring of trenches,
- (6) keeping the site and trenches and all other excavations free from water from whatever cause arising,
- (7) for clearing any scrub or other vegetable growth including all trees and for disposing of the whole of the cleared material to tip provided by the Contractor,
- (8) 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,
- (9) all barriers, lighting, warning signs and any other measures necessary to ensure complete safety around the area of the works,
- (10) reinstatement except where separate items are included.

(2) **Excavation in Rock**

Excavation in rock, which shall, in all cases, be measured extra over measurement under 1(a) or 1(b) above by volume from the level at which rock is encountered. For work described under 1(a) and 1(b), measurement shall be as specified therein.

(3) **Fill**

Fill shall be measured as the net volume above ground level of the permanent earthwork to the dimensions shown on the Drawings or ordered by the Engineer, irrespective of source of material. The rate shall include for selection, handling, placing, compaction of excavated or imported material and cost of control and material selecting tests (field and laboratory). Costs incurred in connection with the remedial work ordered by the Engineer consequent to the results of control tests falling below the minimum specified shall be borne by the Contractor.

15. **Concrete**

The rates for concrete are to include for

- (1) all costs incurred in determining the mixes to satisfy the Specification (including any admixtures);
- (2) supplying all material (including any admixtures), storing, mixing, transporting, placing and compaction (whether by hand or vibration);
- (3) excavation as required below previously filled levels and back filling (except where separate items are provided);
- (4) roughening the surface of previously executed work as required in order to provide the necessary bond with new concrete;
- (5) achieving specified tolerance;

- (6) forming sloping, falls and the like;
- (7) forming holes or boxing out for pipes, bolts, frames for covers and other steel work;
- (8) building in cable conduit, pipes, junction boxes etc;
- (9) forming 25mm chamfers on all external arises to exposed concrete;
- (10) forming all construction joints, keys, stop ends, temporary stops and shuttering of other than permanently exposed faces (except where separate items are provided);
- (11) curing the concrete and all measures to protect freshly poured concrete from direct sunlight and wave action;
- (12) troweling, rubbing down etc. and making good the concrete surfaces to provide the specified finishes;
- (13) the cost of control testing throughout the period of concreting and for the testing of concrete and remedial work ordered by the Engineer consequent to the results of control tests falling below the minimum specified;
- (14) overtime working to maintain continuity of casting;
- (15) a daily return to the Engineer showing the quantities of cement and the volume of concrete placed and compacted in position, of each class of concrete in each section of the works and temporary works.

The measurement of concrete shall be by cubic metre, square metre or linear metre of completed structure. Where volumetric measure is used, no deductions will be made for channels, recesses or rebates less than 600mm girth, for splays or chamfers less than 300mm measured on the splay nor for holes or ducts formed in the concrete less than 1m girth. Fillets less than 300mm on the splay will be measured.

16. Form Work

Rates and prices for the formwork shall include for

- (1) general formwork, working in narrow spaces and small quantities, for setting up, strutting and supporting at any height, together with any necessary strutting and supporting through lower floors, applying mould oil, use of polythene, easing, striking and removing, cleaning preparing for reuse, and removal, including all props, stays, struts, wedges, bolts etc;
- (2) all fillets to form grooves, rebates, throats, splays or chamfers, raking, circular cutting, cutting around all pipes, sleeves, conduits etc;
- (3) Providing samples to the Engineer for approval.

17. Steel Reinforcement

The rates for steel bar and steel fabric reinforcement shall include for supplying, transporting, storing, cleaning, cutting bending, all labour in working, distribution to the various parts of the works, fixing in position and supporting and for the use of binding wire and for welding where indicated.

The unit of measurement for steel reinforcement is the Kilogram (kg.) and the weight of steel has been calculated net with no allowance made for wastage or laps and the cost of these will be deemed to be covered in the rates.

The weight of steel supports, spacer bars and ties, but including stirrups and binders, used to locate and hold the reinforcement in place is not included in the quantity and the cost of these will be deemed to be covered in the rates.

18. Timber

The rates for timber shall include for all handling, labour and waste, for all chamfers and nosing and for protective treatment except where otherwise provided. The rates for timber for permanent works are to allow for the use of new properly seasoned new timber.

19. Brickwork

The basis of measurement for brickwork walls shall be the overall area of the walls measured in plane elevation, no allowance being made for setbacks, recesses and nibs.

Rates for brickwork shall include for bricks of the thickness stated bounded in cement mortar, damp proof course, finishing around all openings vertical expansion joints as required, building in electrical conduit and small pipes and tubes, galvanized wire ties to steel work and concrete.

20. Hand Railing

Rates and prices for hand railing shall be for handrail materials and forged standards as specified including all bends, removable sections, wall hooks, fixings and painting.

21. Painting and Protective Coatings

The rate for painting and protective coatings, whether measured separately or included in other items, is to include for all temporary staging ladders and the like, covering the adjacent works to prevent splashing providing adequate protection to the work being painted or coated against dust, spray and other foreign matter, for all preparation and priming, carrying out the work in materials and colours to the requirements of the Engineer, curling in edges, washing off stains, and leaving the whole of the work perfect on completion. The rates for painting are to allow the applying of the final coat of paint immediately prior to handing over any section of the work.

22. Fences and Boundary Walls

Rates for fences and boundary walls shall include but not limited to, excavation, refilling and ramming, disposal of surplus, materials for construction of fences and boundary walls, and all painting.

23. Unit of Measurement

Metric units are used throughout the Bill of Quantities for measurement purposes unless otherwise indicated. The following abbreviations are used in this Contract.

<i>Unit</i>	<i>Abbreviation</i>
Millimetre	mm
Metre	m
Square metre	m ² or sq m
Cubic metre	m ³ or cu m
Kilometre	km
Kilo gram	kg
Tonne	t
Litre	ltr
Number	nr
Provisional Sum	PS
Lump Sum	LS
Hour	h
Week	wk
Month	mon
Labour day	L day
Man Month	MM
Sri Lanka Rupees	Rs.
Cents.	Cts.

24. DAYWORK SCHEDULE

General

Reference should be made to Clause 13.6 of the Conditions of Contract. Work shall not be executed on a day work basis except by written order of the Engineer. Contractors shall enter rates for day work items in schedules, which rates shall apply to any quantity of day work ordered by the Engineer.

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

Labour

The contractor is to enter hereunder the individual rates for labour for skilled and unskilled workers and gangers employed on dayworks 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 daywork, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the traveling time from the part of the Site where the Constructional Plant was located when ordered by the Engineer to be employed on daywork 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 daywork 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 daywork 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.

**THE PRICED BILL OF QUANTITIES AND
SCHEDULES**

PRP 1 / C1A - 1

(B) 5
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Improvement and Rehabilitation of Priority Road Project

Contract Package No - RDA/RNIP/PRP1/C1

Hakmana - Beliatte - Tangalle Road

Section from 11.5 km (Beliatte) to 19.31 km (Tangalle)

Length of the Section 7.47km

BILL OF QUANTITIES

SUMMARY		AMOUNT(Rs.)
No.	Description	
1	Preliminary and General 1 A	141,492,526.60
	1 B	83,421,360.00
2	Site Clearing	240,000.00
3	Earthworks	15,406,200.00
4	Road Pavement	287,712,530.00
5	Drainage	45,286,050.00
6	Bridges and Culverts	30,166,210.00
7	Incidentals	23,491,600.00
8	Provisional Sums	27,365,000.00
9	Day works - Labour	200,250.00
	Day works -Equipment	1,033,000.00
	Day works - Materials	
Sub - Total 1 :		655,814,726.60
Provisional sum for Price Escalation 8%		52,465,178.13
Contingencies at 10% of Sub - Total 1		65,581,472.66
TENDER PRICE		773,851,377.39
In words	Rupees :	
Value added tax at 12% of the Tender Price		92,863,365

Bidder: Signature _____
 Name _____
 Address _____

Witness 1 Signature _____
 Name _____
 Address _____

Witness 2 Signature _____
 Name _____
 Address _____

BILL No.1A : PRELIMINARY GENERAL						
ITEM NO		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
	108.1(1)	Allow for cost of providing Performance Security adv.guar.	LS	Allow	11,000,000.00	11,000,000.00
2	108.2(1)	Allow for the cost of providing Insurances	LS	Allow	11,446,426.60	11,446,426.60
3	108.3(1)	Mobilization of Contractor's facilities and Plant / Equipment	LS	Allow	8,500,000.00	8,500,000.00
4	108.3(2)	De-Mobilization of Contractor's facilities & Plant / Equipment	LS	Allow	3,500,000.00	3,500,000.00
5	108.7(1)	Provide and maintain Project sign board	nr	7	38,300.00	268,100.00
6	108.7(2)	Provide and maintain Plaques	nr	12	283,000.00	3,396,000.00
7	118.4(1)	Provide Main office for the Engineer.	nr	1	1,500,000.00	1,500,000.00
8	118.4(2)	Provide Secondary office for the Engineer.	nr	5	1,300,000.00	6,500,000.00
9	118.4(3)	Provide office for the Employer	nr	1	1,000,000.00	1,000,000.00
10	118.6(1)	Provide Housing for the Employer	nr	1	198,500.00	198,500.00
11	118.6(1)	Provide Housing for the Engineer	nr	1	198,500.00	198,500.00
		<u>Vehicles for the Engineer</u>				
12	118.8(1)	Purchase and supply Vehicle Type 1-A as specified in appendix 4 of Volume 1	P.Sum	allow	6,000,000.00	6,000,000.00
13	118.8(2)	Purchase and supply Vehicle Type1B as specified in appendix 4 of Volume 1	P.Sum	allow	25,000,000.00	25,000,000.00
14	118.8(3)	Purchase and supply Vehicle Type 2 as specified in appendix 4 of Volume 1	P.Sum	allow	6,000,000.00	6,000,000.00
15	118.8(4)	Purchase and supply Vehicle Type 3 as specified in appendix 4 of Volume 1	P.Sum	allow	300,000.00	300,000.00
16	118.8(5)	Over heads and profit for supply of vehicle Type 1	%	31,000,000.00	10%	3,100,000.00
17	118.8(6)	Over heads and profit for supply of vehicle Type 2	%	6,000,000.00	10%	600,000.00
18	118.8(7)	Over heads and profit for supply of vehicle Type 3	%	300,000.00	10%	30,000.00
		<u>Vehicles for the Employer</u>				
19	118.8(10)	Purchase and supply Vehicle Type 1 as specified in appendix 4 of Volume 1	item	Allow	ps	6,000,000.00
20	118.8(11)	Purchase and supply Vehicle Type 2 as specified in appendix 4 of Volume 1	item	Allow	ps	4,000,000.00
21	118.8(12)	Over heads and profit for supply of vehicle Type 1	%		10%	600,000.00
22	118.8(13)	Over heads and profit for supply of vehicle Type 2	%		10%	400,000.00
23	118.9(1)	Provide Main Laboratory	nr	1	1,500,000.00	1,500,000.00
24	118.9(2)	Provide Secondary Laboratory	nr	2	1,500,000.00	3,000,000.00
25	118.9(3)	Provide Equipment for the Main Laboratory	item	Allow	13,100,000.00	13,100,000.00
26	118.9(4)	Provide Equipment for the field Laboratory	item	Allow	8,250,000.00	8,250,000.00
27	118.10(1)	Provide and maintain Survey equipment	item	Allow	4,555,000.00	4,555,000.00
28	119(1)	Longitudinal and Cross sectional detailing of full pavement width	item	Allow	11,550,000.00	11,550,000.00
Bill No. 1A Carried to Summary						141,492,526.60

BILL No.2 : SITE CLEARING						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
CLEARING AND GRUBBING						
1	201(1)	Clearing and grubbing	m ²	3,000	80	240,000.00
		<i>Remove trees :</i>				
2	201(2)	- Girth 600 to 1,200 mm	nr			
3	201(3)	- Girth 1,200 to 2,000 mm	nr			
4	201(4)	- Girth over 2000 mm	nr			
		<i>Remove Branches :</i>				
5	201(5)	- Girth 300 to 600 mm	nr			
6	201(6)	- Girth 600 to 1,200 mm	nr			
7	201(7)	- Girth over 1,200 mm	nr			
		<i>Remove Stumps :</i>				
8	201(8)	- Girth 600 to 1,200 mm	nr			
9	201(9)	- Girth 1,200 to 2,000 mm	nr			
10	201(10)	- Girth over 2000 mm	nr			
2.2 REMOVAL OF STRUCTURES & OBSTRUCTIONS						
11	202(1)	Dismantle & remove brick masonry structures				
		(Provisional Quantity)	m ³			
12	202(2)	Dismantle & remove Random Rubble masonry structures				
		(Provisional Quantity)	m ³			
13	202(3)	Dismantle & remove concrete structures				
		(Provisional Quantity)	m ³			
14	202(4)	Dismantle & remove Dress stone masonry structures				
		(Provisional Quantity)	m ³			
15	202(5)	Remove fencing (Provisional Quantity)	m			
Bill No.2 Carried to Summary						240,000.00

BILL No.4 : ROAD PAVEMENT						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
4.1		GRANULAR PAVEMENT				
1	401(1)	Sub base as compacted in position	m ³	3,000	2,110.00	6,330,000.00
2	402(1)	Provide and place stabilized gravel base of 200mm thick	m ³			-
3	402(3)	Cement	tonne			-
4	405(1)	Dense graded aggregate base	m ³	13,000	7,850.00	102,050,000.00
4.2		RECONSTRUCTION OF EXISTING PAVEMENT				
5	408(1)	Scarify and remove existing bitumen layer	m ²			-
4.3		SHOULDERS				
6	409(1)	Earthen shoulder as compacted in position	m ³	4881	1,630.00	7,956,030.00
7	402(1)	Stabilized gravel shoulder as compacted in position	m ³			-
8	402(3)	Cement	tonne			-
9	409(2)	Dense graded aggregate shoulders as compacted in position	m ³			-
10	409(3)	Trench excavation for cross shoulder drain	m ³			-
11	409(4)	Porous material for cross shoulder drain	m ³			-
12	1710(1)	Geotextile for cross shoulder drain	m ²			-
4.4		PRIME COAT AND TACK COAT				
13	501(1)	Bituminous Prime Coat using MC 30 at 1 litre per m ²	m ²	61,600	240.00	14,784,000.00
14	501(2)	Extra over for MC 30	ltr			-
15	502(1)	Bituminous Tack Coat (Cationic Emulsion grade CRS1 at 0.3 litre/m ²)	m ²	30,500	85.00	2,592,500.00
16	502(2)	Extra over for CRS 1	ltr			-
4.5		BITUMINOUS SURFACING				
17	505.1	Bitumen Grade (80-100)	ltr			-
18	505.2	Kerosene/ diesel or other approved cutter	ltr			-
19	505.3	20mm chips	m ³			-
20	505.4	10mm chips	m ³			-
21	506.1	Asphalt concrete in wearing course 50mm compacted thickness	m ²	61,600	2,500.00	154,000,000.00
22	506.2	Asphalt concrete in binder/ Correction course	MT			
Bill No. 4 Carried to Summary						287,712,530.00

BILL No.5 : DRAINAGE						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
5.1		ROADSIDE AND LEAD AWAY SURFACE DRAINS				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³	75	23,330.00	1,749,750.00
2	1001(2)	Grade C 20	m ³	560	25,830.00	14,464,800.00
3	1006(1)	Random rubble masonry	m ³			-
4	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²			-
		<i>Precast concrete cover slab :</i>				
5	701(3)	600 X 500 X 100mm thick	m ²	500	5,830.00	2,915,000.00
6	701(4)	800 X 600 X 125mm thick	m ²	750	10,410.00	7,807,500.00
7	1002(1)	Tor Steel reinforcement	kg	26,000	274.00	7,124,000.00
		<i>Form work</i>				
8	1008(1)	Formwork smooth finish	m ²	5,000	2,245.00	11,225,000.00
9	1008(2)	Formwork rough finish	m ²			-
5.2		SUB-SURFACE DRAINS (UNDERDRAINS)				
10	702(1)	160mm dia. PVC Pipe (Type 600)	m			
11	702(2)	Graded aggregate maximum size 37.5mm	m ³			
12	1710(1)	Provide and place Geyotextile filter	m ²			
5.3		UNDER GROUND PIPE DRAIN				
13	704(1)	Inlet to line drain PVC pipe (Type 600) 100mm dia.	m			
5.4		CLEANING AND RESHAPING OF EARTH DRAINS				
14	1301(1)	Clear and reshape earth drains	m			
5.5		CLEANING AND REPAIRING OF BUILT-UP DRAINAGE SYSTEM				
15	1302(1)	Clean, desilt & repair built-up (lined) drains.	m			
5.6		CLEANING, DESILTING & REPAIRING OF CULVERTS				
16	1303(1)	Pipe Culverts	nr			
17	1303(2)	Other Culvert type	nr			
Bill No. 5 Carried to Summary						45,286,050.00

BILL No.6 : BRIDGES, CULVERTS AND OTHER STRUCTURES							
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)	
Bill	Pay						
6.1		STRUCTURES					
		Concrete :					
1	1001(1)	Grade C 15	m ³				
2	1001(3)	Grade C 25	m ³				
3	1001(4)	Grade C 30	m ³				
4	1002(1)	Tor Steel reinforcement	kg				
5	1006(1)	Random rubble masonry	m ³				
		Formwork					
6	1008(1)	Formwork smooth finish	m ²				
7	1008(2)	Formwork rough finish	m ²				
8	705(1)	100mm crushed stone back fill material	m ³				
9	705(2)	37.5mm maximum size crushed stone - filter material	m ³				
10	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m				
11	706(2)	Rainwater outlet/Duts 160mm dia PVC pipe (Type 600)	m				
12	814(1)	Hand Rails and uprights	m				
13	814(2)	End pilasters	nr				
6.2		CULVERTS					
14	707(1)	Laying and jointing of pipes, 600mm dia. (Single row)	m				
15	707(2)	Laying and jointing of pipes, 600mm dia. (Double row)	m				
16	707(3)	Laying and jointing of pipes, 900mm dia. (Single row)	m				
17	707(8)	Sand fill	m ³				
18	1001(1)	Grade C 15 Concrete	m ³	312	23,330.00	7,278,960.00	
19	1001(2)	Grade C 20 Concrete	m ³			-	
20	1001(3)	Grade C 25 Concrete	m ³	683	29,160.00	19,916,280.00	
21	1001(4)	Grade C 30 Concrete	m ³			-	
22	1002(1)	Tor Steel reinforcement	kg	1,226	270.00	331,020.00	
23	1002(2)	20 mm Mild Steel dowels at 500 mm c/c	kg	250	270.00	67,500.00	
24	1006(1)	Random rubble masonry	m ³			-	
25	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²			-	
26	1008(1)	Formwork smooth finish	m ²	874	2,245.00	1,962,130.00	
27	1008(2)	Formwork rough finish	m ²	73	1,790.00	130,670.00	
28	705(1)	100mm crushed stone back fill material	m ³	48	5,830.00	279,840.00	
29	705(2)	37.5mm maximum size crushed stone - filter material	m ³	12	5,830.00	69,960.00	
30	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m	53	2,450.00	129,850.00	
31	707(10)	Supply,Lay and joint 900X900X1650mm Precast box units	nr				
Bill No. 6 Carried to Summary :						30,166,210.00	

BILL No.7 : INCIDENTAL WORKS						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
7.1		TOP SOILING				
1	801(1)	Furnish, Spread and compact top soil	m ²			
7.2		GRASSING				
2	802(1)	Grass sodding	m ²			
7.3		RIP RAP PROTECTION FOR EMBANKMENT SLOPES				
3	804(1)	Dumped Rip Rap	m ³			
7.4		PAVED SIDE WALKS				
4	806(1)	Precast concrete slab (450x450x50mm) paving	m ²	1,300	3910	5,083,000.00
5	806(2)	Asphalt concrete surfacing to 50mm compacted thickness	m ²			-
7.5		PRE CAST CONCRETE KERBS AND CHANNELS				
6	807(1)	Standard kerb	m	1,350	3320	4,482,000.00
7	807(2)	Flat /Edge Kerb	m			-
8	807(3)	Drop kerb	m	100	3320	332,000.00
9	807(4)	Bridge kerb	m			-
10	808(1)	Guard stones (Road way, Culverts, Causeway and Bridges)	nr			-
7.6		ROAD MARKING				
		Center line :				
11	810(1)	Continuous	m ²	2,700	2340	6,318,000.00
12	810(2)	Intermittent	m ²			-
		Edge line :				
13	810(3)	Continuous	m ²			-
14	810(4)	Pedestrian crossing	m ²	250	3160	790,000.00
15	810(5)	Road Studs	nr	1,800	2040	3,672,000.00
7.7		ROAD SIGNS				
		Reflective road sign :				
16	811(1)	Single pole, sign area up to 0.5m ²	nr	120	15830	1,899,600.00
17	811(2)	Double pole, sign area up to 2.0m ²	nr			-
18	811(3)	Chevron warning sign	nr			-
19	811(4)	Flag Type Sign	nr			-
7.8		CONCRETE KERB INLETS				
20	813(1)	Kerb inlet	nr			-
21	701(2)	Precast concrete Kerb Inlet slab (800x500x50mm thick)	m ²			-
7.9		KILOMETRE POSTS				
22	815(1)	Provide ,Install and paint new kilometre post	nr			-
23	815(2)	Reposition existing kilometer post	nr			-
24	815(3)	Paint existing kilometer post	nr			-
7.10		MAINTENANCE OF CARRIAGEWAY				
25	1101(1)	Filling pot-holes and patch repairs with Asphalt concrete				
		Cold mix (MC30), 20mm & less in depth	m ²			-
26	1101(2)	Filling pot-holes and patch repairs with Asphalt concrete				
		Cold mix (MC30), 75mm & less in depth	m ²	250	3660	915,000.00
27	1101(1)	Filling pot holes and patch repairs with Asphalt concrete				
		Cold mix (MC30), deeper than 75mm	m ²			-
28	401(1)	Filling pot holes and patch repairs with gravel	m ³			
Bill No. 7 Carried to Summary						23,491,600.00

BILL No.9 : SCHEDULE OF DAY WORKS RATES

9.2 : EQUIPMENT DAY WORKS

All Quantities are Provisional

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
1	Doubler cabin Pickup 4WD, diesel, above 2,000 cc	Hr			
2	Lorry, 3 to 5 tonnes	Hr			
3	Lorry, 5 to 10 tonnes	Hr			
4	Low-loader, 20 to 40 tonnes	Hr			
5	Site dumper, over 1.0 m ³	Hr			
6	Tipper truck, up to 5 tonnes	Hr			
7	Tipper truck, 5 to 10 tonnes	Hr			
8	Tipper truck, 10 to 15 tonnes	Hr			
9	Bowser, water, up to 6,000 litres with Spray Bar	Hr	20	1,300.00	26,000.00
10	Bowser, water, 6,000 to 10,000 litres with Spray Bar	Hr			
11	Bowser, bitumen, up to 10,000 litres	Hr			-
12	Bitumen distributor, up to 4,500 litres	Hr			-
13	Bitumen distributor, over 4,500 litres	Hr			-
14	Farm Tractor & Broom over 2m width	Hr			-
15	Farm tractor, with trailer minimum 3 tonne	Hr			-
16	Bulldozer, wheeled or Tracked up to 100 HP	Hr			-
17	Backhoe, wheeled, 50 - 100 HP	Hr	20	3,000.00	60,000.00
18	Backhoe, wheeled, 100 - 200 HP	Hr			-
19	Backhoe, tracked, 50 - 100 HP	Hr	20	3,000.00	60,000.00
20	Backhoe, tracked, 100 - 200 HP (2.0~2.3m ³)	Hr			-
21	Front-end Loader, Tracked or wheeled, 50 to 100 HP	Hr			-
22	Front-end Loader, wheeled, 100 to 200 HP (2.7~3.1m ³)	Hr			-
23	Motor grader, up to 100 HP	Hr			-
24	Motor grader, 120 to 140HP	Hr	20	4,000.00	80,000.00
25	Steel-wheeled roller, static, 8 to 10 tonnes	Hr			
26	Steel-wheeled roller, vibratory, 4 to 8 tonnes	Hr			
Equipment Day works Carried to forward :					200,000.00

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BILL No.9 : SCHEDULE OF DAY WORKS RATES					
9.2 : EQUIPMENT DAY WORKS					
All Quantities are Provisional					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	COST (Rs)
Equipment Day works Brought Forward :					200,000.00
27	Steel-wheeled roller, vibratory, 10 tonnes	Hr			
28	Pneumatic-tyred roller, 8 to 10 tonnes	Hr			
29	Tandem roller, 6 to 8 tonnes, Vibrating	Hr			
30	Hand roller, vibratory, 1/2 - 1 tonne	Hr			
31	Plate compactor, vibratory, over 90 kg	Hr			
32	Rammer, mechanical, over 60 kg	Hr			
33	Mobile Crane 25 tonnes	Hr	20	15,000.00	300,000.00
34	Asphalt mixing plant, over 60 tonnes/hr	Hr			-
35	Crushing and screening plant, over 80 tonnes/hr	Hr			-
36	Asphalt paver, wheeled or Tracked 60 tonnes/hr	Hr			-
37	Asphalt paver, wheeled or Tracked over 80 tonnes/hr	Hr			-
38	Chip spreader, self-propelled	Hr			-
39	Drilling rig, crawler, over 75 mm diameter bit	Hr			-
40	Rock drill, hand-held	Hr			-
41	Air compressor with hoses and tools, 250 to 600 cfm	Hr			-
42	Water pump with hoses, 50 to 100 mm outlet	Hr	10	950.00	9,500.00
43	Concrete mixer, 0.25 to 0.50 cu.m.	Hr			-
44	Concrete mixer, over 0.50 cu.m.	Hr	20	1,000.00	20,000.00
45	Generator, 10 to 50 KVA	Hr	100	5,000.00	500,000.00
46	Welding set, electric, 300 - 400 amp	Hr			-
47	Poker Vibrator, petrol driven	Hr	10	350.00	3,500.00
48	Ordinary Truck (Up to 3 Ton)				-
Equipment Day works Carried to Summary :					1,033,000.00

**THE PRICED BILL OF QUANTITIES AND
SCHEDULES**

PRP 1 / C1A - 2

Improvement and Rehabilitation of Priority Road Project
 Contract Package No - RDA/RNIP/PRP1/C1
 Bopale Junction - Kiriibbanara - Udamauara
 Section from 0.00km (Bopale Junction) to 8.50km (Udamauara)
 Length of the Section 8.50km

BILL OF QUANTITIES

SUMMARY		AMOUNT (Sri Lanka Rupees)
No.	Description	
1	Preliminary and General 1 A	
	Preliminary and General 1 B	
2	Site Clearing	3,136,800.00
3	Earthworks	93,120,320.00
4	Road Pavement	283,801,250.00
5	Drainage	23,124,400.00
6	Bridges and Culverts	27,891,200.00
7	Incidentals	28,526,850.00
8	Provisional Sums	27,365,000.00
9	Day works - Labour	200,250.00
	Day works -Equipment	1,087,000.00
	Day works - Materials	
Sub - Total 1 :		488,253,070.00

Provisional sum for Price Escalation 8%	39,060,245.60
Contingencies at 10% of Sub - Total 1	48,825,307.00

TENDER PRICE	576,138,622.60
Value added tax at 12% of the Tender Price	69,136,634.71

Bidder:	Signature	
	Name	
	Address	
Witness 1	Signature	
	Name	
	Address	
Witness 2	Signature	
	Name	
	Address	

[Handwritten Signature]

BILL No.2 : SITE CLEARING						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
CLEARING AND GRUBBING						
1	201(1)	Clearing and grubbing	m ²	39,210	80.00	3,136,800.00
<i>Remove trees :</i>						
2	201(2)	- Girth 600 to 1,200 mm	nr			
3	201(3)	- Girth 1,200 to 2,000 mm	nr			
4	201(4)	- Girth over 2000 mm	nr			
<i>Remove Branches :</i>						
5	201(5)	- Girth 300 to 600 mm	nr			
6	201(6)	- Girth 600 to 1,200 mm	nr			
7	201(7)	- Girth over 1,200 mm	nr			
<i>Remove Stumps :</i>						
8	201(8)	- Girth 600 to 1,200 mm	nr			
9	201(9)	- Girth 1,200 to 2,000 mm	nr			
10	201(10)	- Girth over 2000 mm	nr			
2.2 REMOVAL OF STRUCTURES & OBSTRUCTIONS						
11	202(1)	Dismantle & remove brick masonry structures (Provisional Quantity)	m ³			
12	202(2)	Dismantle & remove Random Rubble masonry structures (Provisional Quantity)	m ³			
13	202(3)	Dismantle & remove concrete structures (Provisional Quantity)	m ³			
14	202(4)	Dismantle & remove Dress stone masonry structures (Provisional Quantity)	m ³			
15	202(5)	Remove fencing (Provisional Quantity)	m			
Bill No.2 Carried to Summary						3,136,800.00

BILL No.2 : SITE CLEARING						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
CLEARING AND GRUBBING						
1	201(1)	Clearing and grubbing <i>Remove trees :</i>	m ²	39,210	80.00	3,136,800.00
2	201(2)	- Girth 600 to 1,200 mm	nr			
3	201(3)	- Girth 1,200 to 2,000 mm	nr			
4	201(4)	- Girth over 2000 mm	nr			
<i>Remove Branches :</i>						
5	201(5)	- Girth 300 to 600 mm	nr			
6	201(6)	- Girth 600 to 1,200 mm	nr			
7	201(7)	- Girth over 1,200 mm	nr			
<i>Remove Stumps :</i>						
8	201(8)	- Girth 600 to 1,200 mm	nr			
9	201(9)	- Girth 1,200 to 2,000 mm	nr			
10	201(10)	- Girth over 2000 mm	nr			
2.2 REMOVAL OF STRUCTURES & OBSTRUCTIONS						
11	202(1)	Dismantle & remove brick masonry structures (Provisional Quantity)	m ³			
12	202(2)	Dismantle & remove Random Rubble masonry structures (Provisional Quantity)	m ³			
13	202(3)	Dismantle & remove concrete structures (Provisional Quantity)	m ³			
14	202(4)	Dismantle & remove Dress stone masonry structures (Provisional Quantity)	m ³			
15	202(5)	Remove fencing (Provisional Quantity)	m			
Bill No.2 Carried to Summary						3,136,800.00

BILL No.4 : ROAD PAVEMENT						
ITEM	DESCRIPTION		UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
4.1		GRANULAR PAVEMENT				
1	401(1)	Sub base as compacted in position	m ³			
2	402(1)	Provide and place stabilized gravel base of 200mm thick	m ³			
3	402(3)	Cement	tonne			
4	405(1)	Dense graded aggregate base	m ³	12,900 ✓	7,400.00	95,460,000.00
4.2		RECONSTRUCTION OF EXISTING PAVEMENT				
5	408(1)	Scarify and remove existing bitumen layer	m ²			
4.3		SHOULDERS				
6	409(1)	Earthen shoulder as compacted in position	m ³	5150 ✓	1,600.00	8,240,000.00
7	402(1)	Stabilized gravel shoulder as compacted in position	m ³			
8	402(3)	Cement	tonne			
9	409(2)	Dense graded aggregate shoulders as compacted in position	m ³			
10	409(3)	Trench excavation for cross shoulder drain	m ³			
11	409(4)	Porous material for cross shoulder drain	m ³			
12	1710(1)	Geotextile for cross shoulder drain	m ²			
4.4		PRIME COAT AND TACK COAT				
13	501(1)	Bituminous Prime Coat using MC 30 at 1 litre per m ²	m ²	59,500 ✓	241.00	14,339,500.00
14	501(2)	Extra over for MC 30	ltr			
15	502(1)	Bituminous Tack Coat (Cationic Emulsion grade CRS1 at 0.3 litre/m ²)	m ²	29,750 ✓	128.00	3,808,000.00
16	502(2)	Extra over for CRS 1	ltr			
4.5		BITUMINOUS SURFACING				
17	505.1	Bitumen Grade (80-100)	ltr			
18	505.2	Kerosene/ diesel or other approved cutter	ltr			
19	505.3	20mm chips	m ³			
20	505.4	10mm chips	m ³			
21	506.1	Asphalt concrete in wearing course 50mm compacted thickness	m ²	65,747 ✓	2,250.00	147,930,750.00
22	506.2	Asphalt concrete in binder/ Correction course	MT	758 ✓	18,500.00	14,023,000.00
Bill No. 4 Carried to Summary						283,801,250.00

BILL No.5 : DRAINAGE						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
5.1		ROADSIDE AND LEAD AWAY SURFACE DRAINS				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³	64 ✓	23,300.00	1,491,200.00
2	1001(2)	Grade C 20	m ³	304 ✓	25,800.00	7,843,200.00
3	1006(1)	Random rubble masonry	m ³			
4	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²			
		<i>Precast concrete cover slab :</i>				
5	701(3)	600 X 500 X 100mm thick	m ²			
6	701(4)	800 X 600 X 125mm thick	m ²	320 ✓	12,000.00	3,840,000.00
7	1002(1)	Tor Steel reinforcement	kg	19,000 ✓	275.00	5,225,000.00
		<i>Form work</i>				
8	1008(1)	Formwork smooth finish	m ²	2,100 ✓	2,250.00	4,725,000.00
9	1008(2)	Formwork rough finish	m ²			
5.2		SUB-SURFACE DRAINS (UNDERDRAINS)				
10	702(1)	160mm dia. PVC Pipe (Type 600)	m			
11	702(2)	Graded aggregate maximum size 37.5mm	m ³			
12	1710(1)	Provide and place Geyotextile filler	m ²			
5.3		UNDER GROUND PIPE DRAIN				
13	704(1)	Inlet to line drain PVC pipe (Type 600) 100mm dia.	m			
5.4		CLEANING AND RESHAPING OF EARTH DRAINS				
14	1301(1)	Clear and reshape earth drains	m			
5.5		CLEANING AND REPAIRING OF BUILT-UP DRAINAGE SYSTEM				
15	1302(1)	Clean, desilt & repair built-up (lined) drains.	m			
5.6		CLEANING, DESILTING & REPAIRING OF CULVERTS				
16	1303(1)	Pipe Culverts	nr			
17	1303(2)	Other Culvert type	nr			
Bill No. 5 Carried to Summary						23,124,400.00

BILL No.6 : BRIDGES, CULVERTS AND OTHER STRUCTURES						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
6.1.		STRUCTURES				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³			
2	1001(3)	Grade C 25	m ³			
3	1001(4)	Grade C 30	m ³			
4	1002(1)	Tor Steel reinforcement	kg			
5	1006(1)	Random rubble masonry	m ³			
		<i>Formwork</i>				
6	1008(1)	Formwork smooth finish	m ²			
7	1008(2)	Formwork rough finish	m ²			
8	705(1)	100mm crushed stone back fill material	m ³			
9	705(2)	37.5mm maximum size crushed stone - filter material	m ³			
10	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m			
11	706(2)	Rainwater outlet/Duts 160mm dia PVC pipe (Type 600)	m			
12	814(1)	Hand Rails and uprights	m			
13	814(2)	End pilasters	nr			
6.2		CULVERTS				
14	707(1)	Laying and jointing of pipes, 600mm dia. (Single row)	m			
15	707(2)	Laying and jointing of pipes, 600mm dia. (Double row)	m			
16	707(3)	Laying and jointing of pipes, 900mm dia. (Single row)	m			
17	707(8)	Sand fill	m ³	189 ✓	5,900.00	1,115,100.00
18	1001(1)	Grade C 15 Concrete	m ³	47 ✓	23,300.00	1,095,100.00
19	1001(2)	Grade C 20 Concrete	m ³			
20	1001(3)	Grade C 25 Concrete	m ³	414 ✓	29,000.00	12,006,000.00
21	1001(4)	Grade C 30 Concrete	m ³			
22	1002(1)	Tor Steel reinforcement	kg	35,000 ✓	275.00	9,625,000.00
23	1002(2)	20 mm Mild Steel dowels at 500 mm c/c	kg			
24	1006(1)	Random rubble masonry	m ³			
25	1008(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²			
26	1008(1)	Formwork smooth finish	m ²	1,800 ✓	2,250.00	4,050,000.00
27	1008(2)	Formwork rough finish	m ²			
28	705(1)	100mm crushed stone back fill material	m ³			
29	705(2)	37.5mm maximum size crushed stone - filter material	m ³			
30	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m			
31	707(10)	Supply, Lay and joint 900X900X1650mm Precast box units	nr			
Bill No. 6 Carried to Summary :						27,891,200.00

BILL No.7 : INCIDENTAL WORKS						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
7.1		TOP SOILING				
1	801(1)	Furnish, Spread and compact top soil	m ²			
7.2		GRASSING				
2	802(1)	Grass sodding	m ²	16,365 ✓	670.00	10,964,550.00
7.3		RIP RAP PROTECTION FOR EMBANKMENT SLOPES				
3	804(1)	Dumped Rip Rap	m ³			
7.4		PAVED SIDE WALKS				
4	806(1)	Precast concrete slab (450x450x50mm) paving	m ²	480 ✓	3,920.00	1,881,600.00
5	806(2)	Asphalt concrete surfacing to 50mm compacted thickness	m ²			
7.5		PRE CAST CONCRETE KERBS AND CHANNELS				
6	807(1)	Standard kerb	m	500 ✓	3,325.00	1,662,500.00
7	807(2)	Flat /Edge Kerb	m			
8	807(3)	Drop kerb	m			
9	807(4)	Bridge kerb	m			
10	808(1)	Guard stones (Road way, Culverts, Causeway and Bridges)	nr	900 ✓	4,160.00	3,744,000.00
7.6		ROAD MARKING				
		<i>Center line :</i>				
11	810(1)	Continuous	m ²	800 ✓	2,340.00	1,872,000.00
12	810(2)	Intermittent	m ²			
		<i>Edge line :</i>				
13	810(3)	Continuous	m ²			
14	810(4)	Pedestrian crossing	m ²	246 ✓	3,200.00	787,200.00
15	810(5)	Road Studs	nr	1,500 ✓	2,050.00	3,075,000.00
7.7		ROAD SIGNS				
		<i>Reflective road sign :</i>				
16	811(1)	Single pole, sign area up to 0.5m ²	nr	190 ✓	16,000.00	3,040,000.00
17	811(2)	Double pole, sign area up to 2.0m ²	nr			
18	811(3)	Chevron warning sign	nr			
19	811(4)	Flag Type Sign	nr			
7.8		CONCRETE KERB INLETS				
20	813(1)	Kerb inlet	nr			
21	701(2)	Precast concrete Kerb Inlet slab (800x500x50mm thick)	m ²			
7.9		KILOMETRE POSTS				
22	815(1)	Provide ,Install and paint new kilometre post	nr			
23	815(2)	Reposition existing kilometer post	nr			
24	815(3)	Paint existing kilometer post	nr			
7.10		MAINTENANCE OF CARRIAGEWAY				
25	1101(1)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 20mm & less in depth	m ²			
26	1101(2)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 75mm & less in depth	m ²			
27	1101(1)	Filling pot holes and patch repairs with Asphalt concrete Cold mix (MC30), deeper than 75mm	m ²	500 ✓	3,000.00	1,500,000.00
28	401(1)	Filling pot holes and patch repairs with gravel	m ³			
Bill No. 7 Carried to Summary						28,526,850.00

BILL No.8 : PROVISIONAL SUMS						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
1	103(2)	Temporary by-passes for culverts, bridges and other structures.	PS			
2	111(1)	Allow for provision of standards/technical literature as required by the Engineer	PS			500,000.00
3	113.1(1)	Repairs to damages of existing services	PS			500,000.00
4	113.1(2)	Demolition / Rebuilding of property	PS			1,000,000.00
5	117.1(1)	Diversion, protection or removal of electrical services	PS			5,000,000.00
6	117.1(2)	Diversion, protection or removal of water services	PS			3,000,000.00
7	117.1(3)	Diversion, protection or removal of telecommunication services	PS			50,000.00
8	703(1)	Grade adjustment of existing manholes	PS			1,000,000.00
9	1103(1)	Investigations and clearance of Landmines and unexploded ordnance on roads and bridges where necessary	PS			10,000,000.00
10		Allow for Contractor's overheads and profit for above Provisional Sum items.	%	21,050,000	30%	6,315,000.00
Bill No. 8 Carried to Summary						27,365,000.00

BILL No.9 : SCHEDULE OF DAY WORKS RATES

9.2 : EQUIPMENT DAY WORKS

All Quantities are Provisional

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
1	Doubler cabin Pickup 4WD, diesel, above 2,000 cc	Hr			
2	Lorry, 3 to 5 tonnes	Hr			
3	Lorry, 5 to 10 tonnes	Hr			
4	Low-loader, 20 to 40 tonnes	Hr			
5	Site dumper, over 1.0 m ³	Hr			
6	Tipper truck, up to 5 tonnes	Hr			
7	Tipper truck, 5 to 10 tonnes	Hr			
8	Tipper truck, 10 to 15 tonnes	Hr			
9	Bowser, water, up to 6,000 litres with Spray Bar	Hr	20 ✓	1,300.00	26,000.00
10	Bowser, water, 6,000 to 10,000 litres with Spray Bar	Hr			
11	Bowser, bitumen, up to 10,000 litres	Hr			
12	Bitumen distributor, up to 4,500 litres	Hr			
13	Bitumen distributor, over 4,500 litres	Hr			
14	Farm Tractor & Broom over 2m width	Hr			
15	Farm tractor, with trailer minimum 3 tonne	Hr			
16	Bulldozer, wheeled or Tracked up to 100 HP	Hr			
17	Backhoe, wheeled, 50 - 100 HP	Hr	20 ✓	3,000.00	60,000.00
18	Backhoe, wheeled, 100 - 200 HP	Hr			
19	Backhoe, tracked, 50 - 100 HP	Hr	20 ✓	3,000.00	60,000.00
20	Backhoe, tracked, 100 - 200 HP (2.0-2.3m ³)	Hr			
21	Front-end Loader, Tracked or wheeled, 50 to 100 HP	Hr			
22	Front-end Loader, wheeled, 100 to 200 HP (2.7-3.1m ³)	Hr			
23	Motor grader, up to 100 HP	Hr			
24	Motor grader, 120 to 140HP	Hr	20 ✓	4,000.00	80,000.00
25	Steel-wheeled roller, static, 8 to 10 tonnes	Hr			
26	Steel-wheeled roller, vibratory, 4 to 8 tonnes	Hr			
Equipment Day works Carried to forward :					226,000.00

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BILL No.9 : SCHEDULE OF DAY WORKS RATES					
9.2 : EQUIPMENT DAY WORKS					
All Quantities are Provisional					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	COST (Rs)
Equipment Day works Brought Forward :					226,000.00
27	Steel-wheeled roller, vibratory, 10 tonnes	Hr			
28	Pneumatic-tyred roller, 8 to 10 tonnes	Hr			
29	Tandem roller, 6 to 8 tonnes, Vibrating	Hr			
30	Hand roller, vibratory, 1/2 - 1 tonne	Hr			
31	Plate compactor, vibratory, over 90 kg	Hr			
32	Rammer, mechanical, over 60 kg	Hr			
33	Mobile Crane 25 tonnes	Hr	20 ✓	15,000.00	300,000.00
34	Asphalt mixing plant, over 60 tonnes/hr	Hr			
35	Crushing and screening plant, over 80 tonnes/hr	Hr			
36	Asphalt paver, wheeled or Tracked 60 tonnes/hr	Hr			
37	Asphalt paver, wheeled or Tracked over 80 tonnes/hr	Hr			
38	Chip spreader, self-propelled	Hr			
39	Drilling rig, crawler, over 75 mm diameter bit	Hr			
40	Rock drill, hand-held	Hr			
41	Air compressor with hoses and tools, 250 to 600 cfm	Hr			
42	Water pump with hoses, 50 to 100 mm outlet	Hr	50 ✓	950.00	47,500.00
43	Concrete mixer, 0.25 to 0.50 cu.m.	Hr			
44	Concrete mixer, over 0.50 cu.m.	Hr	10 ✓	1,000.00	10,000.00
45	Generator, 10 to 50 KVA	Hr	100 ✓	5,000.00	500,000.00
46	Welding set, electric, 300 - 400 amp	Hr			
47	Poker Vibrator, petrol driven	Hr	10 ✓	350.00	3,500.00
Equipment Day works Carried to Summary :					1,087,000.00

**THE PRICED BILL OF QUANTITIES AND
SCHEDULES**

PRP 1 / C1A - 3

CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

Summary of Bill of Quantities

Bill No.100 Preliminaries & General	=	141,430,376.15
Bill No.200 Site Clearing	=	8,371,536.00
Bill No.300 Earth Works	=	259,878,822.40
Bill No.400 Sub bases, bases and Shuolders	=	281,703,850.00
Bill No 500 Surfacing	=	515,917,864.00
Bill No 700 Drainage Construction	=	109,704,560.00
Bill No 800 Incidental Construction	=	122,090,540.00
Bill No 1000 Bridges and other Structures	=	798,985,904.00
Day Works	=	<u>28,865,700.00</u>
Total B.O.Q Amount	=	2,266,949,152.55
Direct Cost	=	
Allow for Physical contingencies 10%	=	226,694,915.26
Allow for Price escalation 8%	=	181,355,932.20
Contract Amount	=	2,675,000,000.0
12% VAT	=	321,000,000.00
Total Estimated cost ((Rs.)	=	<u><u>2,996,000,000.01</u></u>

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

BILL NO 100 : PRELIMINARY AND GENERAL

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
			<u>Traffic Safety & Control</u>				
100/1	A.101	103 (1)	Allow for traffic control & safty measures during works with temporary sign boards, barricading, lighting & watching etc.	Mths	12.0	600,000.00	7,200,000.00
			<u>Mobilization and De-Mobilization of Contractor</u>				
100/2			Mobilization of Contractor's facilities and Plant / Equipment	L.S.	1.00	7,571,576.15	7,571,576.15
100/3			De-Mobilization of Contractor's facilities & Plant / Equipment	L.S.	1.00	1,500,000.00	1,500,000.00
			<u>Setting out , Cross section Survey and Drawings</u>				
100/4	A.102	117(1)	Cross section Detailing of full Pavement Width	K.m	8.0	800,000.00	6,400,000.00
			<u>Project Sign Boards</u>				
100/5	SSR- 01	118(1)	Making & erecting project name board 1.8	Nos	2.00	78,000.00	156,000.00
100/6			Provide and maintain Project Plaques	Nos	2.00	400,000.00	800,000.00
			<u>Maintenance of Road during construction</u>				
100/7	SSR- 02		Allow for maintenance of existing road, free of pot holes including right of way as directed by the Engineer	km.mth	96.0	215,300.00	20,668,800.00
			<u>Facilities for the Engineer and Staff</u>				
100/8	A.103		Provide Office for Engineer	No.	1.0	2,500,000.00	2,500,000.00
100/9	A.104		Provide Furniture for Engineer's office	L.S.		1,800,000.00	1,800,000.00
100/10			Provide Accommodation	No.	1.0	2,000,000.00	2,000,000.00
100/11			Provide Furniture, Fittings, and equipment	L.S.		1,100,000.00	1,100,000.00
100/12			Provide Laboratory Equipment	L.S.		11,400,000.00	11,400,000.00
100/13	A.108		Provide Stationary for the Engineer (Provisional)	P.S.		289,000.00	289,000.00
100/14	A.109		Provide and Maintain Survey Equipment	L.S.		4,800,000.00	4,800,000.00
100/15	A.110		Maintenance of the Engineer's office,	Month	12.0	400,000.00	4,800,000.00
100/16			Survey Assistants	p. wk	96.0	15,000.00	1,440,000.00
100/17			Laboratory assistant (Classified skilled)	p. wk	96.0	15,000.00	1,440,000.00
100/18			Administrator / Clerk	p. wk	96.0	9,000.00	864,000.00
100/19			Office assistant	p. wk	96.0	9,000.00	864,000.00
100/20			Draughtsman	p. wk	96.0	18,000.00	1,728,000.00

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

BILL NO 100 : PRELIMINARY AND GENERAL

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
100/21			Provide & maintain new vehicle Type 1 (Car)	V.month	12.0	650,000.00	7,800,000.00
100/22			Provide & maintain initially new vehicle Type 2 (Cab 01 No)	V.month	12.0	650,000.00	7,800,000.00
Facilities for the Employer and Staff							
100/23	A.103		Provide Office for Employer	No.	1.0	1,500,000.00	1,500,000.00
100/24	A.104		Provide Furniture for Employer's office	L.S.		1,000,000.00	1,000,000.00
100/25			Provide Accommodation	No.	1.0	1,500,000.00	1,500,000.00
100/26			Provide Furniture, Fittings, and equipment for Accommodation	L.S.		1,000,000.00	1,000,000.00
100/27	A.108		Provide Stationary for the Employer (Provisional)	P.S.		289,000.00	289,000.00
100/28	A.110		Maintenance of the Employer's office & Accommodation including Furniture, Fittings & Equipment etc.	Month	12.0	250,000.00	3,000,000.00
100/29			Administrator / Clerk	p. wk	96.00	10,000.00	960,000.00
100/30			Office assistant	p. wk	96.0	10,000.00	960,000.00
100/31			Provide & maintain new vehicle Type 1 (Car)	V.month	12.0	650,000.00	7,800,000.00
100/32			Provide Office Equipments for the Employer (Provisional)	P.S.	1.0	1,000,000.00	1,000,000.00
00/33			Detailed Design	P.S.	1.0	8,000,000.00	8,000,000.00
Services							
100/34			Allow for Shifting of Services & Utilities.	P.S.	1.0	500,000.00	500,000.00
Contract Insurances and Securities							
100/35	A.119	119(1)	Provide all necessary Insurance	L.S.	1.00	5,000,000.00	5,000,000.00
100/36	A.120	119(2)	Provide all necessary bonds and securities	L.S.	1.00	14,000,000.00	14,000,000.00
PRELIMINARY AND GENERAL - TOTAL CARRIED TO GRAND SUMMARY							141,430,376.15

BILL NO : 200

CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION
SITE CLEARING

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.		Rate/(Rs.)	Amount/(Rs.)
201			<u>Clearing and Grubbing</u>					
201/1	RA-01	201(1)	Clearing and Grubbing inclusive of backfilling holes and trenches caused by removal of stumps.	Sq.m.	124,800.0	124,800.0	55.00	6,864,000.00
201/2	SSR-03	201(2)	Removal of trees, girth greater than or equal to 300 and less than 600 mm	No.	36.0	36.0	876.00	31,536.00
201/3	SSR-04	201(3)	Removal of trees, girth greater than or equal to 600 and less than 1200 mm	No.	16.0	16.0	2,640.00	42,240.00
201/4	SSR-05	201(4)	Removal of trees, girth greater than or equal to 1200 and less than 2000 mm	No.	8.0	8.0	8,760.00	70,080.00
201/5	SSR-06	201(5)	Removal of trees, girth greater than 2000 mm.	No.	3.0	3.0	13,200.00	39,600.00
201/6	SSR-07	201(10)	Removal of overhanging branches of girth exceeding 300 (Provisional)	No.	10.0	10.0	8,760.00	87,600.00
202			<u>Removal of structures and obstruction</u>					
202/1		202(1)	Dismantle the Existing brick masonry structures & culvert pipes	Cu.m.	48.0	48.0	4,760.00	228,480.00
202/2		202(2)	Dismantle the Concrete structures	Cu.m.	112.0	112.0	9,000.00	1,008,000.00
SITE CLEARING - TOTAL CARRIED TO GRAND SUMMARY								8,371,536.00

CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

EARTH WORKS

BILL NO : 300

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
301			<u>Roadway Excavation</u>				
301/1	RA.02	301(4)	Roadway Excavation in unclassified soil, excavated material is suitable for construction works	Cu.m.	16,128.00	732.00	11,805,696.00
301/2	RA.03	301(11)	Roadway excavation in classified soil, excavated material is unsuitable for construction works.	Cu.m.	10,080.00	1,250.00	12,600,000.00
301/3	RA.04	301(4a)	Roadway Excavation in Classified Soft Rock	Cu.m.	3,225.60	2,400.00	7,741,440.00
301/4	RA.05	301(10)	Roadway Excavation in classified hard rock	Cu.m.	806.40	4,600.00	3,709,440.00
301/5	RA.04	301 (13)	Roadway Pavement Excavation.	Cu.m.	1,612.80	1,320.00	2,128,896.00
301/6	RA.06	301(14)	Roadway excavation in marshy materials	Cu.m.	2,822.40	1,440.00	4,064,256.00
301/7	EW1-009	301 (16)	Preparation of subgrade	Sq.m.	55,500.00	144.00	7,992,000.00
							0.00
			<u>Channel Excavation</u>				
301/8	RA.07	301A(1)	Drain excavation in unclassified soil, excavated material is suitable for construction works.	Cu.m.	2,995.20	1,188.00	3,558,297.60
301/9	RA.08	301A(4)	Drain excavation in classified hard rock.	Cu.m.	1,123.20	4,440.00	4,987,008.00
301/10	RA.09	301A(5)	Drain excavation in classified soil, excavated material is unsuitable for construction works.	Cu.m.	1,497.60	708.00	1,060,300.80
							0.00
304			<u>Embankment construction</u>				
304/1	RA.16	304(1)	Embankment construction using type 1 material from roadway excavation, and compacted in position.	Cu.m.	16,128.00	1,800.00	29,030,400.00
304/2	RA.17	304(2)a	Embankment construction using borrow material (type 1) and compacted in position	Cu.m.	34,258.56	1,920.00	65,776,435.20
304/3	RA.17	304(2)b	Embankment construction using borrow material (type II) and compacted in position	Cu.m.	51,367.84	1,920.00	98,664,652.80
304/4	EW-010	304(3)	Trimming leveling and compaction of original ground	Sq.m.	84,500.00	80.00	6,760,000.00
EARTHWORKS - TOTAL CARRIED TO SUMMARY							259,878,822.40

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION
SUB - BASES, BASES AND SHOULDERS

BILL NO : 400

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
401			<u>Sub base</u>				
401/1	RA.19	401(1a)	Provide and place Sub base Type 1	Cu.m.	28,765.00	2,350.00	67,597,750.00
401/2	RA.19a	401(1b)	Provide and place Sub base Type 11 as capping layer	Cu.m.	11,506.00	2,350.00	27,039,100.00
							0.00
405			<u>Dense Graded Aggregate Base</u>				
405/1	RA.20	405(1)	Provide and place 37.5 (40) mm dense graded aggregate base (Compacted)	Cu.m.	20,920.00	8,300.00	173,636,000.00
							0.00
408			<u>Reconstruction of Existing Pavement</u>				
408/1	SSR-11	408(2)	Scarify and remove existing asphalt layer.	Sq.m.	18,000.00	220.00	3,960,000.00
							0.00
409			<u>Shoulders</u>				
409/1	RA.19b	409(1)	Provide and place Soil Shoulder Material	Cu.m.	4,510.00	2,100.00	9,471,000.00
SUB - BASES, BASES AND SHOULDERS TOTAL CARRIED TO MAIN SUMMARY							281,703,850.00

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION
SURFACINGS

BILL NO : 500

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
501	RA.36	501(5)	<u>Prime Coat</u> Prime coat with emulsion CSS-1 using 1 ltr/sq.m including blinding with sand at the rate of 250m ² /1m ³ of sand	Sq.m.	112,420.00	252.00	28,329,840.00
501/1							0.00
502	RA.37	502(2)	<u>Tack Coat</u> Applying tack coat to the surface using emulsion CSS1 at a rate of 0.5 L/Sq.m.	Sq.m.	224,840.00	110.00	24,732,400.00
502/1							0.00
506	RA.39	506(2)	<u>Asphalt Concrete Surfacing</u> Asphalt concrete surfacing Binder Course	M.T.	10,567.48	21,200.00	224,030,576.00
506/1							
506/2	RA.38	506(2)	Asphalt concrete surfacing Wearing Course	M.T.	10,567.48	22,600.00	238,825,048.00
SURFACINGS TOTAL CARRIED TO MAIN SUMMARY							515,917,864.00

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X

CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION
DRAINAGE CONSTRUCTION

BILL NO : 700

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
701			<u>Roadside and Lead Away Surface Drains</u>				
701/1	SSR-18	701 (2)a	Lining of drains with cast insitu class A or B grade 25/20 concrete	Cu.m.	1,215.00	31,200.00	37,908,000.00
701/2	SSR-21	701 (6)a	Precast reinforced concrete cover slab 75 mm thick with class A or B Grade '25/20 concrete (For light vehicular access)	Sq.m.	68.00	5,830.00	396,440.00
701/3	SSR-21	701 (6)b	Precast reinforced concrete cover slab 100 mm thick with class A or B Grade '25/20 concrete (For light vehicular access)	Sq.m.	135.00	6,120.00	826,200.00
701/4	SSR-22	701 (6)c	Precast reinforced concrete cover slab 125 mm thick with class A or B Grade '25/20 concrete (For heavy vehicular access)	Sq.m.	101.00	10,920.00	1,102,920.00
1001/1	RA.32	1001(2)	Grade 15 with 40 mm aggregate size	Cu.m.	270.00	20,800.00	5,616,000.00
1002/1	STI-054	1002(1)	Steel Reinforcement (Tor Steel)	tonne(t)	94.50	230,000.00	21,735,000.00
1008/1	ST1-061	1008(1)	Formwork, smooth finish	Sq.m.	17,550.00	2,400.00	42,120,000.00
DRAINAGE CONSTRUCTIONS TOTAL CARRIED TO MAIN SUMMARY							109,704,560.00

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

BILL NO : 800

INCIDENTAL CONSTRUCTIONS

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
801 801/1	RA.25	801(1)	<u>Top soiling</u> Top soil furnished, transported, spread, levelled and tamped.	Sq.m.	15,040.00	800.00	12,032,000.00 0.00
802 802/1	SSR-30	802(4)	<u>Grassing</u> Solid Sodding	Sq.m.	22,560.00	723.00	16,310,880.00 0.00
806 806/1	RA.19	806/1	<u>Paved Side Walks</u> Gravelly Soil Base Layer	Cu.m.	2,167.50	2,280.00	4,941,900.00
806/2		806/3	Bed course material using sand 40mm thick	Sq.m.	22,160.00	756.00	16,752,960.00
806/4	RA.35	806/4	Supply and Lay 450 x 450 x 50 mm Pre cast concrete slabs on foot walk	Sq.m.	5,000.00	3,880.00	19,400,000.00 0.00
807 807/1	RA.34	807/1	<u>Kerbs</u> Supply and Lay Standard road kerbs.	L.m.	9,000.00	3,240.00	29,160,000.00
807/5	ST1-117		Construction Kerb inlet type K1/T1	Nos.	680.00	5,160.00	3,508,800.00 0.00
808 808/1	RA.26	808(5)	<u>Guard Stones</u> Guard Stones (concrete)	No.	200.00	4,140.00	828,000.00 0.00
810 810/1	RA.27	810(1)	<u>Road Marking Paint</u> Road Markings in reflectorized thermoplastic paint	Sq.m.	5,840.00	2,840.00	16,585,600.00
810/2	RA.28	810(3)	Installation of reflecting Road studs	No.	140.00	3,000.00	420,000.00 0.00
811 811/1	SSR-32	811(1)	<u>Road Signs</u> Provide and erect road signs	No.	128.00	16,800.00	2,150,400.00
INCIDENTAL CONSTRUCTIONS TOTAL CARRIED TO MAIN SUMMARY							122,090,540.00

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CONSTRUCTION OF INTERCHANGE AT SIRIBOPURA JUNCTION

BILL NO :1000

BRIDGES AND OTHER STRUCTURES - GENERAL

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
1001			Construction of Hume Pipe Culvert.		Refer Sub BOQ 1000-1		63,881,296.00
1003			Construction of Concrete Ramp Wall.		Refer Sub BOQ 1000-3		116,222,280.00
1004			Construction of RRM Retaining Wall.		Refer Sub BOQ 1000-4		78,025,418.00
1005			Construction of Gabion wall		Refer Sub BOQ 1000-5		9,739,223.46
1000-A			Construction of Flyover		Refer Sub BOQ 1000-A		798,985,904.00
BRIDGES AND OTHER STRUCTURES (ROAD STRUCTURES GENERAL)							1,066,854,121.46
TOTAL CARRIED FORWARD							

267,868,217.40

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CONSTRUCTION OF INTERCHANGE AT SIRIBOPURA JUNCTION

SUB BILL NO :1000-1 CONSTRUCTION OF HUME PIPE CULVERT

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
302			<u>Excavation and Backfill of structures</u>				
302/1	RA.12	302(1)	Excavation in unclassified suitable material and backfill of structures	Cu.m.	336.00	2,520.00	846,720.00
302/2	RA.13	302(5)	Excavation in unsuitable material and Backfill to structures with approved material	Cu.m.	134.40	3,960.00	532,224.00
302/3	RA.14	302(4)	Excavation in hard rock and Backfill to structures with approved material	Cu.m.	89.60	7,848.00	703,180.80
302/4	RA.15	302(5)	Excavation in marshy material and backfill of structures with approved material	Cu.m.	44.80	6,804.00	304,819.20
302/5	SSR-08	302(8)	Backfill with granular material	Cu.m.	44.80	7,080.00	317,184.00
302/6	RA.19	304 (2)	Hard earth filling using Sub base Type 1 material.	Cu.m.	89.60	2,256.00	202,137.60
1001			<u>Concrete for Structures</u>				0.00
		1001(1)	Concrete Class A				0.00
1001/1	RA.29		1) Grade 25 with 20 mm aggregate size	Cu.m.	0.00		0.00
1001/2	RA.30		2) Grade 20 with 20 mm aggregate size	Cu.m.	268.80	23,600.00	6,343,680.00
1001/3	RA.31		3) Grade 20 with 40 mm aggregate size	Cu.m.	0.00		0.00
		1001(2)	Concrete Class B				0.00
1001/4	RA.32		1) Grade 15 with 40 mm aggregate size	Cu.m.	1154.40	20,800.00	24,011,520.00
1002			<u>Steel Reinforcement for Concrete Structures</u>				0.00
1002/1	STI-054	1002(1)	1) Steel Reinforcement (Tor Steel)	tonne(t)	6.40	230,000.00	1,471,411.20
1002/5	STI-055	1002(1)	2) Steel Reinforcement (Mild Steel)	tonne(t)	1.28	230,000.00	294,400.00
1006			<u>Random Rubble Masonry</u>				0.00
1006/1	RA.33	1006(1)	Mortared R. R. Masonry	Cu.m.	55.20	13,400.00	739,680.00
1006/2	ST1-032	1006(3)	Plastering	Sq.m.	57.60	2,520.00	145,152.00
1006/3	P1-002		Rubble Paving 150mm Thick	Sq.m.	38.40	15,800.00	606,720.00
1008			<u>Formwork for Structures</u>				0.00
1008/1	ST1-061	1008(1)	Formwork, smooth finish	Sq.m.	1433.60	3,192.00	4,576,051.20
1008/2	ST1-064	1008(2)	Formwork, rough finish	Sq.m.	424.96	3,000.00	1,274,880.00
1012			Stainless Steel Dowels				0.00

1012/1	BO-433	1012(1)	Stainless Steel Dowels (Dia. 20mm , Length 1.2m)	Nos.	8.00	3,600.00	28,800.00
1303			<u>Painting of Culverts</u>				0.00
1303/3	MS1-043	1303(3)	Painting of Culverts (Emulsion, One coat)	Sq.m.	128.00	1,772.00	226,816.00
705			<u>Drainage Backfill behind Earth Retaining Structures</u>				0.00
705/1	RA.22	705(1)	Aggregate Backfill	Cu.m.	484.16	10,476.00	5,072,060.16
705/2	RA.23	705(2)	Filter medium	Cu.m.	57.06	11,880.00	677,825.28
705/3	RA.41	705(3)	Clay puddle	Sq.m.	25.92	1,668.00	43,234.56
706			<u>Weep holes for Earth Retaining Structures</u>				0.00
706/1	RA.42	706(1)	Weep holes using 100mm dia., PVC pipes	L.m.	467.20	3,600.00	1,681,920.00
707			<u>Hume Pipe.</u>				0.00
707/5	RA.24.a		Reinforced concrete pipe Culvert 610. mm Dia.	L.m.	176.00	57,000.00	10,032,000.00
707/6	RA.24.b		Reinforced concrete pipe Culvert 915. mm Dia.	L.m.	22.00	95,000.00	2,090,000.00
707/7	RA.24.c		Reinforced concrete pipe Culvert 1220. mm Dia.	L.m.	0.00		0.00
808			<u>Guard Stones</u>				0.00
808/1	RF1-008+RF1009	808(5)	Casting and Fixing standard type guard stone in 225 mm thick cement concrete 1:3:6 (37.5 mm)	Nos.	144.00	11,520.00	1,658,880.00
CONSTRUCTION OF HUME PIPE CULVERT TOTAL CARRIED							63,881,296.00

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

SUB BILL NO :1000-3

CONSTRUCTION OF CONCRETE RETAINING/TOE WALL.

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
302			Excavation and Backfill of structures				
302/1	RA.12	302(1)	Excavation in unclassified suitable material and backfill of structures	Cu.m.	600.00	2,520.00	1,512,000.00
302/2	RA.13	302(5)	Excavation in unsuitable material and Backfill to structures with approved material	Cu.m.	850.00	3,960.00	3,366,000.00
302/3	RA.14	302(4)	Excavation in hard rock and Backfill to structures with approved material	Cu.m.	210.00	7,848.00	1,648,080.00
302/4	RA.15	302(5)	Excavation in marshy material and backfill of structures with approved material	Cu.m.	150.00	6,804.00	1,020,600.00
302/5	SSR-08	302(8)	Backfill with granular material	Cu.m.	112.00	7,080.00	792,960.00
302/6	RA.19	304 (2)	Hard earth filling using Sub base Type 1 material.	Cu.m.	260.00	2,256.00	586,560.00
1001			Concrete for Structures				0.00
		1001(1)	Concrete Class A				0.00
1001/2	RA.30		2) Grade 25 with 20 mm aggregate size	Cu.m.	1792.00	23,600.00	42,291,200.00
1001/3	RA.31		3) Grade 20 with 40 mm aggregate size	Cu.m.		22,500.00	0.00
		1001(2)	Concrete Class B				0.00
1001/4	RA.32		1) Grade 15 with 40 mm aggregate size	Cu.m.	107.00	20,800.00	2,225,600.00
1002			Steel Reinforcement for Concrete Structures				0.00
1002/1	STI-055	1002(1)	1) Steel Reinforcement (Tor Steel)	tonne(t)	160.00	230,000.00	36,800,000.00
1008			Formwork for Structures				0.00
1008/1	ST1-061	1008(1)	Formwork, smooth finish	Sq.m.	4520.00	3,192.00	14,427,840.00
1008/2	ST1-064	1008(2)	Formwork, rough finish	Sq.m.	560.00	3,000.00	1,680,000.00
1012			Stainless Steel Dowels				0.00
1012/1	BO-433	1012(1)	Stainless Steel Dowels (Dia. 20mm , Length 1.2m)	Nos.		3,600.00	0.00
705			Drainage Backfill behind Earth Retaining Structures				0.00
705/1	RA.22	705(1)	Aggregate Backfill	Cu.m.	460.00	10,476.00	4,818,960.00
705/2	RA.23	705(2)	Filter medium	Cu.m.	248.00	11,880.00	2,946,240.00
705/3	RA.41	705(3)	Clay puddle	Sq.m.	140.00	1,688.00	233,520.00
706			Weep holes for Earth Retaining Structures				0.00
706/1	RA.42	706(1)	Weep holes using 100mm dia., PVC pipes	L.m.	610.00	2,400.00	1,464,000.00
808			Guard Stones				0.00
808/1	RF1-008+RF1-009	808(5)	Casting and Fixing standard type guard stone in 225 mm thick cement concrete 1:3:6 (37.5 mm)	Nos.	52.00	7,860.00	408,720.00
CONSTRUCTION OF CONCRETE RETAINING/TOE WALL TOTAL CARRIED FORWARD TO BILL NO. 1000							116,222,280.00

CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

SUB BILL NO :1000-4

CONSTRUCTION OF RRM RETAINING/TOE WALL

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
302			<u>Excavation and Backfill of structures</u>				
302/1	RA.12	302(1)	Excavation in unclassified suitable material and backfill of structures	Cu.m.	60	1,176.00	70,560.00
302/2	RA.13	302(5)	Excavation in unsuitable material and Backfill to structures with approved material	Cu.m.	828	2,700.00	2,235,600.00
302/3	RA.14	302(4)	Excavation in hard rock and Backfill to structures with approved material	Cu.m.	119	3,000.00	357,000.00
302/4	RA.15	302(5)	Excavation in marshy material and backfill of structures with approved material	Cu.m.	178	2,700.00	480,600.00
302/5	SSR-08	302(8)	Backfill with granular material	Cu.m.	546	4,800.00	2,620,800.00
302/6	RA.19	304 (2)	Hard earth filling using Sub base Type 1 material.	Cu.m.	633	1,548.00	979,884.00
1001			<u>Concrete for Structures</u>				
1001/2	RA.30	1001(1)	Concrete Class A				
			2) Grade 20 with 20 mm aggregate size	Cu.m.	504	23,600.00	11,894,400.00
1001/4	RA.32	1001(2)	Concrete Class B				
			1) Grade 15 with 40 mm aggregate size	Cu.m.	126	20,800.00	2,620,800.00
1002			<u>Structures</u>				
1002/1	STI-055	1002(1)	1) Steel Reinforcement (Tor Steel)	tonne(t)	12	230,000.00	2,760,000.00
1006			<u>Random Rubble Masonry</u>				
1006/1	RA.33	1006(1)	Mortared R. R. Masonry	Cu.m.	1,783	13,400.00	23,892,200.00
1006/2	ST1-032	1006(3)	Plastering	Sq.m.	804	2,520.00	2,026,080.00
1008			<u>Formwork for Structures</u>				0.00
1008/2	ST1-064	1008(2)	Formwork, rough finish	Sq.m.	1,368	4,440.00	6,073,920.00
705			<u>Drainage Backfill behind Earth Retaining Structures</u>				
705/1	RA.22	705(1)	Aggregate Backfill	Cu.m.	571	15,240.00	8,702,040.00
705/2	RA.23	705(2)	Filter medium	Cu.m.	100	17,400.00	1,740,000.00
705/3	RA.41	705(3)	Clay puddle	Sq.m.	801	2,430.00	1,946,430.00
706			<u>Weep holes for Earth Retaining Structures</u>				
706/1	RA.42	706(1)	Weep holes using 100mm dia., PVC pipes	L.m.	408	3,600.00	1,468,800.00
808			<u>Guard Stones</u>				
808/1	RF1-008+RF1-009	808(5)	Castling and Fixing standard type guard stone in 225 mm thick cement concrete 1:3:6 (37.5 mm)	Nos.	679	11,520.00	7,822,080.00
1012			<u>Stainless Steel Dowels</u>				
1012/1	BO-433	1012(1)	Stainless Steel Dowels (Dia. 20mm , Length 1.2m)	Nos.	66	5,064.00	334,224.00
CONSTRUCTION OF RRM RETAINING/TOE WALL TOTAL CARRIED							78,025,418.00

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CONSTRUCTION OF INTERCHANGE AT SIRIBOPURA JUNCTION

SUB BILL NO :1000-5

CONSTRUCTION OF GABION WALL

Item No.	HSR/ Rate code	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
302			<u>Excavation and Backfill of structures</u>				
302/1	RA.12	302(1)	Excavation in unclassified suitable material and backfill of structures	Cu.m.	4.63	2,520.00	11,655.00
302/2	RA.13	302(5)	Excavation in unsuitable material and Backfill to structures with approved material	Cu.m.	64.75	3,960.00	256,410.00
302/3	RA.14	302(4)	Excavation in hard rock and Backfill to structures with approved material	Cu.m.	9.25	7,848.00	72,594.00
302/4	RA.15	302(5)	Excavation in marshy material and backfill of structures with approved material	Cu.m.	13.88	6,804.00	94,405.50
302/5	SSR-08	302(8)	Backfill with granular material	Cu.m.	14.80	7,080.00	104,784.00
302/6	RA.19	304 (2)	Hard earth filling using Sub base Type 1 material.	Cu.m.	303.40	2,256.00	684,470.40
1001			<u>Concrete for Structures</u>				
		1001(1)	Concrete Class A				
1001/2	RA.30		2) Grade 20 with 20 mm aggregate size	Cu.m.	31.82	23,600.00	750,952.00
		1001(2)	Concrete Class B				
1001/4	RA.32		1) Grade 15 with 40 mm aggregate size	Cu.m.	5.55	20,800.00	115,440.00
1002			<u>Steel Reinforcement for Concrete Structures</u>				
1002/1	STI-055	1002(1)	1) Steel Reinforcement (Tor Steel)	tonne (t)	0.78	230,000.00	178,710.00
805			<u>Gabions</u>				
805/1	SSR.31	805/1	Gabions	Cu.m.	296.0	23,550.00	6,970,800.00
805/2	RA.18	805/2	Filter Fabric	Sq.m.	230.9	1,182.00	272,900.16
805/3		805/1	Compacted Ruble Base	Cu.m.	31.8	6,820.00	217,012.40
808			<u>Guard Stones</u>				
808/1	RF1-008+RF1-009	808(5)	Casting and Fixing standard type guard stone in 225 mm thick cement concrete 1:3:6 (37.5 mm)	Nos.	2.00	4,545.00	9,090.00
CONSTRUCTION OF GABION WALL TOTAL CARRIED FORWARD TO BILL NO. 1000							9,739,223.46

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION

SUB BILL NO :1000-A CONSTRUCTION OF FLYOVER (LENGTH 150M)

Item No.	SSCM No / Pay Item No	Description	Unit	Qty.	Rate/(Rs.)	Amount/(Rs.)
302		EXCAVATION AND BACKFILL FOR STRUCTURES				
302/1	302 (5)	Excavation and backfill for structures (General)	Cu.m.	2,400	3,720.00	8,928,000.00
302/2	302 (5)	Excavation and backfill for structures (sheet pile)	Cu.m.	930	11,040.00	10,267,200.00
302/3	302(8)	Backfilling with porous backfill material - Type B for structures.	Cu.m.	690	10,920.00	7,534,800.00
302/4	302(7)	Backfilling with crushed stone (50-100mm) under long span bridges	Cu.m.	1,140	15,240.00	17,373,600.00
1001		CONCRETE				0.00
1001/1	1001(3)	Grade 15 Concrete	Cu.m.	53	20,000.00	1,060,000.00
1001/2	1001(1)	Grade 30 Concrete	Cu.m.	1,997	24,300.00	48,527,100.00
1001/4	1001(1)	Grade 40 Concrete	Cu.m.	1,150	32,900.00	37,835,000.00
						0.00
1008		FORM WORK				0.00
1008/1	1008 (1)	Class F1 Form work - Pile Caps	sq.m.	469	3,000.00	1,405,800.00
1008/2	1008 (1)	Class F4 Form work - Parapets	sq.m.	90	3,240.00	291,600.00
1008/3	1008 (1)	Class F4 Form work - Piers/Abutments	sq.m.	2,778	3,240.00	9,000,720.00
1008/4	1008 (1)	Class F1 Form work - Deck , Crossbeam,	sq.m.	3,664	3,240.00	11,871,684.00
						0.00
1002		REINFORCEMENT				0.00
1002/1	1002(1)	High Yield steel bars Grade 460	tonne(t)	354	291,600.00	103,226,400.00
						0.00
1003		PRE CAST CONCRETE UNITS - GIRDERS				0.00
1003/1	1003 (1)	PC - post tension girder - 30.0m long	nr	60	5,808,000.00	348,480,000.00
1003/2	1003 (2)	PC Girder Erection - 30.000m long	nr	60	1,392,000.00	83,520,000.00
						0.00
		TESTING GIRDER				0.00
		Testing of PC post - tensioned girder - 30.0 m long.	nr	2	2,232,000.00	4,464,000.00
						0.00
1009		STRUCTURES - MISCELLANEOUS				0.00
1009/1	1009(1)	Expansion joint - for foot ways	m	35	26,400.00	924,000.00
1009/2	1009(1)	Expansion joint - for main bridges (reinforced elastomeric)	m	150	78,000.00	11,700,000.00
						0.00
1010		ELASTROMERIC BEARING PAD FOR				0.00
1010/1	1010 (1)	PC - post tension girder - 30.0m long	nr	120	57,600.00	6,912,000.00
1020		MISCELLANEOUS				0.00
1020/1	1020(1)	PVC - Duct 225mm dia (t=13.0mm min)	m	400	4,800.00	1,920,000.00
1020/2	1020(1)	PVC - Duct 110mm dia (t=6.4mm min)	m	400	3,960.00	1,584,000.00
1020/3	1020(1)	PVC - Duct 75mm dia (t=4.4mm min)	m			0.00
1020/4	1020(1)	Rain Water inlet	nr	8,000	9,720.00	77,760,000.00
		Name Plate	nr	2	2,200,000.00	4,400,000.00
CONSTRUCTION OF FLYOVER(LENGTH 300M) TOTAL CARRIED TO MAIN SUMMARY						798,985,904.00

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CONSTRUCTION OF FLYOVER AT SIRIBOPURA JUNCTION
DAY WORKS, LABOUR & EQUIPMENT
ALL QUANTITIES ARE PROVISIONAL

1. LABOUR

Grade of staff	Unit	Qty	Rate	Amount
1. Unskilled labour	day	225.00	4,800.00	1,080,000.00
2. Semi skilled labour	day	225.00	5,760.00	1,296,000.00
3. Skilled labour	day	225.00	6,960.00	1,566,000.00
4. Operator	day	225.00	7,680.00	1,728,000.00
5. Driver (Heavy Duty Vehicles)	Hrs	450.00	900.00	405,000.00
6. Driver (Light Duty Vehicles)	Hrs	450.00	870.00	391,500.00
Total				6,466,500.00

2. EQUIPMENT

The rates are exclusive of Driver , Operator or Attendent , but inclusive of Fuel & Consumable stores.

Description	Capacity	Unit	Qty	Rate	Amount
1. Backhoe loader	2 WD, 0.15 scoop capacity	hrs	175.00	4,200.00	735,000.00
2. Farm Tractor	With 3T trailer	hrs	175.00	600.00	105,000.00
3. Farm Tractor	With Broom	hrs	175.00	3,000.00	525,000.00
4. Water Bowser	6000 ltrs	hrs	175.00	1,800.00	315,000.00
5. Motor Greader	120-140 HP	hrs	175.00	4,200.00	735,000.00
6. Spreyer	Emultion	hrs	175.00	5,400.00	945,000.00
7. Chip - Spreader	Propelled	hrs	175.00	2,100.00	367,500.00
8. Roller	8-10 Ton	hrs	175.00	2,400.00	420,000.00
9. Vibrating Roller -	7 Ton (Small Tandem)	hrs	175.00	3,540.00	619,500.00
10. Pneumatic Roller	8-10 Ton	hrs	175.00	4,200.00	735,000.00
11. Mechanical Paver	Wheel	hrs	110.00	18,000.00	1,980,000.00
12. Road Marker	Hand Cart, Gas/Heater	hrs	110.00	2,100.00	231,000.00
13. Pickup truck	Double cab, 4WD	km	700.00	48.00	33,600.00
14. Rammers	60 kg	Hrs	220.00	870.00	191,400.00
15. Mobile Crane	(Wheeled or tracked) 25 T	Hrs	110.00	18,000.00	1,980,000.00
16. Low bed Trailer	(20 to 40 tonnes)	Hrs	220.00	12,000.00	2,640,000.00
17. Tar Boiler		Hrs	110.00	1,800.00	198,000.00
18. Bitumen Distributor	750 Ltrs	Hrs	110.00	5,400.00	594,000.00
Total					13,350,000.00

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ITEM		DESCRIPTION	UNIT	QTY	RATE	AMOUNT (Rs)
Bill	Pay					
BILL No.7 : INCIDENTAL WORKS						
7.1 TOP SOILING						
1	801(1)	Furnish, Spread and compact top soil	m ²			
7.2 GRASSING						
2	802(1)	Grass sodding	m ²	79,860	540.00	43,124,400.00
7.3 RIP RAP PROTECTION FOR EMBANKMENT SLOPES						
3	804(1)	Dumped Rip Rap	m ³	200	3,560.00	712,000.00
7.4 PAVED SIDE WALKS						
4	806(1)	Precast concrete slab (450x450x50mm) paving	m ²			
5	806(2)	Asphalt concrete surfacing to 50mm compacted thickness	m ²			
7.5 PRE CAST CONCRETE KERBS AND CHANNELS						
6	807(1)	Standard kerb	m			
7	807(2)	Flat /Edge Kerb	m			
8	807(3)	Drop kerb	m			
9	807(4)	Bridge kerb	m			
10	808(1)	Guard stones (Road way, Culverts, Causeway and Bridges)	nr	2,500	6,000.00	15,000,000.00
7.6 ROAD MARKING						
<i>Center line :</i>						
11	810(1)	Continuous	m ²	6,110	2,500.00	15,275,000.00
12	810(2)	Intermittent	m ²	2,499	2,500.00	6,247,500.00
<i>Edge line :</i>						
13	810(3)	Continuous	m ²	7,684	2,500.00	19,210,000.00
14	810(4)	Pedestrian crossing	m ²	390	2,500.00	975,000.00
15	810(5)	Road Studs	nr	650	2,200.00	1,430,000.00
7.7 ROAD SIGNS						
<i>Reflective road sign :</i>						
16	811(1)	Single pole, sign area up to 0.5m ²	nr	878	15,800.00	13,872,400.00
17	811(2)	Double pole, sign area up to 2.0m ²	nr	6	33,000.00	198,000.00
18	811(3)	Chevron warning sign	nr	30	17,280.00	518,400.00
19	811(4)	Flag Type Sign	nr			
7.8 CONCRETE KERB INLETS						
20	813(1)	Kerb inlet	nr			
21	701(2)	Precast concrete Kerb Inlet slab (800x500x50mm thick)	m ²			
7.9 KILOMETRE POSTS						
22	815(1)	Provide, Install and paint new kilometre post	nr	24	19,320.00	463,680.00
23	815(2)	Reposition existing kilometer post	nr			
24	815(3)	Paint existing kilometer post	nr			
7.10 MAINTENANCE OF CARRIAGEWAY						
25	1101(1)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 20mm & less in depth	m ²	25,000	1,030.00	25,750,000.00
26	1101(2)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 75mm & less in depth	m ²	18,000	3,800.00	68,400,000.00
27	1101(1)	Filling pot holes and patch repairs with Asphalt concrete Cold mix (MC30), deeper than 75mm	m ²	6,000	6,345.00	38,070,000.00
28	1401(1)	Filling pot holes and patch repairs with gravel	m ³			
						249,246,380.00
Bill No. 7 Carried to Summary						

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BILL No.9 : SCHEDULE OF DAY WORKS RATES					
9.2 : EQUIPMENT DAY WORKS					
All Quantities are Provisional				CATIC	
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
1	Bowser, water, up to 6,000 litres with Spray Bar	Hr	20	1680	33600
2	Backhoe, wheeled, 50 - 100 HP	Hr	20	2100	42000
3	Backhoe, tracked, 50 - 100 HP	Hr	20	3000	60000
4	Motor grader, 120 to140HP	Hr	20	3600	72000
5	Mobile Crane 25 tonnes	Hr	20	5400	108000
6	Water pump with hoses, 50 to 100 mm outlet	Hr	50	2,400	120000
7	Concrete mixer, over 0.50 cu.m.	Hr	10	600	6000
8	Generator, 10 to 50 KVA	Hr	100	2,400	240000
9	Poker Vibrator, petrol driven	Hr	10	300	3000
Equipment Day works Carried to forward :					684,600.00

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**THE PRICED BILL OF QUANTITIES AND
SCHEDULES**

PRP 1 / C3

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Improvement and Rehabilitation of Priority Road Project

Contract Package No - RDA/RNIP/PRP1/C3

Thiruwanaletiya - Agalawatte Road (B 421)

Section from 0.00 km (Thiruwanaletiya) to 33.45 km (Kalawana)

Length of the Section 33.45km

BILL OF QUANTITIES

SUMMARY		AMOUNT(Rs.)
No.	Description	
1	Preliminary and General 1 A	92,153,416.00
	1 B	50,040,000.00
2	Site Clearing	28,832,500.00
3	Earthworks	216,753,000.00
4	Road Pavement	1,339,685,120.00
5	Drainage	225,694,000.00
6	Bridges and Culverts	224,100,720.00
7	Incidentals	111,354,100.00
8	Provisional Sums	65,650,000.00
9	Day works - Labour	101,700.00
	Day works - Equipment	18,516,800.00
	Day works - Materials	
Sub - Total 1:		2,372,881,356.00
Provisional sum for Price Escalation 5%		189,830,508.48
Contingencies at 10% of Sub - Total 1		237,288,135.60
TENDER PRICE		2,800,000,000.08
In words		
Value added tax at 12% of the Tender Price		336,000,000.01

Bidder: Signature
Name
Address

Witness 1 Signature
Name
Address

Witness 2 Signature
Name
Address

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BILL No. 1A : PRELIMINARY GENERAL						
ITEM NO		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
1	108.1(1)	Allow for cost of providing Performance Security	Ls/Item	1/Allow	Ls	9,500,000.00
2	108.2(1)	Allow for the cost of providing Insurances	Ls/Item	1/Allow	Ls	9,500,000.00
3	108.3(1)	Mobilization of Contractor's facilities and Plant / Equipment	Ls/Item	1/Allow	Ls	5,000,000.00
4	108.3(2)	De-Mobilization of Contractor's facilities & Plant / Equipment	Ls/Item	1/Allow	Ls	1,828,416.00
5	108.7(1)	Provide and maintain Project sign board	nr	2	80,000.00	160,000.00
6	108.7(2)	Provide and maintain Plaques	nr	3	55,000.00	165,000.00
7	118.4(1)	Provide Main office for the Engineer	nr	1	2,300,000.00	2,300,000.00
8	118.4(2)	Provide Secondary office for the Engineer.	nr	1	1,500,000.00	1,500,000.00
9	118.4(3)	Provide office for the Employer	nr	1	2,300,000.00	2,300,000.00
10	118.6(1)	Provide Housing for the Employer	nr			
11	118.6(1)	Provide Housing for the Engineer	nr	1	2,300,000.00	2,300,000.00
<u>Vehicles for the Engineer</u>						
12	118.8(1)	Purchase and supply Vehicle Type 1A as specified in appendix 4 of Volume 3	Item	Allow	PS	4,000,000.00
13	118.8(1)	Purchase and supply Vehicle Type 1B as specified in appendix 4 of Volume 2	Item	Allow	PS	6,000,000.00
14	118.8(2)	Purchase and supply Vehicle Type 2 as specified in appendix 4 of Volume 3	Item	Allow	PS	6,000,000.00
15	118.8(3)	Purchase and supply Vehicle Type 3 as specified in appendix 4 of Volume 1	Item	Allow	PS	6,000,000.00
16	118.8(4)	Over heads and profit for supply of vehicle Type 1A & 1B	%	10,000,000.00	10%	
17	118.8(5)	Over heads and profit for supply of vehicle Type 2	%	6,000,000.00	10%	
18	118.8(6)	Over heads and profit for supply of vehicle Type 3	%	6,000,000.00	10%	600,000.00
<u>Vehicles for the Employer</u>						
19	118.8(10)	Purchase and supply Vehicle Type 1 as specified in appendix 4 of Volume 3	Item	Allow	PS	4,000,000.00
20	118.8(11)	Purchase and supply Vehicle Type 2 as specified in appendix 4 of Volume 3	Item	Allow		
21	118.8(12)	Over heads and profit for supply of vehicle Type 1	%	4,000,000.00	10%	400,000.00
22	118.8(13)	Over heads and profit for supply of vehicle Type 2	%			
23	118.9(1)	Provide Main Laboratory	nr	1	3,000,000.00	3,000,000.00
24	118.9(2)	Provide Secondary Laboratory	nr			
25	118.9(3)	Provide Equipment for the Main Laboratory	Ls/Item	1/Allow		11,000,000.00
26	118.9(4)	Provide Equipment for the field Laboratory	Ls/Item	1/Allow		4,000,000.00
27	118.10(1)	Provide and maintain Survey equipment	Ls/Item	1/Allow		6,000,000.00
28	119(1)	Longitudinal and Cross sectional detailing of full pavement width	Ls/Item	1/Allow		5,000,000.00
						92,153,416.00

Bill No. 1A Carried to Summary

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BILL No.4 : ROAD PAVEMENT						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
4.1		GRANULAR PAVEMENT				
1	401(1)	Sub base as compacted in position	m ³	25,000	4,970	124,250,000
2	402(1)	Provide and place stabilized gravel base of 200mm thick	m ³	-		
3	402(3)	Cement	tonne			
4	405(1)	Dense graded aggregate base.	m ³	56,000	7,510	420,560,000
4.2		RECONSTRUCTION OF EXISTING PAVEMENT				
5	408(1)	Scarify and remove existing bitumen layer	m ²	169,600	68	11,532,800
4.3						
6	409(1)	Earthen shoulder as compacted in position	m ³	23,040	2,833	65,272,320
7	402(1)	Stabilized gravel shoulder as compacted in position	m ³			
8	402(3)	Cement	tonne			
9	409(2)	Dense graded aggregate shoulders as compacted in position	m ³			
10	409(3)	Trench excavation for cross shoulder drain	m ³	450	3,600	1,620,000
11	409(4)	Porous material for cross shoulder drain	m ³	300	6,600	1,980,000
12	1710(1)	Geotextile for cross shoulder drain.	m ²	200	1,000	200,000
4.4		PRIME COAT AND TACK COAT				
13	501(1)	Bituminous Prime Coat using MC 30 at 1 litre per m ²	m ²	249,000	260	64,740,000
14	501(2)	Extra over for MC 30	ltr			
15	502(1)	Bituminous Tack Coat (Cationic Emulsion grade CRS1 at 0.3 litre/m ²)	m ²	249,000	120	29,880,000
16	502(2)	Extra over for CRS 1	ltr			
4.5		BITUMINOUS SURFACING				
17	505(1)	Bitumen Grade (80-100)	ltr			
18	505(2)	Kerosene/ diesel or other approved cutter	ltr			
19	505(3)	20mm chips	m ³			
20	505(4)	10mm chips	m ³			
21	506(1)	Asphalt concrete in wearing course 50mm compacted thickness	m ²	249,000	2,450	610,050,000
22	506(2)	Asphalt concrete in binder/ Correction course	MT	500	19,200	9,600,000
Bill No. 4 Carried to Summary						1,339,685,120.00

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BILL No.5 : DRAINAGE						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
5.1		ROADSIDE AND LEAD AWAY SURFACE DRAINS				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³	745	23,000	17,135,000
2	1001(2)	Grade C 20	m ³	3,465	29,000	100,485,000
3	1006(1)	Random rubble masonry	m ³	-		
4	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²	-		
		<i>Precast concrete cover slab :</i>				
5	701(3)	600 X 500 X 100mm thick	m ²	600	3,200	1,920,000
6	701(4)	800 X 600 X 125mm thick	m ²	4,320	3,200	13,824,000
7	1002(1)	Tor Steel reinforcement	kg	188,000	260	48,880,000
		<i>Form work</i>				
8	1008(1)	Formwork smooth finish	m ²	33,000	1,250	41,250,000
9	1008(2)	Formwork rough finish	m ²	-		
5.2		SUB-SURFACE DRAINS (UNDERDRAINS)				
10	702(1)	160mm dia. PVC Pipe (Type 600)	m	-		
11	702(2)	Graded aggregate maximum size 37.5mm	m ³	-		
12	1710(1)	Provide and place Geotextile filter	m ²	-		
5.3		UNDER GROUND PIPE DRAIN				
13	704(1)	Inlet to line drain PVC pipe (Type 600) 100mm dia.	m	-		
5.4		CLEANING AND RESHAPING OF EARTH DRAINS				
14	1301(1)	Clear and reshape earth drains.	m	-		
5.5		CLEANING AND REPAIRING OF BUILT-UP DRAINAGE SYSTEM				
15	1302(1)	Clean, desilt & repair built-up (lined) drains.	m	200	1,500.00	300,000
5.6		CLEANING, DESILTING & REPAIRING OF CULVERTS				
16	1303(1)	Pipe Culverts	nr	20	50,000	1,000,000
17	1303(2)	Other Culvert type	nr	15	60,000	900,000
Bill No. 5 Carried to Summary						225,694,000.00

BILL No.6 : BRIDGES, CULVERTS AND OTHER STRUCTURES						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
6.1.		STRUCTURES				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³	1,000	21,600.00	21,600,000.00
2	1001(3)	Grade C 25	m ³	525	30,800.00	16,170,000.00
3	1001(4)	Grade C 30	m ³	90	40,000.00	3,600,000.00
4	1002(1)	Tor Steel reinforcement	kg	48,990	260.00	12,737,400.00
5	1006(1)	Random rubble masonry	m ³	1,659	13,750.00	22,811,250.00
		<i>Formwork</i>				
6	1008(1)	Formwork smooth finish	m ²	2,940	1,400.00	4,116,000.00
7	1008(2)	Formwork rough finish	m ²	1,868	1,500.00	2,802,000.00
8	705(1)	100mm crushed stone back fill material	m ³	800	4,580.00	3,664,000.00
9	705(2)	37.5mm maximum size crushed stone - filter material	m ³	113	6,250.00	706,250.00
10	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m	1,478	1,580.00	2,335,240.00
11	706(2)	Rainwater outlet/Duts 160mm dia PVC pipe (Type 600)	m			
12	814(1)	Hand Rails and uprights	m	180	9,000.00	1,620,000.00
13	814(2)	End pilasters	nr	30	120,000.00	3,600,000.00
6.2		CULVERTS				
14	707(1)	Laying and jointing of pipes, 600mm dia. (Single row)	m			
15	707(2)	Laying and jointing of pipes, 600mm dia. (Double row)	m			
16	707(3)	Laying and jointing of pipes, 900mm dia. (Single row)	m	1008	21,000.00	21,168,000.00
17	707(8)	Sand fill	m ³			
18	1001(1)	Grade C 15 Concrete	m ³	600	21,600.00	12,960,000.00
19	1001(2)	Grade C 20 Concrete	m ³			
20	1001(3)	Grade C 25 Concrete	m ³	1,598	30,800.00	49,218,400.00
21	1001(4)	Grade C 30 Concrete	m ³			
22	1002(1)	Tor Steel reinforcement	kg	55,545	260.00	14,441,700.00
23	1002(2)	20 mm Mild Steel dowels at 500 mm c/c	kg			
24	1006(1)	Random rubble masonry	m ³	1,152	13,750.00	15,840,000.00
25	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²	1,478	1,410.00	2,083,980.00
26	1008(1)	Formwork smooth finish	m ²	4,538	1,350.00	6,126,300.00
27	1008(2)	Formwork rough finish	m ²	3,825	1,350.00	5,163,750.00
28	705(1)	100mm crushed stone back fill material	m ³	89	5,250.00	467,250.00
29	705(2)	37.5mm maximum size crushed stone - filter material	m ³	50	6,250.00	312,500.00
30	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m	293	1,900.00	556,700.00
31	707(10)	Supply, Lay and joint 900X900X1650mm Precast box units	nr			
Bill No. 6 Carried to Summary :						224,100,720.00

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BILL No.7 : INCIDENTAL WORKS							
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)	
Bill	Pay						
7.1		TOP SOILING					
1	801(1)	Furnish, Spread and compact top soil	m ²	15,000	350	5,250,000	
7.2		GRASSING					
2	802(1)	Grass sodding	m ²	25,000	550	13,750,000	
7.3		RIP RAP PROTECTION FOR EMBANKMENT SLOPES					
3	804(1)	Dumped Rip Rap	m ³				
7.4		PAVED SIDE WALKS					
4	806(1)	Precast concrete slab (450x450x50mm) paving	m ²	1,500	3,000	4,500,000	
5	806(2)	Asphalt concrete surfacing to 50mm compacted thickness	m ²	300	2,500	750,000	
7.5		PRE CAST CONCRETE KERBS AND CHANNELS					
6	807(1)	Standard kerb	m	1,500	3,500	5,250,000	
7	807(2)	Flat /Edge Kerb	m				
8	807(3)	Drop kerb	m	200	5,400	1,080,000	
9	807(4)	Bridge kerb	m	120	3,500	420,000	
10	808(1)	Guard stones (Road way, Culverts, Causeway and Bridges)	nr	770	5,000	3,850,000	
7.6		ROAD MARKING					
		<i>Center line :</i>					
11	810(1)	Continuous	m ²	800	3,000	2,400,000	
12	810(2)	Intermittent	m ²	2,400	3,000	7,200,000	
		<i>Edge line :</i>					
13	810(3)	Continuous	m ²	6,400	3,000	19,200,000	
14	810(4)	Pedestrian crossing	m ²	2,000	3,000	6,000,000	
15	810(5)	Road Studs	nr	500	3,500	1,750,000	
7.7		ROAD SIGNS					
		<i>Reflective road sign :</i>					
16	811(1)	Single pole, sign area up to 0.5m ²	nr	625	12,500	7,812,500	
17	811(2)	Double pole, sign area up to 2.0m ²	nr	15	35,000	525,000	
18	811(3)	Chevron warning sign	nr	200	10,100	2,020,000	
19	811(4)	Flag Type Sign	nr	10	10,100	101,000	
7.8		CONCRETE KERB INLETS					
20	813(1)	Kerb inlet	nr	50	32,000	1,600,000	
21	701(2)	Precast concrete Kerb Inlet slab (800x500x50mm thick)	m ²	150	9,200	1,380,000	
7.9		KILOMETRE POSTS					
22	815(1)	Provide, Install and paint new kilometre post	nr	20	21,000	420,000	
23	815(2)	Reposition existing kilometer post	nr	10	6,000	60,000	
24	815(3)	Paint existing kilometer post	nr	2	2,800	5,600	
7.10		MAINTENANCE OF CARRIAGEWAY					
25	1101(1)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 20mm & less in depth	m ²	6,000	2,700	16,200,000	
26	1101(2)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 75mm & less in depth	m ²	2,200	2,400	5,280,000	
27	1101(1)	Filling pot holes and patch repairs with Asphalt concrete Cold mix (MC30), deeper than 75mm	m ²	900	3,900	3,510,000	
28	401(1)	Filling pot holes and patch repairs with gravel	m ³	200	5,200	1,040,000	
Bill No. 7 Carried to Summary						111,354,100.00	

BILL No.9 : SCHEDULE OF DAY WORKS RATES

9.1 : LABOUR DAY WORKS

All Quantities are Provisional

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
1	Surveyor	Hr	30	1,200	36,000
2	Laboratory Technician (skilled)	Hr	-		
3	Carpenter	Hr	30	300	9,000
4	Mason	Hr	30	300	9,000
5	Steel Fixer	Hr	30	300	9,000
6	Semi-skilled workman	Hr	90	250	22,500
7	Unskilled workman (labourer)	Hr	90	180	16,200
Labour Day works Carried to Summary					101,700.00

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BILL No.9 : SCHEDULE OF DAY WORKS RATES

9.2 : EQUIPMENT DAY WORKS

All Quantities are Provisional

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
1	Bowser, water, up to 6,000 litres with Spray Bar	Hr	20	1,200.00	24,000.00
2	Backhoe, wheeled, 50 - 100 HP	Hr	20	2,800.00	56,000.00
3	Backhoe, tracked, 50 - 100 HP	Hr	20	2,600.00	52,000.00
4	Motor grader, 120 to 140HP	Hr	20	3,500.00	70,000.00
5	Mobile Crane 25 tonnes	Hr	20	12,000.00	240,000.00
6	Water pump with hoses, 50 to 100 mm outlet	Hr	50	1,200.00	60,000.00
7	Concrete mixer, over 0.50 cu.m.	Hr	10	1,200.00	12,000.00
8	Generator, 10 to 50 KVA	Hr	100	180,000.00	18,000,000.00
9	Poker Vibrator, petrol driven	Hr	10	280.00	2,800.00
Equipment Day works Carried to Summary :					18,516,800.00

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**THE PRICED BILL OF QUANTITIES AND
SCHEDULES**

PRP 1 / C6 A

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PRP1 / C6A / 01

中航国际斯里兰卡南方公路重建 PRP1&2 项目部

CATIC-ENG LANKA SOUTHERN DIVISION OF IMPROVEMENT & REHABILITATION OF PRP1&2



Tel: (0094) 770103060 E-mail: catic.lksd.08@gmail.com Address: No.28/6B, De.Fonseka Place, Colombo-5

To: Ms. Tissera

Our Ref: CATIC-ENG/LKSD/PRP1/RDA-230

Road Development Authority

Date: 9th Jul, 2014

From: Wen Zhong Lin

Total Page: 1

CATIC-ENG

China Development Bank Funded Improvement and Rehabilitation of Priority Road Project (PRP1)

Contract Package No: RDA/RNIP/PRP1/ C6A

Subjects: Application for Performance Certificate

Dear Madam,

According to the sub-clause 11.9 of the General Condition of Contract regarding the performance certificate, the engineer shall issue the performance certificate within 28 days after the Defects Notification Period.

Up to 30th June, 2014, the Defects Notification Period of PRP1/C6A were already expired, herewith, we apply for the Performance Certificate from you.

Your early reply will be highly appreciated.

Yours Faithfully

for Wen Zhong Lin

Project Manager of PRP1

China National Aero Technology International Engineering Corporation

Cc:

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BILL No.5 : DRAINAGE						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
5.1		ROADSIDE AND LEAD AWAY SURFACE DRAINS				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³	348	14,350.00	4,992,696.53
2	1001(2)	Grade C 20	m ³	1,740	17,450.00	30,356,290.77
3	1006(1)	Random rubble masonry	m ³	198	9,400.00	1,857,631.03
4	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²	593	850.00	503,931.82
		<i>Precast concrete cover slab :</i>				
5	701(3)	600 X 500 X 100mm thick	m ²	1,740	6,000.00	10,437,693.10
6	701(4)	800 X 600 X 125mm thick	m ²	838	8,000.00	6,707,957.43
7	1002(1)	Tor Steel reinforcement	kg	34,792	260.00	9,046,000.69
		<i>Form work</i>				
8	1008(1)	Formwork smooth finish	m ²	10,438	1,290.00	13,464,624.10
9	1008(2)	Formwork rough finish	m ²	17,396	1,120.00	19,483,693.79
5.2		SUB-SURFACE DRAINS (UNDERDRAINS)				
10	702(1)	160mm dia. PVC Pipe (Type 600)	m			
11	702(2)	Graded aggregate maximum size 37.5mm	m ³			
12	1710(1)	Provide and place Geyotextile filter	m ²			
5.3		UNDER GROUND PIPE DRAIN				
13	704(1)	Inlet to line drain PVC pipe (Type 600) 100mm dia.	m			
5.4		CLEANING AND RESHAPING OF EARTH DRAINS				
14	1301(1)	Clear and reshape earth drains	m			
5.5		CLEANING AND REPAIRING OF BUILT-UP DRAINAGE SYSTEM				
15	1302(1)	Clean, desilt & repair built-up (lined) drains.	m			
5.6		CLEANING, DESILTING & REPAIRING OF CULVERTS				
16	1303(1)	Pipe Culverts	nr	32	5800	185,651.77
17	1303(2)	Other Culvert type	nr	16	6950	111,231.02
Bill No. 5 Carried to Summary						97,147,402.04

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BILL No.6 : BRIDGES, CULVERTS AND OTHER STRUCTURES						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
6.1		STRUCTURES				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³			
2	1001(3)	Grade C 25	m ³			
3	1001(4)	Grade C 30	m ³			
4	1002(1)	Tor Steel reinforcement	kg			
5	1006(1)	Random rubble masonry	m ³			
		<i>Formwork</i>				
6	1008(1)	Formwork smooth finish	m ²			
7	1008(2)	Formwork rough finish	m ²			
8	705(1)	100mm crushed stone back fill material	m ³			
9	705(2)	37.5mm maximum size crushed stone - filter material	m ³			
10	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m			
11	706(2)	Rainwater outlet/Duts 160mm dia PVC pipe (Type 600)	m			
12	814(1)	Hand Rails and uprights	m			
13	814(2)	End pilasters	nr			
6.2		CULVERTS				
14	707(1)	Laying and jointing of pipes, 600mm dia. (Single row)	m	60	18,300.00	1,098,000.00
15	707(2)	Laying and jointing of pipes, 600mm dia. (Double row)	m			
16	707(3)	Laying and jointing of pipes, 900mm dia. (Single row)	m	29	29,500.00	855,500.00
17	707(8)	Sand fill	m ³			
18	1001(1)	Grade C 15 Concrete	m ³	145	14,300.00	2,073,500.00
19	1001(2)	Grade C 20 Concrete	m ³	244	17,450.00	4,257,800.00
20	1001(3)	Grade C 25 Concrete	m ³			
21	1001(4)	Grade C 30 Concrete	m ³			
22	1002(1)	Tor Steel reinforcement	kg	9,742	260.00	2,532,920.00
23	1002(2)	20 mm Mild Steel dowels at 500 mm c/c	kg	70	300.00	21,000.00
24	1006(1)	Random rubble masonry	m ³	1,063	9,300.00	9,885,900.00
25	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²	1,948	790.00	1,538,920.00
26	1008(1)	Formwork smooth finish	m ²	70	3,800.00	266,000.00
27	1008(2)	Formwork rough finish	m ²	104	2,400.00	249,600.00
28	705(1)	100mm crushed stone back fill material	m ³	303	2,600.00	787,800.00
29	705(2)	37.5mm maximum size crushed stone - filter material	m ³	70	6,000.00	420,000.00
30	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m	139	2,500.00	347,500.00
31	707(10)	Supply, Lay and joint 900X900X1650mm Precast box units	nr			
						24,334,440.00
Bill No. 6 Carried to Summary :						

BILL No.7 : INCIDENTAL WORKS						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
7.1		TOP SOILING				
1	801(1)	Furnish, Spread and compact top soil	m ²	34,792	800.00	27,833,600.00
7.2		GRASSING				
2	802(1)	Grass sodding	m ²	34,792	800.00	27,833,600.00
7.3		RIP RAP PROTECTION FOR EMBANKMENT SLOPES				
3	804(1)	Dumped Rip Rap	m ³			-
7.4		PAVED SIDE WALKS				
4	806(1)	Precast concrete slab (450x450x50mm) paving	m ²	2,018	1,700.00	3,430,600.00
5	806(2)	Asphalt concrete surfacing to 50mm compacted thickness	m ²			-
7.5		PRE CAST CONCRETE KERBS AND CHANNELS				
6	807(1)	Standard kerb	m	1,583	2,550.00	4,036,650.00
7	807(2)	Flat /Edge Kerb	m	397	1,930.00	766,210.00
8	807(3)	Drop kerb	m	397	2,400.00	952,800.00
9	807(4)	Bridge kerb	m			-
10	808(1)	Guard stones (Road way, Culverts, Causeway and Bridges)	nr	237	4,900.00	1,161,300.00
7.6		ROAD MARKING				
		<i>Center line :</i>				
11	810(1)	Continuous	m ²	696	2,580.00	1,795,680.00
12	810(2)	Intermittent	m ²	696	2,580.00	1,795,680.00
		<i>Edge line :</i>				
13	810(3)	Continuous	m ²	4,175	2,400.00	10,020,000.00
14	810(4)	Pedestrian crossing	m ²	807	3,400.00	2,743,800.00
15	810(5)	Road Studs	nr	174	3,100.00	539,400.00
7.7		ROAD SIGNS				
		<i>Reflective road sign :</i>				
16	811(1)	Single pole, sign area up to 0.5m ²	nr	216	18,300.00	3,952,800.00
17	811(2)	Double pole, sign area up to 2.0m ²	nr			-
18	811(3)	Chevron warning sign	nr	52	24,000.00	1,248,000.00
19	811(4)	Flag Type Sign	nr			-
7.8		CONCRETE KERB INLETS				
20	813(1)	Kerb inlet	nr	104	7,900.00	821,600.00
21	701(2)	Precast concrete Kerb Inlet slab (800x500x50mm thick)	m ²	87	13,000.00	1,131,000.00
7.9		KILOMETRE POSTS				
22	815(1)	Provide ,Install and paint new kilometre post	nr	3	15,000.00	45,000.00
23	815(2)	Reposition existing kilometer post	nr	17	1,420.00	24,140.00
24	815(3)	Paint existing kilometer post	nr	17	740.00	12,580.00
7.10		MAINTENANCE OF CARRIAGEWAY				
25	1101(1)	Filling pot-holes and patch repairs with Asphalt concrete				-
		Cold mix (MC30), 20mm & less in depth	m ²	2,373	1,240.00	2,942,520.00
26	1101(2)	Filling pot-holes and patch repairs with Asphalt concrete				-
		Cold mix (MC30), 75mm & less in depth	m ²	1,583	2,540.00	4,020,820.00
27	1101(1)	Filling pot holes and patch repairs with Asphalt concrete				-
		Cold mix (MC30), deeper than 75mm	m ²	1,583	2,830.00	4,479,890.00
28	401(1)	Filling pot holes and patch repairs with gravel	m ³			-
Bill No. 7 Carried to Summary						101,587,670.00

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Secondary Laboratory

B. Secondary laboratory	
Laboratory of gross floor area 80 sq. m. located adjacent to the Secondary Office (Resident Engineer's Office)	
Bathroom	1
Kitchen	1
Store room	1
B. Furnishings and Equipment	
Office desks 120x70cm and each having at least 3 drawers, one of which is lockable.	2
Computer desks.	1
Typist chairs, gas lift height adjustment, arm rests.	6
Bench Stools	6
Steel filing cabinets with four drawers.	2
Book shelves, 1m.x 2m. with 3 shelves and lockable cupboard at base.	1
Storage cabinets 1mx2m, two door, lockable.	1
Laboratory benches sufficient for all testing equipment	As reqd.
Laboratory sinks with cold tap (minimum)	2
Bulletin board 0.9x0.6m.	1
White marker board 1.2mx0.8m.	1
IBM Compatible PC, 2.4Ghz processor, 256 Mb DDR RAM, 40Gb Hard Drive, DVD-CD /RW, Modem, 101 Key English Key Board, 2 x USB ports, VGA card, 17" flat screen monitor, Microsoft Mouse, with licensed MS Windows XP and MS Office Professional	1
Uninterrupted Power Supply, On line unit 1 kVA with sealed maintenance free battery and 60 minutes backup time.	1
A4 laser jet printer.	1
C. Safety Equipment	
Safety helmets.	6
Water/ windproof jacket and over trousers.	6
Motorcycle crash helmets.	4
Fire extinguishers - one per room	7
First aid box - stocked.	1
E. General Laboratory Equipment	
Rubber mallet	5
Steel scoops	8
Flasks	8
2 Nos. 100 ml, 2 Nos. 250 ml, 2 Nos. 500 ml, and 2 Nos. 1000 ml	
Measuring Cylinders - 3 Nos. 500 ml, 3 Nos. 1000 ml., 3 Nos 250 ml	9
Vernier Calipers - 150 mm	1
Steel ruler - 300 mm	3
Sample splitter - 50 mm	1
Sample splitter - 12 mm	1
Aluminium trays 24 x 40 cm	12
Electric forced draught oven - capacity 0.15 cu.m.	2
Solution balance capacity 20 kg, graduation 1 gramme	2
Filed scale balance capacity - 35 kg	2
Triple beam balance capacity 10 kg accuracy 0.1 gramme	2
Triple beam balance capacity 3 kg accuracy 0.01 gramme	2
Triple beam balance capacity 2610 grams	2
Triple beam balance capacity 311 grams	2
Electronic balance 1000 gm capacity accurate to 0.01 grams	1
Electronic balance of 1000 gm capacity, accurate to 0.1 gram with a tare correction of not less than 100 gramme.	3
Glass plates - 400 x 600 x 6 mm	4
Linear shrinkage moulds - 250 mm	4
Spatulas - 150 mm	10

BILL No.9 : SCHEDULE OF DAY WORKS RATES					
9.2 : EQUIPMENT DAY WORKS					
All Quantities are Provisional					
ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
1	Bowser, water, up to 6,000 litres with Spray Bar	Hr	20	1,120.00	22,400.00
2	Backhoe, wheeled, 50 - 100 HP	Hr	20	2,236.00	44,720.00
3	Backhoe, tracked, 50 - 100 HP	Hr	20	2,516.00	50,320.00
4	Motor grader, 120 to 140HP	Hr	20	4,472.00	89,440.00
5	Mobile Crane 25 tonnes	Hr	20	5,100.00	102,000.00
6	Water pump with hoses, 50 to 100 mm outlet	Hr	50	1,120.00	56,000.00
7	Concrete mixer, over 0.50 cu.m.	Hr	10	700.00	7,000.00
8	Generator, 10 to 50 KVA	Hr	100	1,120.00	112,000.00
9	Poker Vibrator, petrol driven	Hr	10	200.00	2,000.00
Equipment Day works Carried to forward :					485,880.00

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**THE PRICED BILL OF QUANTITIES AND
SCHEDULES**

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BILL No.4 : ROAD PAVEMENT						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
4.1		GRANULAR PAVEMENT				
1	401(1)	Sub base as compacted in position	m ³	3,500	2,830.00	9,905,000.00
2	402(1)	Provide and place stabilized gravel base of 200mm thick	m ³			
3	402(3)	Cement	tonne			
4	405(1)	Dense graded aggregate base	m ²	7,800	8,000.00	62,400,000.00
4.2		RECONSTRUCTION OF EXISTING PAVEMENT				
5	408(1)	Scarify and remove existing bitumen layer	m ²	23,200.00	100.00	2,320,000.00
4.3		SHOULDERS				
6	409(1)	Earthen shoulder as compacted in position	m ³	3500	2,000.00	7,000,000.00
7	402(1)	Stabilized gravel shoulder as compacted in position	m ³			
8	402(3)	Cement	tonne			
9	409(2)	Dense graded aggregate shoulders as compacted in position	m ³			
10	409(3)	Trench excavation for cross shoulder drain	m ³			
11	409(4)	Porous material for cross shoulder drain	m ³			
12	1710(1)	Geotextile for cross shoulder drain	m ²			
4.4		PRIME COAT AND TACK COAT				
13	501(1)	Bituminous Prime Coat using MC 30 at 1 litre per m ²	m ²	40,600	300.00	12,180,000.00
14	501(2)	Extra over for MC 30	ltr			
15	502(1)	Bituminous Tack Coat (Cationic Emulsion grade CRS1 at 0.3 litre/m ²)	m ²	20,300	75.00	1,522,500.00
16	502(2)	Extra over for CRS 1	ltr			
4.5		BITUMINOUS SURFACING				
17	505.1	Bitumen Grade (80-100)	ltr			
18	505.2	Kerosene/ diesel or other approved cutter	ltr			
19	505.3	20mm chips	m ³			
20	505.4	10mm chips	m ³			
21	506.1	Asphalt concrete in wearing course 50mm compacted thickness	m ²	40,600	2,500.00	101,500,000.00
22	506.2	Asphalt concrete in binder/ Correction course	MT	50	20,000	1,000,000
Bill No. 4 Carried to Summary						197,827,500.00

BILL No.6 : BRIDGES, CULVERTS AND OTHER STRUCTURES						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
6.1		STRUCTURES				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³			
2	1001(3)	Grade C 25	m ³			
3	1001(4)	Grade C 30	m ³			
4	1002(1)	Tor Steel reinforcement	kg			
5	1006(1)	Random rubble masonry	m ³			
		<i>Formwork</i>				
6	1008(1)	Formwork smooth finish	m ²			
7	1008(2)	Formwork rough finish	m ²			
8	705(1)	100mm crushed stone back fill material	m ³			
9	705(2)	37.5mm maximum size crushed stone - filter material	m ³			
10	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m			
11	706(2)	Rainwater outlet/Duts 160mm dia PVC pipe (Type 600)	m			
12	814(1)	Hand Rails and uprights	m			
13	814(2)	End pilasters	nr			
6.2		CULVERTS				
14	707(1)	Laying and jointing of pipes, 600mm dia. (Single row)	m			
15	707(2)	Laying and jointing of pipes, 600mm dia. (Double row)	m			
16	707(3)	Laying and jointing of pipes, 900mm dia. (Single row)	m			
17	707(8)	Sand fill	m ³	220	5,000.00	1,100,000.00
18	1001(1)	Grade C 15 Concrete	m ³	20	19,166.00	383,320.00
19	1001(2)	Grade C 20 Concrete	m ³			
20	1001(3)	Grade C 25 Concrete	m ³			
21	1001(4)	Grade C 30 Concrete	m ³	225	30,000.00	6,750,000.00
22	1002(1)	Tor Steel reinforcement	kg	15,000	250.00	3,750,000.00
23	1002(2)	20 mm Mild Steel dowels at 500 mm c/c	kg			
24	1006(1)	Random rubble masonry	m ³	25	13,300.00	332,500.00
25	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²	50	1,080.00	54,000.00
26	1008(1)	Formwork smooth finish	m ²	1,000	2,000.00	2,000,000.00
27	1008(2)	Formwork rough finish	m ²	125	1,600.00	200,000.00
28	705(1)	100mm crushed stone back fill material	m ³			
29	705(2)	37.5mm maximum size crushed stone - filter material	m ³			
30	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m			
31	707(10)	Supply, Lay and joint 900X900X1650mm Precast box units	nr			
Bill No. 6 Carried to Summary :						14,569,820.00

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BILL No.7 : INCIDENTAL WORKS						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
7.1		TOP SOILING				
1	801(1)	Furnish, Spread and compact top soil	m ²			
7.2		GRASSING				
2	802(1)	Grass sodding	m ²	3,000	583.00	1,749,000.00
7.3		RIP RAP PROTECTION FOR EMBANKMENT SLOPES				
3	804(1)	Dumped Rip Rap	m ³			
7.4		PAVED SIDE WALKS				
4	806(1)	Precast concrete slab (450x450x50mm) paving	m ²			
5	806(2)	Asphalt concrete surfacing to 50mm compacted thickness	m ²			
7.5		PRE CAST CONCRETE KERBS AND CHANNELS				
6	807(1)	Standard kerb	m			
7	807(2)	Flat /Edge Kerb	m			
8	807(3)	Drop kerb	m			
9	807(4)	Bridge kerb	m			
10	808(1)	Guard stones (Road way, Culverts, Causeway and Bridges)	nr			
7.6		ROAD MARKING				
<i>Center line :</i>						
11	810(1)	Continuous	m ²	150	3,000.00	450,000.00
12	810(2)	Intermittent	m ²	300	3,000.00	900,000.00
<i>Edge line :</i>						
13	810(3)	Continuous	m ²	1,100	3,000.00	3,300,000.00
14	810(4)	Pedestrian crossing	m ²	180	3,000.00	540,000.00
15	810(5)	Road Studs	nr			
7.7		ROAD SIGNS				
<i>Reflective road sign :</i>						
16	811(1)	Single pole, sign area up to 0.5m ²	nr	50	15,800	790,000
17	811(2)	Double pole, sign area up to 2.0m ²	nr	10	58,300	583,000
18	811(3)	Chevron warning sign	nr			
19	811(4)	Flag Type Sign	nr			
7.8		CONCRETE KERB INLETS				
20	813(1)	Kerb inlet	nr			
21	701(2)	Precast concrete Kerb Inlet slab (800x500x50mm thick)	m ²			
7.9		KILOMETRE POSTS				
22	815(1)	Provide ,Install and paint new kilometre post	nr	5	13,000.00	65,000.00
23	815(2)	Reposition existing kilometer post	nr			
24	815(3)	Paint existing kilometer post	nr			
7.10		MAINTENANCE OF CARRIAGEWAY				
25	1101(1)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 20mm & less in depth	m ²	100	830.00	83,000.00
26	1101(2)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 75mm & less in depth	m ²	100	1,500.00	150,000.00
27	1101(1)	Filling pot holes and patch repairs with Asphalt concrete Cold mix (MC30), deeper than 75mm	m ²	100	2,000.00	200,000.00
28	401(1)	Filling pot holes and patch repairs with gravel	m ³			
Bill No. 7 Carried to Summary						8,810,000.00

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BILL No.8 : PROVISIONAL SUMS						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
1	103(2)	Temporary by-passes for culverts, bridges and other structures.	PS			1,000,000
2	111(1)	Allow for provision of standards/technical literature as required by the Engineer	PS			500,000
3	113.1(1)	Repairs to damages of existing services	PS			
4	113.1(2)	Demolition / Rebuilding of property	PS			
5	117.1(1)	Diversion, protection or removal of electrical services	PS			1,000,000
6	117.1(2)	Diversion, protection or removal of water services	PS			
7	117.1(3)	Diversion, protection or removal of telecommunication services	PS			
8	703(1)	Grade adjustment of existing manholes	PS			
9	1103(1)	Investigations and clearance of Landmines and unexploded ordnance on roads and bridges where necessary				
10	118.12(1)	provide stationary for Engineer				1,500,000
11	118.12(2)	Provide stationary for Employer	PS			1,000,000
10		Allow for Contractor's overheads and profit for above Provisional Sum items.	%	5,000,000	30%	1,500,000.00
Bill No. 8 Carried to Summary						6,500,000

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BILL No.2 : SITE CLEARING						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
lo - F	Pay					
CLEARING AND GRUBBING						
1	201(1)	Clearing and grubbing	m ²	2,000	85.00	170,000.00
		Remove trees :				
2	201(2)	- Girth 600 to 1,200 mm	nr	5	8,400.00	42,000.00
3	201(3)	- Girth 1,200 to 2,000 mm	nr	5	17,000.00	85,000.00
4	201(4)	- Girth over 2000 mm	nr			
		Remove Branches :				
5	201(5)	- Girth 300 to 600 mm	nr	2	8,400.00	16,800.00
6	201(6)	- Girth 600 to 1,200 mm	nr	1	17,000.00	17,000.00
7	201(7)	- Girth over 1,200 mm	nr	2	42,000.00	84,000.00
		Remove Stumps :				
8	201(8)	- Girth 600 to 1,200 mm	nr	5	17,000.00	85,000.00
9	201(9)	- Girth 1,200 to 2,000 mm	nr	5	35,000.00	175,000.00
10	201(10)	- Girth over 2000 mm	nr			
2.2 REMOVAL OF STRUCTURES & OBSTRUCTIONS						
11	202(1)	Dismantle & remove brick masonry structures (Provisional Quantity)	m ³			
12	202(2)	Dismantle & remove Random Rubble masonry structures (Provisional Quantity)	m ³	80	1,700.00	136,000.00
13	202(3)	Dismantle & remove concrete structures (Provisional Quantity)	m ³	75	3,330.00	249,750.00
14	202(4)	Dismantle & remove Dress stone masonry structures (Provisional Quantity)	m ³			
15	202(5)	Remove fencing (Provisional Quantity)	m	200	1,200.00	240,000.00
Bill No.2 Carried to Summary						1,300,550.00

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BILL No.3 : EARTH WORKS						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
No - F	Pay					
3.1		ROADWAY EXCAVATION				
1	301(1)	Roadway excavation, soil suitable for fill	m ³			
2	301(2)	Roadway excavation, boulders (Provisional Quantity)	m ³			
3	301(3)	Roadway excavation, hard rock (Provisional Quantity)	m ³			
4	301(4)	Roadway excavation, unsuitable soil	m ³	200	920.00	184,000.00
5	301(5)	Roadway excavation, sub grade replacement	m ³	100	920.00	92,000.00
6	301(6)	Road pavement excavation	m ³	100	1,250.00	125,000.00
7	301(7)	Prepare sub grade in cut areas	m ²	24,500	125.00	3,062,500.00
3.2		STRUCTURE EXCAVATION AND BACKFILL				
8	302(1)	Excavation & backfill for structures with suitable soil	m ³	180	2,000.00	360,000.00
9	302(2)	Excavation & Backfil for structures in unsuitable soil	m ³			
10	302(3)	Excavation in Boulders for structures (Provisional Quantity)	m ³			
11	302(4)	Excavation in Hard rock for structures (Provisional Quantity)	m ³			
3.3		EMBANKMENT CONSTRUCTION				
12	304(1)	Trim, level and compact roadbed	m ²	6,750	125.00	843,750.00
13	304(2)	Embankment construction, Type 1	m ³	3,000	1,850.00	5,550,000.00
14	304(3)	Embankment construction, Type 2	m ³			
15	304(4)	Boulder packing for soft ground treatment	m ³			
3.4		CHANNEL EXCAVATION				
16	307(1)	Channel excavation soil suitable for fill	m ³	300	750.00	225,000.00
17	307(2)	Channel excavation, boulders (Provisional Quantity)	m ³			
18	307(3)	Channel excavation, hard rock (Provisional Quantity)	m ³			
19	307(4)	Channel excavation, unsuitable soil	m ³	600	920.00	552,000.00
Bill No.3 Carried to Summary :						10,994,250.00

BILL No.4 : ROAD PAVEMENT						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
No - F	Pay					
4.1		GRANULAR PAVEMENT				
1	401(1)	Sub base as compacted in position	m ³	2,700.00	2,830.00	7,641,000.00
2	402(1)	Provide and place stabilized gravel base of 200mm thick	m ³			
3	402(3)	Cement	tonne			
4	405(1)	Dense graded aggregate base	m ³	7,650.00	8,100.00	61,965,000.00
4.2		RECONSTRUCTION OF EXISTING PAVEMENT				
5	408(1)	Scarify and remove existing bitumen layer	m ²	18,000.00	110.00	1,980,000.00
4.3		SHOULDERS				
6	409(1)	Earthen shoulder as compacted in position	m ³	3250	2,100.00	6,825,000.00
7	402(1)	Stabilized gravel shoulder as compacted in position	m ³			
8	402(3)	Cement	tonne			
9	409(2)	Dense graded aggregate shoulders as compacted in position	m ³			
10	409(3)	Trench excavation for cross shoulder drain	m ³			
11	409(4)	Porous material for cross shoulder drain	m ³			
12	1710(1)	Geotextile for cross shoulder drain	m ²			
4.4		PRIME COAT AND TACK COAT				
13	501(1)	Bituminous Prime Coat using MC 30 at 1 litre per m ²	m ²	31,500	300.00	9,450,000.00
14	501(2)	Extra over for MC 30	ltr			
15	502(1)	Bituminous Tack Coat (Cationic Emulsion grade)	m ²	15,750	75.00	1,181,250.00
16	502(2)	CRS1 at 0.3 litre/m ²	ltr			
16	502(2)	Extra over for CRS 1				
4.5		BITUMINOUS SURFACING				
17	505.1	Bitumen Grade (80-100)	ltr			
18	505.2	Kerosene/ diesel or other approved cutter	ltr			
19	505.3	20mm chips	m ³			
20	505.4	10mm chips	m ³			
21	506.1	Asphalt concrete in wearing course 50mm compacted thickness	m ²	33,075	2,500.00	82,687,500.00
22	506.2	Asphalt concrete in binder/ Correction course	MT			
						174,729,750.00
Bill No. 4 Carried to Summary						

BILL No.5 : DRAINAGE						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
No -	Pay					
5.1		ROADSIDE AND LEAD AWAY SURFACE DRAINS				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³	80	20,200.00	1,616,000.00
2	1001(2)	Grade C 20	m ³	473	26,600.00	12,581,800.00
3	1006(1)	Random rubble masonry	m ³			
4	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²			
		<i>Precast concrete cover slab :</i>				
5	701(3)	600 X 500 X 100mm thick	m ²			
6	701(4)	800 X 600 X 125mm thick	m ²	144.00	3,410.00	491,040.00
7	1002(1)	Tor Steel reinforcement	kg	32,500.00	290.00	9,425,000.00
		<i>Form work</i>				
8	1008(1)	Formwork smooth finish	m ²	6,000.00	2,700.00	16,200,000.00
9	1008(2)	Formwork rough finish	m ²	200.00	1,700.00	340,000.00
5.2		SUB-SURFACE DRAINS (UNDERDRAINS)				
10	702(1)	160mm dia. PVC Pipe (Type 600)	m			
11	702(2)	Graded aggregate maximum size 37.5mm	m ³			
12	1710(1)	Provide and place Geyotextile filter	m ²			
5.3		UNDER GROUND PIPE DRAIN				
13	704(1)	Inlet to line drain PVC pipe (Type 600) 100mm dia.	m			
5.4		CLEANING AND RESHAPING OF EARTH DRAINS				
14	1301(1)	Clear and reshape earth drains	m			
5.5		CLEANING AND REPAIRING OF BUILT-UP DRAINAGE SYSTEM				
15	1302(1)	Clean, desilt & repair built-up (lined) drains.	m			
5.6		CLEANING, DESILTING & REPAIRING OF CULVERTS				
16	1303(1)	Pipe Culverts	nr	4	25,000	100,000.00
17	1303(2)	Other Culvert type	nr	2	25,000	50,000.00
Bill No. 5 Carried to Summary						40,803,840.00

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BILL No.6 : BRIDGES, CULVERTS AND OTHER STRUCTURES						
ITEM		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
to - fr	Pay					
6.1		STRUCTURES				
		<i>Concrete :</i>				
1	1001(1)	Grade C 15	m ³	3.15	19,160.00	60,354.00
2	1001(3)	Grade C 25	m ³			
3	1001(4)	Grade C 30	m ³	55.00	30,000.00	1,650,000.00
4	1002(1)	Tor Steel reinforcement	kg	4,500.00	242.00	1,089,000.00
5	1006(1)	Random rubble masonry	m ³			
		<i>Formwork</i>				
6	1008(1)	Formwork smooth finish	m ²	180.00	1,500.00	270,000.00
7	1008(2)	Formwork rough finish	m ²	35.00	1,330.00	46,550.00
8	705(1)	100mm crushed stone back fill material	m ³			
9	705(2)	37.5mm maximum size crushed stone - filter material	m ³			
10	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m			
11	706(2)	Rainwater outlet/Duts 160mm dia PVC pipe (Type 600)	m	24.00	5,000.00	120,000.00
12	814(1)	Hand Rails and uprights	m	16.00	10,000.00	160,000.00
13	814(2)	End pilasters	nr	12.00	30,000.00	360,000.00
6.2		CULVERTS				
14	707(1)	Laying and jointing of pipes, 600mm dia. (Single row)	m			
15	707(2)	Laying and jointing of pipes, 600mm dia. (Double row)	m			
16	707(3)	Laying and jointing of pipes, 900mm dia. (Single row)	m			
17	707(8)	Sand fill	m ³	106.00	5,000.00	530,000.00
18	1001(1)	Grade C 15 Concrete	m ³	7.92	19,160.00	151,747.20
19	1001(2)	Grade C 20 Concrete	m ³			
20	1001(3)	Grade C 25 Concrete	m ³			
21	1001(4)	Grade C 30 Concrete	m ³	110.00	30,000.00	3,300,000.00
22	1002(1)	Tor Steel reinforcement	kg	6,500.00	250.00	1,625,000.00
23	1002(2)	20 mm Mild Steel dowels at 500 mm c/c	kg			
24	1006(1)	Random rubble masonry	m ³	15.00	13,330.00	199,950.00
25	1006(2)	Plastering, 1:3 cement sand mix, 16mm thick	m ²	50.00	1,080.00	54,000.00
26	1008(1)	Formwork smooth finish	m ²	450.00	2,000.00	900,000.00
27	1008(2)	Formwork rough finish	m ²	60.00	1,660.00	99,600.00
28	705(1)	100mm crushed stone back fill material	m ³			
29	705(2)	37.5mm maximum size crushed stone - filter material	m ³			
30	706(1)	Weep hole, 75mm dia. PVC pipe (Type 600)	m			
31	707(10)	Supply, Lay and joint 900X900X1650mm Precast box units	nr			
Bill No. 6 Carried to Summary :						10,616,201.20

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BILL No.7 : INCIDENTAL WORKS						
ITEM	DESCRIPTION		UNIT	QUANTITY	RATE	AMOUNT (Rs)
Co - F	Pay					
7.1 TOP SOILING						
1	801(1)	Furnish, Spread and compact top soil	m ²			
7.2 GRASSING						
2	302(1)	Grass sodding	m ²	500	580.00	290,000.00
7.3 RIP RAP PROTECTION FOR EMBANKMENT SLOPES						
3	804(1)	Dumped Rip Rap	m ³			
7.4 PAVED SIDE WALKS						
4	806(1)	Precast concrete slab (450x450x50mm) paving	m ²	1,000	4,080.00	4,080,000.00
5	806(2)	Asphalt concrete surfacing to 50mm compacted thickness	m ²			
7.5 PRE CAST CONCRETE KERBS AND CHANNELS						
6	807(1)	Standard kerb	m	1,000	4,500.00	4,500,000.00
7	807(2)	Flat /Edge Kerb	m			
8	807(3)	Drop kerb	m			
9	807(4)	Bridge kerb	m			
10	808(1)	Guard stones (Road way, Culverts, Causeway and Bridges)	nr			
7.6 ROAD MARKING						
<i>Center line :</i>						
11	810(1)	Continuous	m ²	900	3,000.00	2,700,000.00
12	810(2)	Intermittent	m ²	300	3,000.00	900,000.00
<i>Edge line :</i>						
13	810(3)	Continuous	m ²	1,160	3,000.00	3,480,000.00
14	810(4)	Pedestrian crossing	m ²	240	3,000.00	720,000.00
15	810(5)	Road Studs	nr			
7.7 ROAD SIGNS						
<i>Reflective road sign :</i>						
16	811(1)	Single pole, sign area up to 0.5m ²	nr	50	15,800	790,000
17	811(2)	Double pole, sign area up to 2.0m ²	nr	10	58,300	583,000
18	811(3)	Chevron warning sign	nr			
19	811(4)	Flag Type Sign	nr			
7.8 CONCRETE KERB INLETS						
20	813(1)	Kerb inlet	nr			
21	701(2)	Precast concrete Kerb Inlet slab (800x500x50mm thick)	m ²			
7.9 KILOMETRE POSTS						
22	815(1)	Provide ,Install and paint new kilometre post	nr	4	13,400.00	53,600.00
23	815(2)	Reposition existing kilometer post	nr			
24	815(3)	Paint existing kilometer post	nr			
7.10 MAINTENANCE OF CARRIAGEWAY						
25	1101(1)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 20mm & less in depth	m ²	100	830.00	83,000.00
26	1101(2)	Filling pot-holes and patch repairs with Asphalt concrete Cold mix (MC30), 75mm & less in depth	m ²	100	1,500.00	150,000.00
27	1101(1)	Filling pot holes and patch repairs with Asphalt concrete Cold mix (MC30), deeper than 75mm	m ²	100	2,000.00	200,000.00
28	401(1)	Filling pot holes and patch repairs with gravel	m ³			
Bill No. 7 Carried to Summary						18,529,600.00

