



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
MINISTRY OF PORTS & HIGHWAYS

ROAD DEVELOPMENT AUTHORITY

HAMBANTOTA HUB DEVELOPMENT PROJECT
CONSTRUCTION OF
EXTENSION OF SOUTHERN EXPRESSWAY
FROM WETIYA TO ANDARAWEWA

CONTRACT AWARDED TO
CHINA STATE CONSTRUCTION ENGINEERING CORPORATION LIMITED

CIVIL WORK CONTRACT NO: RDA/RNIP/HH/01

VOLUME 5

SCOPE OF WORK

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PRICED BILL OF QUANTITIES AND SCHEDULES

AUGUST 2013

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SCOPE OF WORK

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SCOPE OF WORKS

Project Description

The Southern Expressway from Colombo to Matara is being implemented in various stages. The section from Kottawa to Galle is in operation and the section from Galle to Matara (Godagama) is being constructed and will be opened soon. The extension of the expressway from Matara to Hambantota is identified as one of the key components in the development of the road network. The proposed extension has been divided into four sections as given below:

- Section 1 - Matara to Beliatte
- Section 2 - Beliatte to Wetiya
- Section 3 - Wetiya to Andarawewa
This section will be implemented under a separate project namely Hambantota Hub Project
- Section 4 - Mattala to Hambantota via Andarawewa

This project is schedule to be funded by EXIM Bank of China. This is a fully access controlled expressway approximately 96 km in length. The design speed is 120 km/hr. The formation of road will required cut embankment, fill embankment, viaduct and bridges.

The cut embankment will be formed to six lane while fill embankment will be formed to 4 lane in general keeping outer widening to accommodate 6 lane in future. The viaduct and bridges will generally be formed to four lane substructure.

This scope of works would cover section 3 from Wetiya to Andarawewa in an approximate length of 15 km.

Designs

The Contractor is required to carry out the detailed design of the entire works. The contractor is also required to carry out the design necessitated in remedying any defects in the works.

The detailed design shall be carried out in accordance with the following and all other requirements of the contract.

The Pavement Design shall be based on the following documents:

- Overseas Road Note 31 – Transport Research Laboratory, Fourth Edition, 1993
- A Guide to the Structural Design of Roads under Sri Lankan Conditions – RDA Publication

The Design of Structures shall be based on the following documents:

- Design Code BS 5400
- Bridge Design Manual – RDA Publication 1997

The Geometric Design shall be based on the following documents:

- Austroads -2009 (for Expressway)
- AASHTO-2004 (for Expressway)
- Guide to the Geometric Design of Roads - RDA Publication 1998 (for other than Expressway)

The detailed designs are required to be based on preliminary designs / outline designs / conceptual designs (if any) carried out by the Employer and given in the contract. The detailed design shall include major components such as plan and profile, cross sections, design of interchanges and bridges, over & under passes, drainage facilities, traffic sign and road marking, street lighting system, Design of safety devices & Landscaping, etc. The outcomes of the design, including working drawings, shall have sufficient details in compliance with the contract documents to the satisfaction of the Engineer. The designs require the approval of the Engineer.

The Contractor is required to carry out surveys and investigations necessary for the design which shall be deemed to be a part of the design.

Expressway Construction

General features of the project are as follows,

1. Carriageway to accommodate 4 lanes, two lanes per each direction of traffic flow, each lane being 3.6m wide.
2. Centre median to a width of 3.0 m
3. Outer Hard Shoulder to a width of 3m and an inner hard shoulder to a width of 1.2m on the carriageways of both directions of traffic.
4. Verges on either side of width 1.0m.

Construction of the expressway will consist of clearing or clearing and grubbing, demolition of structures and grading the designated corridor, raising the road to the formation level by forming the embankment, constructing the subbase, base and shoulders to the required thickness and width and constructing the surfacing to the required thickness and width with a wearing course and binder course, using hot mixed asphalt concrete. In addition to that other major activities involved are Construction of Viaduct, Construction of Interchanges, Construction of underpasses, Construction of overpasses, cut and fill, Construction of bridges, box type underpasses, culverts and drainage, Protection works, Construction of Toll system with related facilities and Soft ground treatment.

Maintenance of Existing Road Facilities Affected by Work

The contractor will be required to generally maintain the road section covered by the Contract and road facilities affected by the work, during the contract to ensure the safety of the public and residents and to ensure 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 and to ensure minimum disruption to flow of traffic to the satisfaction of the Engineer, the Engineer shall be entitled to employ a sub-contractor who shall be treated as a nominated sub contractor to carry out the required works and pay for such work done through the Contract. This shall not relieve the Contractor of any of his obligations under the Contract.

In addition to the above following incidental works are involved:

Guardrails, road signs, marking, lighting, traffic signals, communication optical cable, landscaping, ect.

Relocation of utility (such as electricity and telegraphic) service lines, water supply pipes, and railway facilities (if any).

Investigation & Surveys

The contractor is required to carry out detail investigation & ground surveys necessary for the design.

Other Aspects

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.

Items not Included but Required

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.

Quality Control

The quality control in the contract will be required to be carried out in accordance with the technical specifications.

Environmental Management Action Plan (EMAP)

The contractor will be required to adhere to all environmental requirements outlined in Appendix A of Particular Conditions of Contract (PCC) & Technical Specifications. The actions resulting from the compliance of clauses in EMAP are incidental to the Works and no separate payment will be made.

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PREAMBLE TO
THE BILL OF QUANTITIES

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Bill of Quantities

PREAMBLE

The Bill of Quantities shall be read in conjunction with the instructions to Bidders, General Conditions of Contract, Contract Data, Bidding Data, General Specifications, Particular Specifications and Drawings.

1. The quantities given in the Bill of Quantities are estimated and provisional, and give to provide a common basis for bidding. The quantities are not to be used by the contractor to order materials. The Contractor will be responsible to assess his own purchasing requirements based on approved Drawings and/or Specifications etc.
2. Measurements will be for the actual quantities of work ordered and carried out, as measured in accordance with these Preambles and the Measurement and Basis of Payment Clauses in the Specifications and the Clauses of the Contract Documents. Measurement will be made using units listed below in these Preambles.
3. Payment will be made in accordance with the Basis of Payment Clauses of the Specifications and the Clauses of the Contract Documents at the unit rates and prices bid for the appropriate pay items in the priced Bill of Quantities, where applicable, otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
4. Whenever the method of measurement is not clear from the document available, the principles as given in the Civil Engineering Method of Measurement (CEMM-3).
5. The rates and priced tendered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all constructional plant, labour, supervision, material, erection, maintenance, insurance, overheads, profit, taxes and duties/levies, royalties, together with all general risks, liabilities and obligations (including environmental impact mitigation measures and safety provisions) set out or implied in the Contract.
6. The rates and prices shall be quoted entirely in the Sri Lanka currency of Rupees and Cents.
7. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
8. The whole cost of complying with the provisions of the Contract shall be included in the pay items provided in the Bill of Quantities, in accordance with the Method of Measurement, Basis of Payment Clauses of the Specification, and where no pay items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related items Works.

9. General direction and descriptions of works and materials are abbreviated and do not necessarily give the full extent of such works. The Contractor must also refer to the other Contract Documents to satisfy himself as to the full requirements of such works prior to entering rates or prices against each item in the Bill of Quantities.
10. Provisional Sums, included and so designated in the Bill of Quantities shall be expended in whole or in part solely at the direction and discretion of the Engineer in accordance with the Contract.
11. Errors will be corrected by the Employer for any arithmetic errors.
12. Where the determination for payment purposes of the quantity of any item of work depends upon the measurement of existing features or ground levels and the like, then prior to carrying out any operations which might affect such measurement, the Contractor shall first take such levels and measurement as the Engineer may direct and, after the Engineer has had the opportunity to check the same, they shall be certified as agreed by both the Engineer and the Contractor. In the event that the Contractor fails to observe the above procedure, the Engineer shall determine the quantity to be assumed for payment purposes using the best information available to him, and his decision in the matter shall be final.
13. Bidder should visit the site and acquaint themselves with all existing conditions, the nature and extent of work to be done under this contract ascertaining the conditions governing access to the site, the extent of work and accordingly include for, in their prices.
14. Bill No. 100 – Preliminary and General
 - a. Items provided under Bill No. 100 – Preliminary and general are intended to cover all aspects of the works described in Section 1 – General of the Particular Specifications or elsewhere in the Contract Documents in connection with required facilities and services for the Engineer and his Representative's team on site, and any such requirements not directly mentioned in the item descriptions shall be deemed to be included in the items rates as overheads or incidentals.
 - b. Items in Bill No. 100 – Preliminary and General expressed on monthly basis shall be measured using either the actual period of application or the total construction period during which the use of the relevant facilities is required or the maximum Contract Period allowed for in the Contract, whichever, in the opinion of the Engineer, is appropriate. In case the Contract overruns by fault of the Contractor, any extension in time required for the completion of the works shall not be reflected in additional payment months and all facilities shall continue to be provided to the Engineer at the Contractors expenses. Items expressed on monthly basis shall be measured to the nearest day. The actual calendar days in any month shall be used in deciding the fraction.

- c. In the event that a house or office or vehicle is not required for use by the Engineer for any period equal to or greater than one month during the Contract, the Engineer shall notify the Contractor, the respective facility shall be locked or immobilized by the Engineer and payment under the respective provision of services etc. items in the case of housing or mobile office and the respective item for the vehicle that has been immobilized, shall be discontinued for the period the facility is not used.

15. Day works

The rates of labour, equipment & materials in Bill No. 800, Day works shall be for works ordered by the Engineer to be performed under the provisions of the Contract Conditions Clause 13.6 Dayworks. The rates shall be payable only for actual and equipment engaged and shall include all supervision, tools, consumables, overtime premiums, overheads, profits and all other costs. The rates for equipment shall include provisions of driver, operator or attendant. Actual working time of equipment shall not include period when the equipment is idling or is broken down.

The rates for materials shall be the cost of purchase, including any custom duty, freight handling, transportation and all expenses incurred including the transport cost of the material to site. Payments for materials actually used in Dayworks shall be at the unit rates contained in Bill No. 800 and at the percentage rate stated in contract data which shall be in respect of all other costs incurred and profit and overhead. **The percentage rate is applicable to the material rate only is not applicable to labour and equipment rates.**

16. Provisional Sum

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

Provisional Sums are represented with the words 'Provisional Sum' or "PS" entered under the description.

The total payment to the Contractor under this BOQ item will be assessed by applying the percentage rate provided in the Contract Data on actual amount of provisional sum spent in the Contract.

17. Payment of Lump Sums for Items

Lump Sum items stipulated, 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.

18. Shifting of Utilities.

A Provisional Sum has also been provided in the BOQ to meet the expenses required to be incurred for relocation of the existing utilities. The Contractor has to arrange for the shifting in commensuration with his construction program in detailed PCC clause no. 8.3 by engaging the concerned authorities. The expenses incurred by the respective authorities shall be paid through the Contractor. The Contractor shall be entitled to reimbursement of the actual payments made to the concerned authorities plus the percentage rate mentioned in the Contract Data on the actual cost towards his overhead and profit.

19. The following units of measurement and abbreviations are used in the Bill of Quantities:

UNIT	ABBREVIATION
Lump Sum	sum
Provisional Sum	PS
Number	nr
Hour	hr
Day	d
Month	nth
Hectare	ha
Litre	litre
Metre	m
Square Metre	sq.m
Cubit Metre	cu.m
Kilogramme	kg
Metric Ton	tonne
Cubic Metre Kilometre	km.cu.m

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PRICED BILL OF QUANTITIES
AND SCHEDULES

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Description	Amount China State (SLRs.)
Expressway Section 3	26,855,345,493.30
HR 6 & 10	2,048,377,179.60
HR 21	604,782,000.00
Total -1	29,508,504,672.90
PS for contingencies7%	2,065,595,327.10
Total -2	31,574,100,000.00

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**EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO
HAMBANTHOTA**

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

CHINA STATE CONSTRUCTION ENGINEERING CORPORATION

Bill No.	Description	BOQ Amount (SLRs) China State
100	Preliminaries and General Bill No 100A	1,657,273,628.30
	Preliminaries and General Bill No 100B	365,040,000.00
200	Earth Works	8,188,914,240.00
300	Base Course	1,425,486,000.00
400	Pavement	2,843,991,100.00
550A	Minor Structures	2,074,036,515.00
550B	Road and River Bridges	4,963,724,160.00
550D	Concrete Underpasses	772,660,700.00
600	Incidentals Construction	2,457,462,050.00
800	Day works (Labour, Plant, Material)	36,782,100.00
900	Provisinal Sum	2,069,975,000.00
	Sub Total - A	26,855,345,493.30
	PS for contingencies 7% of (A)	1,879,874,184.53
	Total Amount	28,735,219,677.83

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL 1A : PRELIMINARY AND GENERAL

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
		Mobilization				
1		Mobilization of Contractor's facilities and Plant/ Equipment	LS	Item	300,000,000.00	300,000,000.00
2		De- Mobilization of Contractor's facilities and Plant/ Equipment	LS	Item	45,000,000.00	45,000,000.00
		Insurance & Bonds				
3		Allow for cost of providing Insurances	LS	Item	210,000,000.00	210,000,000.00
4		Allow for cost of providing Performance Security & all other necessary bonds	LS	Item	99,373,628.30	99,373,628.30
		Office for Engineer				
5		Provide & equip office for Engineer Type A	nr	1.00	25,000,000.00	25,000,000.00
6		Provide & equip office for Engineer & Employer Type B	nr	2.00	16,000,000.00	32,000,000.00
7		Furnishing Engineer's offices Type A	nr	1.00	20,000,000.00	20,000,000.00
8		Furnishing Engineer's & Employer's offices Type B	nr	2.00	12,500,000.00	25,000,000.00
		Provide Laboratories for Engineer				
9		Main laboratory	nr	1.00	20,000,000.00	20,000,000.00
10		Secondary laboratory	nr	1.00	11,000,000.00	11,000,000.00
11		Supply of laboratory equipments	PS			40,000,000.00
		Provide and Maintenance				
12		Survey equipment for Engineer	PS			15,000,000.00
13		Supply of additional Digital/Vedio cameras for Engineer & Employer (if required)	PS			1,500,000.00
14		Supply of additional Computers and printers for Engineer & Employer(if required)	PS			5,000,000.00
		Designs				
15		Investigation , comprehensive design and preparation of drawings for longitudinal and cross sectionals for full pavement width	LS		414,500,000.00	414,500,000.00
		Administrative costs				
16		Administrative costs for the Project Management Unit	PS			30,000,000.00
		Housing for Engineer & Employer				
17		Provide & equip housing for Engineer & Employer Type A	nr	2.00	7,200,000.00	14,400,000.00
18		Provide & equip housing for Engineer & Employer Type A1	nr	1.00	6,800,000.00	6,800,000.00
19		Provide & equip housing for Engineer & Employer Type B	nr	2.00	6,700,000.00	13,400,000.00
20		Furnishing & equipment for Engineers & Employer housing Type A	nr	2.00	14,000,000.00	28,000,000.00
21		Furnishing & equipment for Engineers housing Type A1	nr	1.00	13,500,000.00	13,500,000.00
21		Furnishing & equipment for Engineers & Employer's housing Type B	nr	2.00	13,000,000.00	26,000,000.00

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Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
		Other Facilities for Engineer				
22		Stationery & other consumables for Engineer/ Employer	PS	Item	7,500,000.00	7,500,000.00
23		Labourers (classified unskilled)	PS	Item		20,000,000.00
24		Survey Assistant (Classified skilled)	PS	Item		10,000,000.00
25		Secretary	PS	Item		3,000,000.00
26		Administrator/ Clerk	PS	Item		5,000,000.00
27		Office Assistants	PS	Item		6,000,000.00
28		Cad Draughtsperson	PS	Item		10,000,000.00
29		Lab Assistants	PS	Item		25,000,000.00
		Vehicles for Engineer				
30		Provide Vehicle Type 1A(4 wheel Jeep) as specified in appendix 4 of Volume 3	PS	Item		18,000,000.00
31		Provide Vehicle Type 1B(4wheel Double cab) as specified in appendix 4 of Volume 3	PS	Item		50,000,000.00
32		Provide Vehicle Type 2(Petrol Car) as specified in appendix 4 of Volume 3	PS	Item		10,000,000.00
33		Provide Vehicle Type 3(Passenger Van) as specified in appendix 4 of Volume 3	PS	Item		18,000,000.00
34		Provide Vehicle Type 4 (4 Stroke Motorcycles) as specified in appendix 4 of Volume 3	PS	Item		1,600,000.00
		Vehicles for Employer				
35		Provide Vehicle Type 1A(4 wheel Jeep) as specified in appendix 4 of Volume 3	PS	Item		18,000,000.00
36		Provide Vehicle Type 1B(4wheel Double cab) as specified in appendix 4 of Volume 3	PS	Item		30,000,000.00
37		Provide Vehicle Type 2 (Petrol Car) as specified in appendix 4 of Volume 3	PS	Item		10,000,000.00
		Project Sign Board				
38		Provide and maintain Project Sign Board	nr	2.00	100,000.00	200,000.00
39		Provide and maintain Project Plaques	nr	2.00	150,000.00	300,000.00
		Progress Photographs for Engineer				
40		Progress photographs including video tapes	mth	24.00	800,000.00	19,200,000.00
		Carried Forward to Main Summary				1,657,273,628.30

EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 1B: PRELIMINARY & GENERAL

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
		Traffic Control and Diversions				
1		Management, Safety control and temporary diversion of traffic, including provision for a general traffic management plan	mth	24.00	2,000,000.00	48,000,000.00
		Care of the Environment				
2		Compliance with Environmental activities required in addition to contractual obligations	mth	24.00	2,500,000.00	60,000,000.00
		Service and Maintenance				
3		Office for Engineer Type A	mth	28.00	750,000.00	21,000,000.00
4		Office for Engineer & Employer Type B	mth	56.00	450,000.00	25,200,000.00
		Maintenance of Laboratories for Engineer				
5		Maintenance of laboratory & testing equipment	mth	56.00	500,000.00	28,000,000.00
		Maintenance of Supplied Vehicles for Engineer				
6		Maintenance of Supplied Vehicle Type 1A	veh-mon	28.00	200,000.00	5,600,000.00
7		Maintenance of Supplied Vehicle Type 1B	veh-mon	140.00	225,000.00	31,500,000.00
8		Maintenance of Supplied Vehicle Type 2	veh-mon	28.00	160,000.00	4,480,000.00
9		Maintenance of Supplied Vehicle Type 3	veh-mon	56.00	200,000.00	11,200,000.00
10		Maintenance of Supplied Vehicle Type 4	veh-mon	168.00	120,000.00	20,160,000.00
		Maintenance of Supplied Vehicles For Employer				
11		Maintenance of Supplied Vehicle Type 1A	veh-mon	28.00	200,000.00	5,600,000.00
12		Maintenance of Supplied Vehicle Type 1B	veh-mon	84.00	255,000.00	21,420,000.00
13		Maintenance of Supplied Vehicle Type 2	veh-mon	28.00	160,000.00	4,480,000.00
		Service and Maintenance				
14		Housing for Engineer & Employer Type A	mth	56.00	600,000.00	33,600,000.00
15		Housing for Engineer Type A1	mth	28.00	600,000.00	16,800,000.00
16		Housing for Engineer Type B	mth	56.00	500,000.00	28,000,000.00
		Carried Forward to Main Summary				365,040,000.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No.200 : EARTH WORK

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	201	Clearing				
1	201.001	General clearing	ha.	70.00	800,000.00	56,000,000.00
2	201.002	Clearing & grubbing	ha.	50.00	900,000.00	45,000,000.00
3	201.003	Remove trees dia 300mm to 900 mm	nr	6,500.00	6,475.00	42,087,500.00
4	201.003	Remove trees over dia 900 to 1200mm	nr	2,000.00	10,090.00	20,180,000.00
5	201.003	Remove trees over dia 1200mm	nr	3,000.00	14,190.00	42,570,000.00
	202	Demolish and Remove Buildings, Waterways				
6	202.001	Building, floor area not exceeding 50sq.m	nr	18.00	125,000.00	2,250,000.00
7	202.002	Building, floor area 50 - 100sq.m	nr	10.00	250,000.00	2,500,000.00
8	202.003	Building, floor area 100 - 150sq.m	nr	3.00	375,000.00	1,125,000.00
9	202.004	Building, floor area 150 - 200sq.m	nr	1.00	500,000.00	500,000.00
10	202.005	Building, floor area 200 - 250sq.m	nr	1.00	625,000.00	625,000.00
11	202.006	Building, floor area 250 - 300sq.m	nr	1.00	750,000.00	750,000.00
12	202.01	Water well depth up to 3.00m	nr	6.00	59,500.00	357,000.00
13	202.011	Water well depth 3.00 - 6.00m	nr	8.00	88,850.00	710,800.00
14	202.012	Water well depth 6.00 - 10.00m	nr	4.00	133,225.00	532,900.00
15	202.013	Septic tank	nr	30.00	95,750.00	2,872,500.00
16	202.015	Culverts	nr	2.00	150,000.00	300,000.00
	203	Dismantling Structures				
17	203.001	Masonry	cu.m	2,000.00	5,320.00	10,640,000.00
18	203.002	Concrete	cu.m	650.00	9,310.00	6,051,500.00
19	203.003	Rubble masonry	cu.m	55.00	7,690.00	422,950.00

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Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	207	Excavation and Embankment				
20	207.001	Stripping & stockpiling top soil	cu.m	20,000.00	790.00	15,800,000.00
21	207.002	Unclassified excavation	cu.m	131,100.00	1,425.00	186,817,500.00
22	207.003	Excavation rock (to crusher plant)	cu.m	7,900.00	6,980.00	55,142,000.00
23	207.004	Excavation rock (to embankment)	cu.m	8,300.00	7,860.00	65,238,000.00
24	207.005a	Excavation unsuitable soil 0 m to 3 m depth	cu.m	87,400.00	2,090.00	182,666,000.00
25	207.005b	Excavation unsuitable soil 3 m to 6 m depth	cu.m	43,680.00	2,860.00	124,924,800.00
26	207.005c	Excavation unsuitable soil over 6 m depth	cu.m	17,470.00	3,630.00	63,416,100.00
27	207.005d	Disposal of excavated unsuitable material beyond 5km from the ROW	cu.m/km	223,000.00	80.00	17,840,000.00
28	207.007	Filling with selected material including boulders & RUC4 using ROW Material	cu.m	8,300.00	5,910.00	49,053,000.00
29	207.007a	Filling with selected material including boulders & RUC4 using Material from borrow	cu.m	40,000.00	3,890.00	155,600,000.00
30	207.008	Filling with unclassified material using available material within ROW	cu.m	120,000.00	1,530.00	183,600,000.00
31	207.008a	Filling with unclassified material from borrow	cu.m	1,531,700.00	1,630.00	2,496,671,000.00
32	207.009	Geotextile material class B	sq.m	150,000.00	1,070.00	160,500,000.00
33	207.01	High strength Geotextile 200/50	sq.m	50,000.00	950.00	47,500,000.00
34	207.011	High strength Geotextile (600/50)	sq.m	200,000.00	1,800.00	360,000,000.00
	211	Borrow Excavation for Filling				
35	211.001	Unclassified borrow excavation	cu.m	1,531,700.00	1,170.00	1,792,089,000.00
36	211.002	Rock borrow excavation	cu.m	40,000.00	6,060.00	242,400,000.00
	212	Structural Excavation & Filling				
37	212.001	Unclassified excavation for drainage structures	cu.m	30,667.00	3,950.00	121,134,650.00
38	212.002	Unclassified excavation for minor structures (retaining walls)	cu.m	5,148.00	4,100.00	21,106,800.00
39	212.003	Unsuitable excavation for drainage structures	cu.m	15,334.00	3,550.00	54,435,700.00
40	212.004	Unsuitable excavation for minor structures (retaining walls)	cu.m	2,574.00	3,650.00	9,395,100.00
41	212.005	Rock excavation for drainage structures (provisional)	cu.m	5,111.00	5,510.00	28,161,610.00
42	212.006	Rock excavation for minor structures (provisional)	cu.m	858.00	5,510.00	4,727,580.00
43	212.007	Structural backfill for drainage structures (using 0-50 mm aggregate material)	cu.m	14,650.00	7,650.00	112,072,500.00
44	212.008	Structural backfill for minor structures (retaining walls) (using 0-50 mm aggregate material)	cu.m	1,400.00	7,650.00	10,710,000.00
45	212.009	Geotextile material class B	sq.m	16,000.00	1,070.00	17,120,000.00
	217	Special Rock Fill				
46	217.001	Special rock fill 10 mm < 20 mm (provisional)	cu.m	3,000.00	7,950.00	23,850,000.00
47	217.002	Special rock fill 50 mm < 150 mm (provisional)	cu.m	18,000.00	7,690.00	138,420,000.00
48	217.003	Fine aggregate filter (provisional)	cu.m	700.00	6,510.00	4,557,000.00
49	217.004	Shot rock	cu.m	300.00	19,150.00	5,745,000.00

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	218	Slope Protection				
50	218.002	Grouted stone pitching	sq.m	15,000.00	15,150.00	227,250,000.00
51	218.003	Gabion	cu.m	2,000.00	18,750.00	37,500,000.00
52	218.004	Reno mattress	cu.m	4,000.00	11,750.00	47,000,000.00
53	218.006	Random rubble masonry	cu.m	2,000.00	14,540.00	29,080,000.00
54	218.007	Precast concrete facing panel	sq.m	800.00	18,000.00	14,400,000.00
55	218.008	Anchored earth fill	cu.m	5,000.00	35,000.00	175,000,000.00
56	218.009	Granular backfill	cu.m			
57	218.01	Surface ceiling in G 15 (20) concrete, 150 mm thick	sq.m	7,000.00	3,150.00	22,050,000.00
58	218.011	Grade 20(20) concrete for berm drains, drain, cascade etc	cu.m	3,345.00	23,050.00	77,102,250.00
59	218.012	Swan formwork	sq.m	4,000.00	3,080.00	12,320,000.00
60	218.012a	Wrought formwork	sq.m	18,000.00	3,135.00	56,430,000.00
61	218.013	Reinforcing steel bar	kg	1,200,000.00	285.00	342,000,000.00
62	218.014	L Shaped 16 mm galvanized double tie bar with non-shrink grout in 1.5 m length (hole = 150 mm dia.)	nr	1,500.00	22,500.00	33,750,000.00
63	218.015	16 mm Galvanized rebar with end tightening arrangement and non-shrink grout in 1.5 m length (hole = 100 mm dia)	m	800.00	5,500.00	4,400,000.00
64	218.016	wheep hole with filtering arrangement	nr	2,000.00	2,960.00	5,920,000.00
65	218.017	Sealing with non-shrink and water proofing cementation mix	litre			
66	218.018	Filling with 20/20 concrete	cu.m	180.00	23,050.00	4,149,000.00
67	218.019	Drilling and installing 25 mm L shaped hot dip galvanized dowels (max. 3 m depth)	m	300.00	23,500.00	7,050,000.00
68	218.02	Fixing of relief drains on cavities where necessary (1 m length)	nr	180.00	18,500.00	3,330,000.00
69	218.021	Filling and compacting using lateric soil for cavities less than 0.5 m deep	sq.m	1,000.00	1,480.00	1,480,000.00
70	218.022	Filling with random rubble masonry for cavities larger than 0.5 m deep	cu.m	500.00	7,270.00	3,635,000.00
71	218.023	Installing dowels on soil	m	300.00	2,800.00	840,000.00
72	218.024	Installing dowels on rock	m	500.00	4,800.00	2,400,000.00
73	218.025	Layer of porus fabric wrapped in filter fabric drain	sq.m	200.00	2,450.00	490,000.00
74	218.026	Impermeable fabric	sq.m	N/A		-
75	218.027	Fixing of 50 mm dia PVC pipe (length 0.5 m) including necessary drilling weathered rock	nr	100.00	17,100.00	1,710,000.00
76	218.028	Fixing of relief drain on rock surface	nr	150.00	21,000.00	3,150,000.00
77	218.029	High yield deformed 25 mm L shaped hot dip galvanized dowels (-1 m) with cementious non-shrink grout (25 N/mm2 at 7 days) including drilling and installation on weathered rock	nr	125.00	18,500.00	2,312,500.00

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
78	218.03	High yield deformed 25 mm L shaped hot dip galvanized dowels (-0.6 m) with cementitious non-shrink grout (25 N/mm ² at 7 days) including drilling and installation on weathered rock	nr	125.00	8,750.00	1,093,750.00
79	218.031	Concrete/shotcrete (dry batch) including supplying and installation	sq.m	3,500.00	10,750.00	37,625,000.00
80	218.032	Wiremesh including installation 100x100x6mm	sq.m	1,300.00	1,450.00	1,885,000.00
81	218.033	Wiremesh including installation 50x50x3.15mm	sq.m	2,000.00	1,450.00	2,900,000.00
	228	Subgrade Preparation				
82	228.001	Compacted subgrade (provisional)	sq.m	125,000.00	125.00	15,625,000.00
	229	Shoulders and Ditches				
83	229.001	1.00m wide rounding to shoulder	m	25,000.00	1,100.00	27,500,000.00
84	229.002	Ditch trimming	m	2,500.00	350.00	875,000.00
	240	Cleaning Existing Culverts, Inlets & Manholes				
85	240.001	Clean culvert (provisional)	nr	20.00	11,500.00	230,000.00
86	240.002	Clean inlet (provisional)	nr	12.00	9,750.00	117,000.00
87	240.003	Clean manhole (provisional)	nr	15.00	9,750.00	146,250.00
Total of Bill No. 200 Carried to Main Summary						8,188,914,240.00

EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No 300 - BASE COURSES

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	307	Crushed Aggregate Base Course				
1	307	Graded crushed rock base course	cu.m	97,700.00	7,980.00	779,646,000.00
	314	Sub base				
2	314	Granular sub base	cu.m	108,000.00	5,980.00	645,840,000.00
Total of Bill No. 300 Carried to Main Summary						1,425,486,000.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 400 - PAVEMENT

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	401	Hot Mix Asphalt Base Wearing and Patching & Levelling Courses				
1	401.001	Hot mix asphalt concrete binder course including bituminous materials	tonne	71,300.00	21,000.00	1,497,300,000.00
2	401.002	Hot mix asphalt concrete wearing course including bituminous materials	tonne	49,200.00	22,000.00	1,082,400,000.00
	408	Tack Coat				
3	408.001	Tack coat	litre	404,650.00	380.00	153,767,000.00
	409	Prime Coat				
4	409.001	Prime coat	litre	390,830.00	270.00	105,524,100.00
	415	Remove Existing Pavement Surface				
5	415.001	Remove existing pavement surface	PS		5,000,000.00	5,000,000.00
	Total of Bill No. 400 Carried to Main Summary					2,843,991,100.00

EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 550A - MINOR STRUCTURES

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State		
					Rate	Amount (SLRS)	
	565	Concrete Work for Pipe and Box Culverts, Retaining walls and Drains					
		Class 30/20 Concrete					
1	565.001	Top, bottom slabs, walls, Head walls, apron, toe walls and Wing wall etc	cu.m	8,075.00	27,190.00	219,559,250.00	
		Class 25/20 Concrete					
2	565.002	Drains. Retaining walls etc.	cu.m	2,000.00	25,420.00	50,840,000.00	
		Class 20/20 Concrete					
3	565.003	Drains. Retaining walls etc.	cu.m	18,450.00	23,050.00	425,272,500.00	
		Class 15/20 Concrete					
4	565.004	Blinding	cu.m	4,785.00	21,000.00	100,485,000.00	
		Formwork					
5	565.005	Wrought formwork	sq.m	71,377.00	3,135.00	223,766,895.00	
6	565.006	Sawn formwork	sq.m	70,113.00	3,080.00	215,948,040.00	
		Reinforcing Steel					
7	565.007	Reinforcing steel bar	kg	1,698,438.00	285.00	484,054,830.00	
	566	Surface Drainage					
8	566.001	Surface drainage system for storm water inclusive of pre-cast kerb, catch pit and shoulder paving in asphalt concrete	PS			50,000,000.00	
	554	Driven Piles - Pile Embankment area					
9	554.006	400x400mm precast concrete pile for piled embankment.	m	10,000.00	22,000.00	220,000,000.00	
10	554.007	Pile caps to piled embankment including formwork & reinforcement	cu.m	1,380.00	59,500.00	82,110,000.00	
11	554.008	Pile Load test	PS			2,000,000.00	
	Total of Bill No. 550A Carried to Main Summary						2,074,036,515.00

EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

**BILL No 550 B - ROAD AND RIVER BRIDGES INCLUDING VIA DUCTS AND OVER PASS -
SUMMARY**

Bill No.	Description	China State
		Total Amount (Rs.)
200	Earth Works	70,113,650.00
550	Structures	4,857,611,760.00
600	Incidental Contruction	35,998,750.00
Total of Bill No. 550B Carried to Main Summary		4,963,724,160.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wctiya to Andarawewa Ch 56+000 to 71+000 km

BILL No 550 B - ROAD AND RIVER BRIDGES INCLUDING VIA DUCTS AND OVER PASS

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	SUB BILL No	200 - EARTHWORK				
	212	Structural Excavation including dewatering shoring coffer damping, sheet piling etc				
1	212.012	Unclassified excavation	cu.m	7,500.00	4,250.00	31,875,000.00
2	212.013	Unsuitable excavation	cu.m	3,650.00	3,850.00	14,052,500.00
3	212.014	Rock excavation	cu.m	1,250.00	8,060.00	10,075,000.00
4	212.017	Structural backfill for structures (using 0-50 mm aggregate material)	cu.m	1,835.00	7,690.00	14,111,150.00
Total of 550B Bill No. 200 Carried to Summary of 550B						70,113,650.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawcwa Ch 56+000 to 71+000 km

ROAD AND RIVER BRIDGES INCLUDING VIA DUCTS AND OVER PASS

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	SUB BILL	550 - STRUCTURE				
	551	Structural Concrete				
		Class 40/20 Concrete				
1	551.001	Decks, cross beams and diaphragms etc	cu.m	3,172.00	30,150.00	95,635,800.00
		Class 30/20 Concrete				
2	551.002	Structure elements (Tie beams, pile caps, pier, pier head, abutment, approach slabs and parapet etc)	cu.m	13,000.00	27,190.00	353,470,000.00
		Class 15/20 Concrete				
3	551.008	Blinding	cu.m	300.00	21,000.00	6,300,000.00
		Formwork				
4	551.009	Wrought formwork	sq.m	3,900.00	3,135.00	12,226,500.00
5	551.010	Sawn formwork	sq.m	7,000.00	3,080.00	21,560,000.00
	552	Reinforcing Steel				
		Reinforcement in Bridges				
6	552.001	Reinforcing steel bar	kg	2,742,000.00	285.00	781,470,000.00
	553	Prestressed Concrete Members				
		Fabrication of PC post tension-T Girders supplied at site				
7	553.001	- 30m long type I	nr	134.00	3,880,000.00	519,920,000.00
8	553.002	- 30m long type II	nr	100.00	3,880,000.00	388,000,000.00
9	553.003	- 25m long	nr	30.00	3,750,000.00	112,500,000.00
10	553.004	- 20m long	nr	10.00	3,480,000.00	34,800,000.00
		Launching of PC-T Girders in to positions including stressing and grouting of continuous joints				
11	553.005	- 30m long type I	nr	134.00	1,780,000.00	238,520,000.00
12	553.006	- 30m long type II	nr	100.00	1,780,000.00	178,000,000.00
13	553.007	- 25m long	nr	30.00	1,600,000.00	48,000,000.00
14	553.008	- 20m long	nr	10.00	1,500,000.00	15,000,000.00



Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
		Testing of Beams				
15	553.005	- 30m long type I	nr	3.00	7,475,000.00	22,425,000.00
16	553.006	- 30m long type II	nr	2.00	7,475,000.00	14,950,000.00
17	553.007	- 25m long	nr	1.00	6,975,500.00	6,975,500.00
18	553.008	- 20m long	nr	1.00	6,432,000.00	6,432,000.00
	555	Bearing Devices				
19	555.001	Elastomeric bearing pads	nr	548.00	110,000.00	60,280,000.00
	562	Prefomed Elastomeric Joint Sealer				
20	562.001	Expansion joint	m	525.00	180,000.00	94,500,000.00
	554	Piling work				
21	554.001	Cast in situ piles(1200mm dia.) of grade 30 concrete (including sonic logging test for each piles) install and socketing bed rock.	m	2,968.00	278,000.00	825,104,000.00
22	554.002	Cast in situ piles(1500mm dia.) of grade 30 concrete (including sonic logging test for each piles) install and socketing bed rock.	m	585.00	377,640.00	220,919,400.00
23	554.003	Cast in situ piles(1800mm dia.) of grade 30 concrete (including sonic logging test for each piles) install and socketing bed rock.	m	1,732.00	442,580.00	766,548,560.00
		Static Load Testing of Piles				
24	554.001	Load testing of 1200mm dia. Bored piles to a load of 1050 tonnes	nr	1.00	2,875,000.00	2,875,000.00
25	554.002	Load testing of 1500mm dia. Bored piles to a load of 1650 tonnes	nr	1.00	2,975,000.00	2,975,000.00
26	554.003	Load testing of 1800mm dia. Bored piles to a load of 2200 tonnes	nr	1.00	3,125,000.00	3,125,000.00
		Pile Dynamic Analysis Test				
27	554.001a	Load testing of 1200mm dia. Bored piles	nr	7.00	2,200,000.00	15,400,000.00
28	554.002a	Load testing of 1500mm dia. Bored piles	nr	2.00	2,350,000.00	4,700,000.00
29	554.003a	Load testing of 1800mm dia. Bored piles	nr	2.00	2,500,000.00	5,000,000.00
Total of 550B Bill No. 550 Carried to Summary of 550B						4,857,611,760.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No.550B - ROAD AND RIVER BRIDGES

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
		600 - INCIDENTAL CONSTRUCTION				
		Miscellaneous				
1	600.001	Bridge Catch Pit	nr	50	30,000.00	1,500,000.00
2	600.002	Bridge Drainage Pipe PVC Ø200mm	m	600	13,000.00	7,800,000.00
3	600.003	Bridge mesh fence (Type- 3) Before Highway Bridges	m	16	35,000.00	560,000.00
4	600.004	Bridge Safety Net for Highway Bridge	sq.m.	180	11,700.00	2,106,000.00
5	600.005	Clay Puddle	cu.m	68	4,750.00	323,000.00
6	600.006	P.V.C.. Pipe 75mm dia	m	103	3,250.00	334,750.00
7	600.007	Precast Concrete Barrier	m	500	25,000.00	12,500,000.00
8	600.008	P.V.C.. Pipe 110mm dia(on Bridge)	m	1,500	7,250.00	10,875,000.00
Total of 550B Bill No. 600-Total Carried to Summary of 550B						35,998,750.00

EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 550D - CONCRETE UNDERPASSES

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
		200 - EARTHWORK				
	212	Structural Excavation				
1	212.024	Unclassified excavation for concrete underpasses	cu.m	2,585.00	4,250.00	10,986,250.00
2	212.025	Unsuitable excavation for concrete underpasses	cu.m	1,295.00	3,850.00	4,985,750.00
3	212.026	Rock excavation for concrete underpasses	cu.m	465.00	8,060.00	3,747,900.00
4	212.027	Structural backfill for concrete underpasses (using 0-50 mm aggregate material)	cu.m	6,500.00	7,690.00	49,985,000.00
		Sub Total				69,704,900.00
	551	Reinforced Concrete Underpasses				
		Class 30/20 Concrete				
5	551.021	Top, bottom, walls, approach slabs, Head walls and toe walls	cu.m	9,900.00	27,190.00	269,181,000.00
		Class 15/20 Concrete				
6	551.024	Blinding	cu.m	291.00	21,000.00	6,111,000.00
		Formwork				
7	551.025	Wrought formwork	sq.m	9,480.00	6,000.00	56,880,000.00
8	551.026	Sawn formwork	sq.m	6,710.00	3,080.00	20,666,800.00
9	551.027	Water stops to specification clause 708.10	m	680.00	8,500.00	5,780,000.00
	552	Reinforcing Steel				
10	552.001	Reinforcing Steel bar	kg	1,208,200.00	285.00	344,337,000.00
		Sub Total				702,955,800.00
Total of Bill No. 550D Carried to Main Summary						772,660,700.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 600 - INCIDENTAL CONSTRUCTION

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	604	Pipe Culverts				
		Concrete Pipes				
1	604.001	Reinforced concrete pipe dia. 450 mm	m	10.00	19,500.00	195,000.00
2	604.002	Reinforced concrete pipe dia. 600 mm	m	15.00	29,550.00	443,250.00
3	604.003	Reinforced concrete pipe dia. 900 mm	m	200.00	41,370.00	8,274,000.00
4	604.005	Reinforced concrete pipe dia. 1,200 mm	m	100.00	95,000.00	9,500,000.00
5	604.006	Reinforced concrete pipe dia. 1,500 mm	m	8.00	115,750.00	926,000.00
		End Sections				
6	604.007b	450 mm dia (RRM only)	nr	4.00	19,500.00	78,000.00
7	604.008b	600 mm dia (RRM only)	nr	6.00	25,400.00	152,400.00
8	604.009b	900 mm dia (RRM only)	nr	40.00	37,800.00	1,512,000.00
9	604.011b	1,200 mm dia (RRM only)	nr	20.00	78,000.00	1,560,000.00
10	604.012b	1,500 mm dia (RRM only)	nr	2.00	101,000.00	202,000.00
		Bedding of Pipes				
11	604.015	Class C	cu.m	130.00	12,750.00	1,657,500.00
	605	Manholes and Inlets				
12	605.001	Drop inlet 900 x 800 x 1,000 (maximum pipe size 450 mm dia.)	nr	4.00	54,000.00	216,000.00
13	605.002	Drop inlet 900 x 1,200 x 1,300 (maximum pipe size 600 mm dia.)	nr	8.00	91,750.00	734,000.00
14	605.003	Drop inlet 900 x 1,300 x 1,400 (maximum pipe size 900 mm dia.)	nr	20.00	143,500.00	2,870,000.00
15	605.004	Drop inlet 900 x 1,500 x 1,600 (maximum pipe size 1,200 mm dia.)	nr	12.00	178,600.00	2,143,200.00
16	605.005	Drop inlet 900 x 1,900 x 1,900 (maximum pipe size 1,500 mm dia.)	nr	10.00	204,300.00	2,043,000.00
	606	Underdrains				
17	606.001	150 mm pipe underdrain (provisional)	m	550.00	4,300.00	2,365,000.00
18	606.002	Fabric lined aggregate underdrains (provisional)	m	900.00	7,690.00	6,921,000.00
19	606.003	Geocomposite underdrain (provisional)	m	1,500.00	1,170.00	1,755,000.00
20	606.004	Pipe edge drain (provisional)	m	1,000.00	1,700.00	1,700,000.00
21	606.005	Geocomposite edge drain (provisional)	m	1,500.00	2,100.00	3,150,000.00
22	606.006	Geocomposite drain without pipe	m	2,100.00	1,850.00	3,885,000.00
23	606.007	Geocomposite drain with pipe (provisional)	m	900.00	6,500.00	5,850,000.00
24	606.008	Underdrain junction boxes (provisional)	m	60.00	123,000.00	7,380,000.00
25	606.011	Outlet pipe dia. 150 mm (provisional)	m	90.00	7,580.00	682,200.00

EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 600 - INCIDENTAL CONSTRUCTION

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
26	606.013	Slope walls to outlet pipes (provisional)	m	10.00	45,600.00	456,000.00
27	606.015	Underdrain pipe outlets treated with fastening (prov)	m	30.00	87,150.00	2,614,500.00
28	606.018	Drainage wicks at the bottom of the embankment foundations (provisional)	m	100,000.00	1,100.00	110,000,000.00
29	606.019	Pre-Construction investigations at wick drain area (static cone, Pieza cone, Bore-Holing, Van shear testing etc or as specified by the Engineer	PS	1.00	6,000,000.00	6,000,000.00
30	606.020	Post Construction Monitoring of Pore Pressure and Settlement including installation of Piezometers, Toe-stakes, settlement-gauges etc.	PS	1.00	9,000,000.00	9,000,000.00
	607	Guardrail (Supply & Installation)				
31	607.001	Guardrail type 3	m	35,000.00	16,000.00	560,000,000.00
32	607.002	Guardrail type 3B	nr	18.00	175,000.00	3,150,000.00
33	607.003	Guardrail type 3D	nr	80.00	60,000.00	4,800,000.00
34	607.004	Guardrail type 3E	nr	30.00	60,000.00	1,800,000.00
35	607.005	Guardrail type 3G	nr	24.00	85,000.00	2,040,000.00
36	607.006	Guardrail type 4	m	350.00	55,000.00	19,250,000.00
37	607.007	Guardrail type 5	m	15,500.00	25,000.00	387,500,000.00
	608	Right of Way Fence				
38	608.001	Woven wire fence with RC posts	m	28,000.00	12,000.00	336,000,000.00
39	608.002	Woven wire gate 4.80 m minimum and 6.0 m maximum opening	nr	30.00	80,000.00	2,400,000.00
40	608.003	Walk gates approximately 1.00 m opening	nr	80.00	53,000.00	4,240,000.00
41	608.004	Cattle Guard in Steel as per 4/SB/014 & 015	nr	6.00	1,500,000.00	9,000,000.00
	609	Wire Rope Safety Barrier				
42	609.001	Wire rope safety barrier	m	5,000.00	8,750.00	43,750,000.00
	651	Furnishing and Placing Topsoil				
43	651.001	Furnishing and placing topsoil	cu.m	24,000.00	250.00	6,000,000.00
	652	Seeding and Mulching including maintainance				
44	652.004	Grassing of embankment slope	sq.m	165,000.00	750.00	123,750,000.00
45	652.005	Slope protection for cut slope upto 15 m in height	sq.m	80,000.00	875.00	70,000,000.00
46	652.006	Slope protection for cut slope above 15 m in height	sq.m	40,000.00	1,020.00	40,800,000.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 600 - INCIDENTAL CONSTRUCTION

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	653	Vine (Creeping Plant) and Ground Cover Planting				
47	653.00	Vines	sq.m	9,000.00	1,900.00	17,100,000.00
48	653.00	Ground covers	sq.m	15,000.00	1,400.00	21,000,000.00
	654	Tree and Shrub Planting				
49	654.001	Tree	nr	400.00	3,000.00	1,200,000.00
50	654.002	Shrub	nr	15,000.00	550.00	8,250,000.00
		ROAD TRAFFIC SIGN AND INFOMATIVE SIGNS				
		Traffic Sign				
		Supply and installation of road traffic signs (Includes, Danger Warning Signs,Regulatory Signs, Informative Signs, Direction Symbols, Special Regulation Signs, Route Number Signs, Service Facilities Signs Additional). Rate shall include foundation, 50mm dia, thickness not less than 3mm heavy duty galvanized Iron Post				
51	657.001	Sign board area up to 0.50 m2	m2	400.00	95,000.00	38,000,000.00
52	657.002	Sign board area over 0.50 m2 to 1.00 m2	m2	200.00	109,000.00	21,800,000.00
53	657.003	Sign board area over 1.00 m2	m2	50.00	160,000.00	8,000,000.00
54	657.004	Sign board area up to 0.50 m2, but without post and fix to the concrete structure with necessary anchored bolts	m2	10.00	75,000.00	750,000.00
		Informative Signs				
		Supply and installation of informative road signs (Includes, Advance Direction Signs, Direction Signs, Overhead Mounted Direction Signs, Direction Signs for Expressway, Place Identification Signs, Confirmatory Signs,). Rate shall include foundation, frames and heavy duty galvanized Iron double or more posts with necessary support according to the technical specification requirement				
55	657.005	Sign board area over 0.50 m2 to 1.00 m2	m2	50.00	299,900.00	14,995,000.00
56	657.006	Sign board area over 1.00 m2	m2	400.00	399,900.00	159,960,000.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No. 600 - INCIDENTAL CONSTRUCTION

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
	662	Electrical Work and Roadway Lictbithq				
57	662.001	Cable 4c x 25 mm2 swa/pvc/pvc/cu	m	10,500.00	9,390.00	98,595,000.00
58	662.002	Cable 4c x 16 mm2 swa/pvc/pvc/cu	m	2,100.00	6,850.00	14,385,000.00
59	662.003	Cable 4c x 10 mm2 swa/pvc/pvc/cu	m	700.00	4,850.00	3,395,000.00
60	662.004	Cable 3c x 10 mm2 pvc/pvc/cu	m	1,160.00	4,250.00	4,930,000.00
61	662.005	Cable 3c x 6 mm2 pvc/pvc/cu	m	1,500.00	3,650.00	5,475,000.00
62	662.006	Single arm 12.00 m high steel pole complete with type II or III semi cut off distribution and 250W HP sodium luminary	nr	278.00	385,000.00	107,030,000.00
63	662.007	Single arm 12.00 m high steel pole complete with type II or III cut off distribution and 250W HP sodium luminary	nr	42.00	435,000.00	18,270,000.00
64	662.008	Double arm 12.00 m high steel pole complete with type II or III semi cut off distribution and 250W HP sodium luminary	nr	4.00	600,000.00	2,400,000.00
65	662.009	Double arm 12.00 m high steel pole complete with type II or III cut off distribution and 250W HP sodium luminary	nr	2.00	700,000.00	1,400,000.00
66	662.01	Feeder pillar	nr	4.00	3,500,000.00	14,000,000.00
67	662.011	Feeder pillar Underpasses/Bridges	nr	30.00	350,000.00	10,500,000.00
68	662.012	Underpass lighting with 70 W HP sodium lamp	nr	21.00	251,000.00	5,271,000.00
69	662.013	Underpass lighting with 36 W twin florescent lamp	nr	65.00	149,000.00	9,685,000.00
70	662.014	u-PVC duct with concrete encased 2x1 10mm dia. uPVC	m	90.00	15,000.00	1,350,000.00
71	662.015	u-PVC duct with concrete encased 4x1 10mm dia. uPVC	m	216.00	19,750.00	4,266,000.00
72	662.016	Manholes for power cables	nr	25.00	235,000.00	5,875,000.00
73	662.017	Over-ground Junction Boxes (OGJBs)	nr	4.00	97,500.00	390,000.00
	663	Pavement Marking				
74	663.001	Road marking, thermoplastic	sq.m	13,000.00	2,370.00	30,810,000.00
75	663.003	Reflecting road studs (provisional)	nr	500.00	3,490.00	1,745,000.00
76	663.004	Rumble strip	sq.m	80.00	6,750.00	540,000.00
77	663.005	Raised median rumble strips	sq.m	160.00	8,750.00	1,400,000.00
78	663.006	Raised Center Median	m	1,100.00	14,500.00	15,950,000.00
Total of Bill No. 600 Carried to Maim Summary						2,457,462,050.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No 800 - DAY WORK SUMMARY

Item No	Description	China State
		Total Amount (Rs.)
1	Labour	2,619,500.00
2	Plant	14,751,850.00
3	Material	19,410,750.00
Total of Bill No. 800 Carried to Main Summary		36,782,100.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No 800 - SCHEDULE OF DAYWORKS: LABOUR

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
1	801.01	Foreman/Ganger	hr	1,500.00	290	435,000.00
2	801.02	Skilled Labour	hr	1,000.00	235	235,000.00
3	801.03	Unskilled Labour	hr	3,500.00	195	682,500.00
4	801.04	Rebar worker	hr	300.00	235	70,500.00
5	801.05	Concrete Worker	hr	200.00	235	47,000.00
6	801.06	Bridge Worker	hr	200.00	240	48,000.00
7	801.07	Bricklayer	hr	100.00	235	23,500.00
8	801.08	Mason	hr	1,500.00	240	360,000.00
9	801.09	Carpenter	hr	1,000.00	240	240,000.00
10	801.10	Electrician	hr	100.00	260	26,000.00
11	801.11	Mechanic	hr	100.00	260	26,000.00
12	801.12	Welder	hr	100.00	260	26,000.00
13	801.13	Plant Operator for excavator, drageline, shovel or crane	hr	100.00	260	26,000.00
14	801.14	Assistant plant Operator for excavator, drageline, shovel or crane	hr	100.00	240	24,000.00
15	801.15	Plant Operator for dozzer with blade or ripper	hr	100.00	260	26,000.00
16	801.16	Assistant plant Operator for dozzer with blade or ripper.	hr	100.00	240	24,000.00
17	801.17	Operator for other plant and equipment	hr	600.00	260	156,000.00
18	801.18	Assistant Operator for other plant and equipment	hr	600.00	240	144,000.00
Bill No. 800 Daywork Labour total Carried to Bill 800 Day work Summary						2,619,500.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL No 800 - SCHEDULE OF DAYWORKS: PLANT

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
1	802.01	Dump Truck 4.0 to 6.0 cu.m	hr	200.00	2,000.00	400,000.00
2	802.02	Cargo Truck - 10 ton	hr	200.00	3,750.00	750,000.00
3	802.03	Agriculture tractor and trailer	hr	200.00	950.00	190,000.00
4	802.04	Bitumen Sprayer	hr	100.00	3,950.00	395,000.00
5	802.05	Self Propelled Chipping Spreader	hr	100.00	5,500.00	550,000.00
6	802.06	Prime Mover & 75.00 ton Flat Bed Truck	hr	50.00	6,100.00	305,000.00
7	802.07	Water Bowser (5000L)	hr	100.00	2,650.00	265,000.00
8	802.08	Bulldozer up to and including 200.00 kw (blade or ripper)	hr	75.00	5,850.00	438,750.00
9	802.09	Bulldozer - over 200 kW (blade or ripper)	hr	75.00	8,775.00	658,125.00
10	802.1	Motor Grader - 3.6 m	hr	50.00	6,410.00	320,500.00
11	802.11	Wheel Loader - up to and including 1.5	hr	50.00	4,565.00	228,250.00
12	802.12	Wheel Loader - over 1.5 cu.m	hr	25.00	6,885.00	172,125.00
13	802.13	Excavator 107.00 kw	hr	25.00	3,950.00	98,750.00
14	802.14	Mobile Crane - 10 ton	hr	25.00	8,250.00	206,250.00
15	802.15	Crawler Crane - 50 ton	hr	50.00	65,000.00	3,250,000.00
16	802.16	Steel Wheel Roller 20.00 ton	hr	50.00	6,750.00	337,500.00
17	802.17	Hand Push Roller 600 kg	hr	125.00	1,300.00	162,500.00
18	802.18	Compaction Tamper 60 kg	hr	125.00	750.00	93,750.00
19	802.19	Tire Roller - 8 to 20 ton	hr	100.00	5,150.00	515,000.00
20	802.20	Concrete Mixer 150 litre	hr	75.00	950.00	71,250.00
21	802.21	Concrete Agitator Truck - 5 cu.m	hr	100.00	2,825.00	282,500.00
22	802.22	Concrete Pump (100m ³ /hr)	hr	50.00	2,025.00	101,250.00
23	802.23	Concrete Vibrator	hr	80.00	550.00	44,000.00
24	802.24	Generator Set - 100 kVA	hr	80.00	15,670.00	1,253,600.00
25	802.25	Welding Set Electric	hr	50.00	850.00	42,500.00
26	802.26	Water Pump - 6"	hr	250.00	2,660.00	665,000.00
27	802.27	Air Compressor - 75 cu.ft./min	hr	250.00	2,330.00	582,500.00
28	802.28	Jack-hammer	hr	40.00	1,000.00	40,000.00
29	802.29	Backhoe - up to 1.0 cu.m bucket	hr	100.00	4,010.00	401,000.00
30	802.30	Vibrating Roller - 2.5 ton	hr	150.00	3,500.00	525,000.00
31	802.31	Macadam Roller - 10 ton	hr	150.00	6,220.00	933,000.00
32	802.32	Asphalt Paver	hr	50.00	9,475.00	473,750.00
Bill No. 800 Daywork Plant total Carried to Bill 800 Day work Summary						14,751,850.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

BILL NR. 800 - SCHEDULE OF DAYWORKS: MATERIALS

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
1	803.01	Cement OPC in bags	t	10.00	30,300.00	303,000.00
2	803.02	Cement rapid hardening	t	0.15	31,500.00	4,725.00
3	803.03	Cement sulphate resisting	t	0.10	31,500.00	3,150.00
4	803.04	Bitumen 80/100	liter	625.00	220.00	137,500.00
5	803.05	Bitumen 60/70	liter	1,000.00	220.00	220,000.00
6	803.06	Bitumen MC 30	liter	750.00	185.00	138,750.00
7	803.07	Bitumen emulsion CRS - 01	liter	500.00	185.00	92,500.00
8	803.08	Hot mix asphalt concrete	t	100.00	19,600.00	1,960,000.00
9	803.09	Cold mix	t	10.00	14,300.00	143,000.00
10	803.10	Formwork timber smooth	sq.m	100.00	2,050.00	205,000.00
11	803.11	Formwork timber rough	sq.m	100.00	2,050.00	205,000.00
12	803.12	Reinforcement - high tensile steel	kg	2,000.00	245.00	490,000.00
13	803.13	Reinforcement - mild steel	kg	1,000.00	245.00	245,000.00
14	803.14	Concrete grade 15	cu.m	25.00	20,500.00	512,500.00
15	803.15	Concrete grade 30	cu.m	50.00	26,100.00	1,305,000.00
16	803.16	Concrete grade 40	cu.m	50.00	29,000.00	1,450,000.00
17	803.17	100 mm Dia. U-Pvc pipe	m	50.00	1,100.00	55,000.00
18	803.18	150 mm Dia. U-Pvc pipe	m	50.00	1,550.00	77,500.00
19	803.19	Road Marking Paint	sq.m	1,000.00	2,370.00	2,370,000.00
20	803.20	Galvanised Barbed wire	kg	100.00	500.00	50,000.00
21	803.21	Galvanised Wire Netting - 1" size	sq.m	100.00	2,000.00	200,000.00
22	803.22	Reinforced concrete pipe dia. 450 mm	m	20.00	6,000.00	120,000.00
23	803.23	Reinforced concrete pipe dia. 600 mm	m	30.00	11,500.00	345,000.00
24	803.24	Reinforced concrete pipe dia. 900 mm	m	62.50	17,000.00	1,062,500.00
25	803.25	Reinforced concrete pipe dia. 1,000 mm	m	50.00	32,500.00	1,625,000.00
26	803.26	Reinforced concrete pipe dia. 1,200 mm	m	37.50	39,750.00	1,490,625.00
		Sub Total				14,810,750.00
	803.27	Approved invoice value of materials not listed	PS			4,000,000.00
		15. % to be added to invoice value of materials not listed above	PS			600,000.00
Bill No. 800 Daywork Plant total Carried to Bill 800 Day work Summary						19,410,750.00

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EXTENSION OF SOUTHERN EXPRESSWAY FROM MATARA TO HAMBANTHOTA

Section 3 From Wetiya to Andarawewa Ch 56+000 to 71+000 km

Bill No. 900 PROVISIONAL SUM

Item No	Pay Item	Item Description	Pay Unit	Quantity	China State	
					Rate	Amount (SLRS)
		Technical Support				
1	901.001	Allow for provision of standards/technical literature as required by the Engineer	PS			5,000,000.00
2	901.002	Tests as required by the Engineer	PS			5,000,000.00
3	901.003	Diversion, Protection or Removal of Electrical Service	PS			25,000,000.00
4	901.004	Diversion, Protection or Removal of Water Service	PS			20,000,000.00
5	901.005	Diversion, Protection or Removal of Telecommunication Service	PS			12,000,000.00
6	901.006	Landscaping works	PS			60,000,000.00
7	901.007	Provide temporary accommodation for Engineer's local staff	PS			1,000,000.00
8	901.008	Temporary vehicles for Engineer/the Employer	PS			2,000,000.00
9	901.009	Additional soil investigation	PS			25,000,000.00
10	901.010	Temporary office for the Engineer (Until supply, max. 5 months)	PS			475,000.00
11	901.011	Radio Communication system for the Engineer	PS			1,000,000.00
12	901.012	Trial Areas	PS			4,000,000.00
13	901.013	Instrumentation, monitoring and testing for earthwork	PS			15,000,000.00
14	901.014	Provide CCTV Monitoring System covering entire length	PS			50,000,000.00
15	901.015	Provide Emergency Telephone System	PS			40,000,000.00
16	901.016	Provide Fire Hydrant System	PS			60,000,000.00
17	901.017	Cost of resettlement works	PS			300,000,000.00
18	901.018	Closed Electronic and Manual tall system in compatible with other system	PS			300,000,000.00
19	901.019	Biological and Electrical Fencing for Elephants	PS			28,500,000.00
20	901.020	Overseas Training facility for RDA staff	PS			30,000,000.00
21	901.021	Supply of Vehicles for Operation And Maintenance	PS			150,000,000.00
22	901.022	Construction of Buildings for Tall booths with Furniture and Equipment	PS			200,000,000.00
23	901.023	Soft ground treatments	PS			200,000,000.00
24	901.024	Cyclone fence	PS			4,000,000.00
25	901.025	Provision for Semi mountable Kerb	PS			2,000,000.00
26	901.026	Diversion of streams & Irrigation Structures	PS			60,000,000.00
27	901.027	Sub Surface and cross shoulder Drains	PS			300,000,000.00
28	901.028	Provision of Power connection	PS			30,000,000.00
29	901.029	Provision for Pilot Roads	PS			140,000,000.00
Provisional Sum Total carried to summary						2,069,975,000.00

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China State Construction Engineering Corporation Ltd
Road Project - HR 06, HR 10
Sooriyawewa-Galwewa Junction- Moraketiya - Embilipitiya Road
BILL OF QUANTITIES - SUMMARY HR 06, HR 10

BILL No.	DESCRIPTION	China State
1	Preliminary and general- 1A	121,510,750.00
	1B	84,502,089.60
2	Site Clearing	59,049,850.00
3	Earthworks	235,021,880.00
4	Sub Base, Base and Shoulders	603,201,600.00
5	Surface Application and Surfacing (Asphalt)	568,625,250.00
6	Culverts and Bridges	113,316,220.00
7	Drainage Constructions	35,707,180.00
8	Incidental Works	199,774,460.00
10	Maintenance of Road	2,549,100.00
11	Provisional Sums	19,250,000.00
12	Schedule of Day Works Rate	5,868,800.00
	Sub Total - A	2,048,377,179.60
	PS for contingencies 7% of (A)	143,386,402.57
	Total Amount	2,191,763,582.17

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BILL No.1A : PRELIMINARY GENERAL

BILL No.1A : PRELIMINARY GENERAL					China State	
ITEM NO		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
2	119(1)	Allow for the cost of providing Insurances	PS	Item	Allow	25,000,000.00
3	108(1)	Mobilization of Contractor's facilities and Plant / Equipment	LS	Item	Allow	
4	108(2)	De-Mobilization of Contractor's facilities & Plant / Equipment	LS	Item	Allow	
5	118(1)	Provide and maintain Project sign board	nr	2	100,000.00	200,000.00
6	118(2)	Provide and maintain Project Plaques	nr	2	100,000.00	200,000.00
7	111.4.(1)	Provide Main office for the Engineer	P.Sum			6,000,000.00
8	111.4.(3)	Provide Secondary office for the Engineer	P.Sum			6,000,000.00
9	111.4.(2)	Provide office for the Employer	P.Sum			4,000,000.00
10	111.6(1)	Provide Housing for the Employer	P.Sum			4,000,000.00
11	111.6(2)	Provide Housing for the Engineer	P.Sum			8,000,000.00
		<u>Vehicles for the Engineer</u>				
12	111.8(1)	Provide Vehicle Type 1A as specified in appendix 4 of Volume 2	P.Sum			18,000,000.00
15	111.8(3)	Provide Vehicle Type 3 (hired) as specified in appendix 4 of Volume 2	P.Sum			14,000,000.00
16	111.8(4)	Provide Vehicle Type 4 as specified in appendix 4 of Volume 2	P.Sum			1,500,000.00
17	111.8(5)	Over heads and profit for supply of vehicle Type 1A & B	%	18,000,000.00	10%	1,800,000.00
19	111.8(7)	Over heads and profit for supply of vehicle Type 3	%	14,000,000.00	10%	1,400,000.00
20	111.8(8)	Over heads and profit for supply of vehicle Type 4	%	1,500,000.00	10%	150,000.00
		<u>Vehicles for the Employer</u>				
21	111.8(13)	Provide Vehicle Type 1A as specified in appendix 4 of Volume 2	P.Sum			
22	111.8(14)	Provide Vehicle Type 2 as specified in appendix 4 of Volume 2	P.Sum			14,000,000.00
24	111.8(16)	Over heads and profit for supply of vehicle Type 2	%	14,000,000.00	10%	1,400,000.00
25	111.9(1)	Provide Main Laboratory	PS	1		2,500,000.00
26	111.9(2)	Provide Field Laboratory	PS	2		2,500,000.00
27	111.9(3)	Provide Equipment for the Main Laboratory	PS	Item	Allow	
28	111.9(4)	Provide Equipment for the Field Laboratories (one set)	PS	Item	Allow	
29	111.10(1)	Provide and maintain Survey equipment	PS	Item	Allow	
30	117(1)	Longitudinal and Cross sectional detailing of full pavement width	km	34.43	25,000.00	860,750.00
31	121	Administrative costs for the Project Management Unit	PS	Item	Allow	10,000,000.00
Bill No. 1A Carried to Summary						121,510,750.00

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BILL No.1B : PRELIMINARY GENERAL

					China State	
ITEM NO		DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (Rs)
Bill	Pay					
1	103(1)	Management, Safety and Control and Temporary Diversion of Traffic, including provision of a general traffic management plan	mon	24	42,170.40	1,012,089.60
2	108.3(1)	Progress Photographs	mon	24	250,000.00	6,000,000.00
3	111.5(1)	Maintain Main office for the Engineer	mon	27	200,000.00	5,400,000.00
4	111.5(1)	Maintain Secondary office for the Engineer	mon	27	200,000.00	5,400,000.00
5	111.5(2)	Maintain office for the Employer	mon	27	200,000.00	5,400,000.00
6	111.7.(2)	Maintain Housing for the Engineer	mon	27	250,000.00	6,750,000.00
7	111.7.(1)	Maintain Housing for the Employer	mon	27	250,000.00	6,750,000.00
Vehicles for the Engineer						
8	111.8(9)	Maintenance of Supplied Vehicle type 1A	Veh-mon	54	150,000.00	8,100,000.00
9	111.8(9)	Maintenance of Supplied Vehicle type 1B	Veh-mon			-
10	111.8(10)	Maintenance of Supplied Vehicle type 2	Veh-mon			-
11	111.8(11)	Maintenance of Supplied Vehicle type 3	Veh-mon	54	150,000.00	8,100,000.00
12	111.8(12)	Maintenance of Supplied Vehicle type 4	Veh-mon	135	18,000.00	2,430,000.00
Vehicles for the Employer						
13	111.8(17)	Maintenance of Supplied Vehicle type 1A	Veh-mon			-
14	111.9(18)	Maintenance of Supplied Vehicle type 2	Veh-mon	27	80,000.00	2,160,000.00
15	111.9(5)	Maintenance of Main Laboratory	mon	27	100,000.00	2,700,000.00
16	111.9(6)	Maintenance of Field Laboratory	mon	54	100,000.00	5,400,000.00
17	111.11(1)	Labourers (classified unskilled)	PS			6,600,000.00
18	111.11(2)	Survey Assistant (classified skilled)	PS			1,500,000.00
19	111.11(3)	Secretary	PS			2,000,000.00
20	111.11(4)	Administrator/Clerk	PS			1,500,000.00
21	111.11(5)	Office Assistants	PS			2,000,000.00
22	111.11(6)	CAD Draughtsperson	PS			2,000,000.00
23	111.12(1)	Provide Stationary for the Engineer	PS			1,500,000.00
24	110(1)	Allow for provision of standards/technical literature as required by the Engineer	PS			1,500,000.00
25		Allow for Contractor's overheads and profit for above Provisional Sum items 110 (1) & 111.12(1)	%	3,000,000.00	10%	300,000.00
Bill No. 1B Carried to Summary						84,502,089.60
PRELIMINARY GENERAL SUMMARY						
		DESCRIPTION			Contractor's Amount	
1		Bill No. 1 A			121,510,750.00	
2		Bill No. 1 B			84,502,089.60	
PRELIMINARY C/F TO MAIN SUMMARY						206,012,839.60

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BILL No. 3 : EARTH WORK				China State		
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
3.1		ROADWAY EXCAVATION				
1	301(1)	Roadway excavation, soil suitable for fill	m ³	3,560.00	690.00	2,456,400.00
2	301(3)	Roadway excavation, boulders (Provisional Quantity)	m ³	225.00	6,000.00	1,350,000.00
		Roadway excavation, hard rock (Provisional Quantity)	m ³	915.00	5,030.00	4,602,450.00
3	301(4)	Roadway excavation, unsuitable soil	m ³	20,984.00	1,010.00	21,193,840.00
4	301(6)	Road pavement excavation	m ³	1,560.00	2,340.00	3,650,400.00
5	301(8)	Roadway excavation, Soft rock (Provisional Quantity)	m ³	350.00	2,660.00	931,000.00
3.2		STRUCTURE EXCAVATION AND BACKFILL				
6	302(1)	Excavation & backfill for structures with, suitable soil	m ³	425.00	2,490.00	1,058,250.00
7	302(2)	Excavation for structures in unsuitable soil and backfill with suitable soil	m ³	2,024.00	3,550.00	7,185,200.00
3.3		EMBANKMENT CONSTRUCTION				
8	304(1)	Trim, level and compact original gravel	m ²	45,500.00	110.00	5,005,000.00
9	304(2)	Embankment construction, Type 01	m ³	18,543.00	2,960.00	54,887,280.00
10	304(3)	Embankment construction, Type 02	m ³	31,656.00	2,610.00	82,622,160.00
11	304(4)	Boulder packing for soft ground treatment (Embankment construction using rock fill)	m ³	7,200.00	5,620.00	40,464,000.00
3.4		CHANNEL EXCAVATION				
12	307(1)	Channel excavation, suitable soil	m ³	2,350.00	2,490.00	5,851,500.00
13	307(3)	Channel excavation, hard rock (Provisional Qty)	m ³	145.00	5,030.00	729,350.00
14	307(4)	Channel Excavation, unsuitable soil	m ³	3,005.00	1,010.00	3,035,050.00
Bill No. 3 carried to Summary						235,021,880.00

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BILL No. 4 : SUB BASE, BASES AND SHOULDERS				China State		
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
4.1		GRANULAR PAVEMENT				
1	401(1)	Sub base as compacted in position	m ³	30,000.00	6,300.00	189,000,000.00
2	405(1)	Dense graded aggregate base	m ³	35,000.00	7,980.00	279,300,000.00
3	408(1)	Scarify and remove existing bitumen layer	m ²	9,500.00	468.00	4,446,000.00
4.2		SHOULDERS				
4	409(1)	Earthen shoulders as compacted in position	m ³	9,700.00	6,300.00	61,110,000.00
5		Dense graded aggregate base in shoulders	m ³	8,600.00	7,980.00	68,628,000.00
6		Trench excavation for cross shoulder drain	m ³	150.00	3,500.00	525,000.00
7		Geotextile for cross shoulder drain	m ²	180.00	1,070.00	192,600.00
Bill No. 4 Carried to Summary						603,201,600.00
BILL No. 5 : SURFACE APPLICATION AND SURFACINGS (ASPHALT)				China State		
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
5.1		PRIME COAT AND TACK COAT				
1	501(1)	Bituminous Prime Coat using M30 at 1 liter per m ²	m ²	148,500.00	270.00	40,095,000.00
2	502(1)	Bituminous Tack Coat (Cationic Emulsion grade CRS1 at 0.3 liter/m ²)	m ²	203,280.00	150.00	30,492,000.00
5.2		BITUMINOUS SURFACING				
3	506(1)a	Asphalt concrete in wearing course 40mm compacted thickness	m ²	170,945.00	2,250.00	384,626,250.00
4	506(2)	Asphalt concrete in binder/ Correction course	MT	5,200.00	21,810.00	113,412,000.00
Bill No. 5 Carried to Summary						568,625,250.00

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BILL No.6 :

6.1 BOX CULVERTS , CULVERTS & 03 MINOR BRIDGES					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
1	707(3)	Laying and jointing of pipes, 900mm dia (single row)	m	25.00	29,550.00	738,750.00
2	707(4)	Laying and jointing of pipes, 900mm dia (double row)	m	40.00	59,100.00	2,364,000.00
3	1001(1)	Grade C 15 concrete	m ³	32.00	21,000.00	672,000.00
4	1001(3)	Grade C 25 concrete	m ³	261.00	25,420.00	6,634,620.00
5	1002(1)	Tor steel reinforcement	Kg	55,882.00	285.00	15,926,370.00
6	1006(1)	Random Rubble masonry	m ³	350.00	14,540.00	5,089,000.00
7	1006(2)	Plastering 1:3 cement sand mix 16mm thick	m ²	1,225.00	1,070.00	1,310,750.00
8	1008(1)	Formwork smooth finish	m ²	975.00	3,080.00	3,003,000.00
9	1008(2)	Formwork rough finish	m ²	1,200.00	2,130.00	2,556,000.00
10	705(1)	backfill material	m ³	119.00	5,320.00	633,080.00
11	705(2)	37.5mm maximum size crushed stone - filter material	m ³	85.00	7,690.00	653,650.00
12	706(1)	Weep hole 100mm dia PVC pipe (type 600)	m	140.00	2,610.00	365,400.00
13	201(1)	Clearing & Grubbing	L.S.		591,000.00	591,000.00
14	202(8)	Removal and disposal of existing bridge foundation in the area under new foundation.	L.S.		5,910,000.00	5,910,000.00
		Excavation & Backfill				
15	SP-2, 302(1)	Excavation for structures, Soil suitable for backfill	m ³	150.00	2,490.00	373,500.00
16	SP-2, 302(5)	Excavation for structures in unsuitable soil	m ³	950.00	3,310.00	3,144,500.00
17	SP-2, 302(9)	Preparation of base of foundation.	PS			500,000.00
18	SP-2, 302(10)	Construction of necessary cofferdams cribs sheeting, shoring and bracing and their subsequent	PS			1,500,000.00
19	SP-2, 302(11)	Dewatering	PS			500,000.00
		Concrete For Structures				
20	1001(1)	Grade C15 concrete as screed under foundation slabs of abutments & wingwalls.	m ³	15.00	21,000.00	315,000.00
21		Grade C25concrete .	m ³	470.00	25,420.00	11,947,400.00
22	1001(4)	Grade C30 concrete	m ³	110.00	27,190.00	2,990,900.00
23		Grade C40concrete .	m ³	45.00	30,150.00	1,356,750.00
		Formwork				
24	1008(2)	Rough finish formwork for foundation slabs of abutments & wingwalls.	m ²	3,700.00	3,080.00	11,396,000.00
25	1008(1)	Smooth finish formwork for abutments & wingwalls	m ²	2,100.00	3,080.00	6,468,000.00

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BILL No.6 :

6.1 BOX CULVERTS , CULVERTS & 03 MINOR BRIDGES				China State		
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
		Reinforcement				
26	1002(1)	Tor steel reinforcement in foundation slabs ,abutments , wingwalls and approach slab.	Kg	11,300.00	285.00	3,220,500.00
27	1002(3)	Mild steel reinforcement in abutment capping beams, curtain walls, ballast walls, bearing pads and approach slabs.	Kg	2,500.00	285.00	712,500.00
		Weep Holes				
28	706(1)	weep holes, 110mm dia. P.V.C. pipes(type 600)	L.m.	65.00	2,610.00	169,650.00
		Drainage Backfill Material				
29	705(1)	100 mm crushed stone backfill material	m ³	172.00	7,100.00	1,221,200.00
30	705(2)	37.5 mm maximum size crushed stone - filter material	m ³	85.00	7,690.00	653,650.00
31	1006/1	Random rubble masonry	M3	125.00	14,540.00	1,817,500.00
		Railings				
32	814(1)	Handrails and uprights	L.m.	298.00	12,500.00	3,725,000.00
33	814(2)	End pillasters (1.4X1.550X.35)	Nos.	12.00	88,650.00	1,063,800.00
34		guard Stone	Nos.	25.00	5,150.00	128,750.00
		Concrete Kerbs				
35	807(4)	Bridge Kerbs	L.m.	46.00	3,550.00	163,300.00
36	807(1)	Lower kerbs	L.m.	46.00	2,370.00	109,020.00
		Expansion joints				
37	1009(1)	Supplying and fixing of mild steel angle iron & hard rubber expansion joint as per drawing No. T/B/107	L.m.	54.00	8,930.00	482,220.00
		Bridge Bearings				
38	1010(1)	75x12mm hard rubber bearing pads supplied & laid over capping beam as per drawing	L.m.	50.00	35,000.00	1,750,000.00
39	1013(1)	Service duct of size 600x400mm. formed in deck as per drawing.	L.m.	36.00	5,560.00	200,160.00
40	1014(1)	750x500x100mm. thick cover slabs for service ducts in Class B Grade 25(20) concrete inclusive of light reinforcement and smooth shuttering provided as per drawing.	Nos.	12.00	42,500.00	510,000.00
41	1015(1)	160mm. dia. P.V.C. rain water outlets supplied and fixed through deck as per drawing.	L.m.	42.00	10,000.00	420,000.00
42	1015(2)	50mm. dia. P.V.C. drain pipes supplied and fixed through deck as per drawing.	L.m.	25.00	2,800.00	70,000.00

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BILL No.6 :

6.1 BOX CULVERTS , CULVERTS & 03 MINOR BRIDGES					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
		Dowels				
43		20mm dia. 400 mm Long Stainless steel dowels	Nos.	75.00	240.00	18,000.00
44		20mm dia. 400 mm Long Mild steel dowels	Nos.	75.00	240.00	18,000.00
		Tack Coat				
45	502(1)	Medium curing cut back bitumen (10-20%) or emulsified bitumen Grade CSS-1 or CSS-1h tack coat applied at the rate of 0.5 litres/m ² to concrete deck and approach slab surface.	m ²	1,110.00	220.00	244,200.00
		Cold Mix Surfacing				
48	507(1)	Cold mix surfacing using cut back bitumen (10-20%) or bituminous emulsion & dense graded coarse aggregate of nominal size 20mm. to concrete deck and approach slab surface. (100 mm)	m ³	66.00	56,150.00	3,705,900.00
6.4		CONSTRUCTION OF RETAINING WALL				
46	302(15)	Excavation in unclassified soil for foundation and backfilling	Cu.m.	450	2,490.00	1,120,500.00
47	1008(2)	Supplying & fixing 25mm thick planks and struts of class II timber as formwork rough finish, in foundation including removing.	Sq.m	220	3,080.00	677,600.00
48	1008(1)	Supplying & fixing smoothing shuttering of class II timber as formwork complete with props etc. for concrete retaining walls/toe walls including removing 25mm thick planks and struts of class II timber as formwork.	Sq.m	220	3,080.00	677,600.00
49	1001(2)a	Class B cement concrete nominal mix 1:3:6(37.5mm)	Cu.m.	20	27,900.00	558,000.00
50	1001(2)a	Class B cement concrete grade 25(19mm)	Cu.m.	75	27,900.00	2,092,500.00
51	1006(2)	Plastering 19mm thick with cement sand mortar 1:3 mix (smooth finish) in exposed surface of retaining walls/toewalls.	Sq.m	275	3,080.00	847,000.00
Total Carried to Summary						113,316,220.00

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Bill No. 7-SUB - DRAINAGE CONSTRUCTIONS					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
Concrete						
1	1001/1	Grade C 15	m ³	38.00	21,000.00	798,000.00
2	1001/2	Grade C 20	m ³	270.00	23,050.00	6,223,500.00
3	1001/3	Grade C 25	m ³	30.00	25,420.00	762,600.00
4	1006/1	Random rubble masonry	m ³	40.00	14,540.00	581,600.00
5	1006/2	Plastering 1.3 cement sand mix,16mm thick	m ²	220.00	1,070.00	235,400.00
	7.1	Precast concrete cover slab	m ²			
8	701/3	900*600*150	m ²	150.00	14,440.00	2,166,000.00
9	701/4	800*600*125mm for drain	m ²	890.00	14,440.00	12,851,600.00
13	1002/1	Tor-steel reinforcement	kg	8,960.00	308.00	2,759,680.00
14	1008/1	Formwork smooth finish	m ²	960.00	3,080.00	2,956,800.00
15	1008/2	Formwork rough finish	m ²	1,100.00	3,080.00	3,388,000.00
	7.2	Clearing and repairing culverts and drains				
16	1301(1)	Clearing and repairing of earth drains	m	1,400.00	2,000.00	2,800,000.00
17	1303(2)	Clearing and desilting pipe culverts	nr	16.00	11,500.00	184,000.00
TOTAL FOR BILL NO 7 CARRIED TO MAIN SUMMARY						35,707,180.00

BILL NO 8: INCIDENTAL WORK				China State		
ITEM NO		DESCRIPTION	UNIT	QUANTITY	RATE(Rs)	AMOUNT(Rs)
Bill	Pay					
8.1		<u>TOP SOILING</u>				
1	801(1)	Furnish, spread and compact top soil	M2	22,200.00	130.00	2,886,000.00
8.2		<u>GRASSING</u>				
2	802(1)	Grass sodding	M2	22,200.00	510.00	11,322,000.00
8.3		<u>RIP RAP PROTECTION FOR EMBANKMENT SLOPES</u>				
3	804(1)	Dumped rip rap	M3	256.00	19,150.00	4,902,400.00
4		Gabion	M3	1,890.00	18,750.00	35,437,500.00
8.4		<u>PAVED SIDE WALK</u>				
5	806(1)	Precast concrete slab(450*450*50mm) paving	M2	4,500.00	10,830.00	48,735,000.00
8.5		<u>PRECAST CONCRET KERBS AND CHANNEL</u>				
6	807(1)a	Standard kerb-type A	M	3,200.00	3,550.00	11,360,000.00
7	807(2)	Flat/edge kerb	M			
8	808(1)	Guard stone (Roadway, Culverts, Causeway and Bridges)	Nr	128.00	5,150.00	659,200.00
9		Guard rail for foot walk	M	3,150.00	1,800.00	5,670,000.00
8.6		<u>ROAD MARKING</u>				
		<u>Center line</u>				
10	810(1)	Continuous	M2	1,295.00	2,130.00	2,758,350.00
11	810(2)	Intermittent	M2	740.00	2,130.00	1,576,200.00
		<u>Edge line</u>				
12	810(3)	Continuous	M2	4,440.00	2,130.00	9,457,200.00
13	810(4)	Pedestrian crossing	M2	800.00	2,370.00	1,896,000.00
14	810(5)	Road studs	nr	2,400.00	2,840.00	6,816,000.00
8.7		<u>ROAD SIGNS</u>				
		<u>Reflective road sing</u>				
15	811(1)	Single pole,sign area up to 0.5m2	nr	323.00	21,870.00	7,064,010.00
16	811(2)	Double pole,sign are up to 2.0m2	nr	22.00	236,400.00	5,200,800.00
17	811(3)	Chevron warning sign	nr	30.00	15,000.00	450,000.00
18	811(4)	Flag type sign	nr	7.00	25,000.00	175,000.00
8.8		<u>CONCRETE KERB INLETS</u>				
19	813(1)	Kerb inlet	nr	220.00	3,550.00	781,000.00
8.9		<u>KILOMETER POSTS</u>				
20	815(1)	Provide install and paint new kilometer post	nr	18.00	7,100.00	127,800.00
		<u>SAFETY MEASURES</u>				
21		W- Beams (length and Location are decided by the Engineer)	m	1,700.00	25,000.00	42,500,000.00
BILL NO 8 CARRIED SUMMARY						199,774,460.00

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BILL No. 10 : MAINTENANCE OF ROAD				China State		
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
MAINTENANCE OF CARRIAGEWAY						
1	1101(1)	Filling pot-holes and patch repairs with asphalt concrete cold mix (MC30) 20mm & less in	m2	3,000.00	117.20	351,600.00
2	1101(2)	Filling pot-holes and patch repairs with asphalt concrete cold mix (MC30) 75mm & less in depth(Provisional Qty)	m2	2,000.00	439.50	879,000.00
3	1101(3)	Filling pot-holes and patch repairs with asphalt concrete cold mix (MC30) deeper than 75mm(Provisional Qty)	m2	3,000.00	439.50	1,318,500.00
Bill No. 10 Carried to Summary						2,549,100.00

BILL No. 11 : PROVISIONAL SUMS				China State		
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
1	103(2)	Temporary by-passes for culverts, bridges and other structures	PS			5,000,000.00
2	113.1(1)	Repairs to damages of existing services	PS			500,000.00
3	113.1(2)	Demolition/Rebuilding of property	PS			500,000.00
4	117.1(1)	Diversion, protection or removal of electrical services	PS			8,000,000.00
5	117.1(2)	Diversion, protection or removal of water services	PS			1,000,000.00
6	117.1(3)	Diversion, protection or removal of telecommunication services	PS			2,000,000.00
7	703(1)	Grade adjustment of existing manholes	PS			500,000.00
8		Allow for contractor's overheads and profit for above Provisional Sum items	%	17,500,000.00	10.00%	1,750,000.00
Bill No. 11 Carried to Summary						19,250,000.00

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BILL NOM 12:SCHEDULE OF DAY WORKS RATE					
12.1:LABOUR DAY WORKS					
All Quantities are provisional				China State	
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT(Rs.)
1	Surveyor	Hr	10	290.00	2,900.00
2	Laboratory Technician(skilled)	Hr	10	240.00	2,400.00
3	Carpenter	Hr	10	240.00	2,400.00
4	Mason	Hr	10	240.00	2,400.00
5	Steel Fixer	Hr	10	240.00	2,400.00
6	Semi-Skilled workman	Hr	10	210.00	2,100.00
7	Unskilled workman(labourer)	Hr	10	190.00	1,900.00
Labour Day works carried to Summary					16,500.00

BILL NOM 12:SCHEDULE OF DAY WORKS RATE					
12.2:EQUIPMENT DAY WORKS					
All Quantities are provisional				China State	
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT(Rs.)
1	Bowser,water,up to 6,000 liter with Spray Bar	Hr	10	3,030.00	30,300.00
2	Backhoe,wheeled,50-100 HP	Hr	10	4,010.00	40,100.00
3	Backhoe,tracked,50-100 HP	Hr	10	3,010.00	30,100.00
4	Motor grader,120 to 140 HP	Hr	10	6,410.00	64,100.00
5	Mobile Crane 25 tonnes	Hr	10	8,250.00	82,500.00
6	Water pump with hoses,50 to 100 mm outlet	Hr	10	720.00	7,200.00
7	Concrete mixer,over 0.50 cu.m.	Hr	10	1,650.00	16,500.00
8	Generator,10 to 50 KVA	Hr	10	2,560.00	25,600.00
9	Poker Vibrator,petrol driven	Hr	10	550.00	5,500.00
10	Steel-Wheeled roller,Vibratory,10 tonnes	Hr	10	6,220.00	62,200.00
11	Pneumatic tyred roller,8 to 10 tonnes	Hr	10	5,150.00	51,500.00
12	Tandem roller,6 to 8 tonnes ,Vibrating	Hr	10	3,850.00	38,500.00
13	Hand roller,Vibratory,1/2 -1 tonnes	Hr	10	1,930.00	19,300.00
14	Plate compactor,vibrotory,over 90 kg	Hr	10	830.00	8,300.00
15	rammer,mechanical,over 60 kg	Hr	10	720.00	7,200.00
16	Air compressor with hoses and tools,250 to 600 cfm	Hr	10	2,330.00	23,300.00
17	Concrete mixer,0.25 to 0.50 cu.m	Hr	10	1,400.00	14,000.00
18	Welding set,electric,300-400 amp	Hr	10	2,200.00	22,000.00
Equipment Day works carried to Summary					548,200.00

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BILL NOM 12:SCHEDULE OF DAY WORKS RATE				China State	
12.3: MATERIAL DAY WORKS				RATE	AMOUNT(Rs.)
ITEM	DESCRIPTION	UNIT	QTY		
1	Aggregate base, dense graded (37.5mm)	m ³	10	9,660.00	96,600.00
2	Aggregate, 6mm (crushed finish)	m ³	10	8,250.00	82,500.00
3	Aggregate, 12mm	m ³	10	10,450.00	104,500.00
4	Aggregate, 20mm	m ³	10	9,900.00	99,000.00
5	Aggregate, 25mm	m ³	10	9,900.00	99,000.00
6	Aggregate, 37.5mm	m ³	10	9,660.00	96,600.00
7	Asphalt concrete, cold mix	mt	10	14,300.00	143,000.00
8	Asphalt concrete, hot mix	mt	10	19,600.00	196,000.00
9	Bitumen emulsion, (CRS 1, CRS 2, CSS 1)	ltr	10	195.00	1,950.00
10	Bitumen prime coat, cutback MC	ltr	10	255.00	2,550.00
11	Bitumen, sraight run, 60/70 penetration	ltr	10	220.00	2,200.00
12	Block, cement, 400*200*100mm	no	10	70.00	700.00
13	Cement, ordinary Portland	mt	10	30,300.00	303,000.00
14	Concrete pipe, reinforced 600mm diameter	m	10	13,530.00	135,300.00
15	Concrete pipe, reinforced 900mm diameter	m	10	24,890.00	248,900.00
16	Concrete pipe, reinforced 1,200mm diameter	m	10	40,920.00	409,200.00
17	Concrete, Grade 15/20	m ³	10	20,500.00	205,000.00
18	Concrete, Grade 20/20	m ³	10	22,400.00	224,000.00
19	Concrete, Grade 25/20	m ³	10	24,700.00	247,000.00
20	Concrete, Grade 30/20	m ³	10	26,100.00	261,000.00
21	Concrete, Grade 40/20	m ³	10	29,000.00	290,000.00
22	Formwork, steel	m ²	10	3,000.00	30,000.00
23	Formwork, timber (smooth)	m ²	10	2,050.00	20,500.00
24	Paint, emulsion	ltr	10	1,350.00	13,500.00
25	Paint, enamel	ltr	10	1,450.00	14,500.00
26	Pipe, PVC, 100mm diameter (Type 600)	m	10	3,850.00	38,500.00
27	Lime	kg	10	33.00	330.00
28	Reinforcement, high-yield steel, Grade 460/425	kg	10	260.00	2,600.00
29	Reinforcement, mild steel, Grade 250	kg	10	260.00	2,600.00
30	Rubble, 100 - 150 mm	m ³	10	5,180.00	51,800.00
31	Rubble, 150 - 250 mm	m ³	10	6,730.00	67,300.00
32	River Sand	m ³	10	6,150.00	61,500.00
33	Reflective, thermoplastic road paint	kg	10	295.00	2,950.00
34	Timber, Class 2, Sri Lanka Timber Corporation	m ³	10	68,250.00	682,500.00
35	Auto diesel	ltr	10	205.00	2,050.00
36	Petrol	ltr	10	265.00	2,650.00
37	Kerosene Oil	ltr	10	200.00	2,000.00
Materials Sub Total					4,243,280.00
Percentage markup applicable to materials in Bill No. 12.3			25%		1,060,820.00
Total					5,304,100.00
<i>Note: Bidders shall submit the schedule with rates of any materials which they anticipate</i>					
Materials Day works carried to Summary:					5,304,100.00

TEM NO	DESCRIPTION	Amount
12.1	LABOUR DAY WORKS	16,500.00
12.2	EQUIPMENT DAY WORKS	548,200.00
12.3	MATERIAL DAY WORKS	5,304,100.00
	TOTAL	5,868,800.00

A. G. S.

China State Construction Engineering Corporation Ltd
Road Project - HR 21
Ranna - Wetiya Road
BILL OF QUANTITIES - SUMMARY HR 21

BILL No.	DESCRIPTION	AMOUNT
1	Preliminary and general- 1A	
	1B	
2	Site Clearing	5,828,700.00
3	Earthworks	12,041,500.00
4	Sub Base, Base and Shoulders	119,742,000.00
5	Surface Application and Surfacing (Asphalt)	440,769,000.00
6	Culverts and Bridges	4,500,000.00
7	Drainage Constructions	16,032,000.00
12	Schedule of Day Works Rate	5,868,800.00
	Sub Total - A	604,782,000.00
	PS for contingencies 7% of (A)	42,334,740.00
	Total Amount	647,116,740.00

A. B. S.

HR - 21-Ranna - Wetiya

BILL No. 2 : SITE CLEARING					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
2.1		CLEARING AND GRUBBING				
1	201(1)	Clearing and grubbing <i>Remove trees</i>	m ²	32,000.00	150.00	4,800,000.00
2	201(2)	Girth 300 to 600mm	nr	20.00	3,500.00	70,000.00
3	201(2)	Girth 600 to 1200mm	nr	80.00	5,090.00	407,200.00
4	201(3)	Girth 1200 to 2000mm	nr	25.00	9,460.00	236,500.00
5	201(4)	Girth over 2000mm	nr	30.00	10,500.00	315,000.00
						5,828,700.00

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HR - 21-Ranna - Wetiya

BILL No. 3 : EARTH WORK					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
3.1		ROADWAY EXCAVATION				
1	301(1)	Roadway excavation, soil suitable for fill	m ³	200.00	690.00	138,000.00
2	301(3)	Roadway excavation, boulders (Provisional Quantity)	m ³	500.00	6,000.00	3,000,000.00
3	301(4)	Roadway excavation, unsuitable soil	m ³	3,750.00	1,010.00	3,787,500.00
4	301(6)	Road pavement excavation	m ³	800.00	2,340.00	1,872,000.00
3.3		EMBANKMENT CONSTRUCTION				
5	304(4)	Boulder packing for soft ground treatment (Embankment construction using rock fill)	m ³	400.00	5,620.00	2,248,000.00
3.4		CHANNEL EXCAVATION				
6	307(1)	Channel excavation, suitable soil	m ³	400.00	2,490.00	996,000.00
Bill No. 3 carried to Summary						12,041,500.00

A. B. S.

HR - 21-Ranna - Wetiya

BILL No. 4 : SUB BASE, BASES AND SHOULDERS					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
4.1		GRANULAR PAVEMENT				
1	405(1)	Dense graded aggregate base	m ³	400.00	7,980.00	3,192,000.00
4.2		SHOULDERS				
2	409(1)	Earthen shoulders as compacted in position	m ³	9,000.00	6,300.00	56,700,000.00
		Dense graded aggregate base in shoulders	m ³	7,500.00	7,980.00	59,850,000.00
Bill No. 4 Carried to Summary						119,742,000.00

BILL No. 5 : SURFACE APPLICATION AND SURFACINGS (ASPHALT)					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
5.1		PRIME COAT AND TACK COAT				
1	501(1)	Bituminous Prime Coat using M30 at 1 liter per m ²	m ²	30,000.00	270.00	8,100,000.00
5.2		BITUMINOUS SURFACING				
2	506(1)a	Asphalt concrete in wearing course 40mm compacted thickness	m ²	144,800.00	2,250.00	325,800,000.00
3	506(2)	Asphalt concrete in binder/ Correction course	MT	4,900.00	21,810.00	106,869,000.00
Bill No. 5 Carried to Summary						440,769,000.00

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HR - 21-Ranna - Wetiya

BILL No.6 :

6.1 BOX CULVERTS , CULVERTS				China State		
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
		Widening of culverts	PS			4,500,000.00
						4,500,000.00

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HR - 21-Ranna - Wetiya

Bill No. 7-SUB - DRAINAGE CONSTRUCTIONS					China State	
ITEM NO:		DESCRIPTION	UNIT	QTY	Rate(Rs)	Amount(Rs)
Bill	Pay					
	7.2	clearing and repairing culverts and drains				
1	1301(1)	Clearing and repairing of earth drains	m	8,000.00	2,000.00	16,000,000.00
2	1303(2)	Clearing and desilting pipe culverts	Nr	16.00	2,000.00	32,000.00
		TOTAL FOR BILL NO 7 CARRIED TO MAIN SUMMARY				16,032,000.00

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HR - 21-Ranna - Wetiya

BILL NOM 12:SCHEDULE OF DAY WORKS RATE					
12.1:LABOUR DAY WORKS					
All Quantities are provisional				China State	
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT(Rs.)
1	Surveyor	Hr	10	290.00	2,900.00
2	Laboratory Technician(skilled)	Hr	10	240.00	2,400.00
3	Carpenter	Hr	10	240.00	2,400.00
4	Mason	Hr	10	240.00	2,400.00
5	Steel Fixer	Hr	10	240.00	2,400.00
6	Semi-Skilled workman	Hr	10	210.00	2,100.00
7	Unskilled workman(labourer)	Hr	10	190.00	1,900.00
Labour Day works carried to Summary					16,500.00

BILL NOM 12:SCHEDULE OF DAY WORKS RATE					
12.2:EQUIPMENT DAY WORKS					
All Quantities are provisional				China State	
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT(Rs.)
1	Bowser,water,up to 6,000 liter with Spray Bar	Hr	10	3,030.00	30,300.00
2	Backhoe,wheeled,50-100 HP	Hr	10	4,010.00	40,100.00
3	Backhoe,tracked,50-100 HP	Hr	10	3,010.00	30,100.00
4	Motor grader,120 to 140 HP	Hr	10	6,410.00	64,100.00
5	Mobile Crane 25 tonnes	Hr	10	8,250.00	82,500.00
6	Water pump with hoses,50 to 100 mm outlet	Hr	10	720.00	7,200.00
7	Concrete mixer,over 0.50 cu.m.	Hr	10	1,650.00	16,500.00
8	Generator,10 to 50 KVA	Hr	10	2,560.00	25,600.00
9	Poker Vibrator,petrol driven	Hr	10	550.00	5,500.00
10	Steel-Wheeled roller,Vibratory,10 tonnes	Hr	10	6,220.00	62,200.00
11	Pneumatic tyred roller,8 to 10 tonnes	Hr	10	5,150.00	51,500.00
12	Tandem roller,6 to 8 tonnes ,Vibrating	Hr	10	3,850.00	38,500.00
13	Hand roller,Vibratory,1/2 -1 tonnes	Hr	10	1,930.00	19,300.00
14	Plate compactor,vibrotory,over 90 kg	Hr	10	830.00	8,300.00
15	rammer,mechanical,over 60 kg	Hr	10	720.00	7,200.00
16	Air compressor with hoses and tools,250 to 600 cfm	Hr	10	2,330.00	23,300.00
17	Concrete mixer,0.25 to 0.50 cu.m	Hr	10	1,400.00	14,000.00
18	Welding set,electric,300-400 amp	Hr	10	2,200.00	22,000.00
Equipment Day works carried to Summary					548,200.00

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BILL NOM 12:SCHEDULE OF DAY WORKS RATE				China State	
12.3: MATERIAL DAY WORKS				RATE	AMOUNT(Rs.)
ITEM	DESCRIPTION	UNIT	QTY		
1	Aggregate base, dense graded (37.5mm)	m ³	10	9,660.00	96,600.00
2	Aggregate, 6mm (crushed finish)	m ³	10	8,250.00	82,500.00
3	Aggregate, 12mm	m ³	10	10,450.00	104,500.00
4	Aggregate, 20mm	m ³	10	9,900.00	99,000.00
5	Aggregate, 25mm	m ³	10	9,900.00	99,000.00
6	Aggregate, 37.5mm	m ³	10	9,660.00	96,600.00
7	Asphalt concrete, cold mix	mt	10	14,300.00	143,000.00
8	Asphalt concrete, hot mix	mt	10	19,600.00	196,000.00
9	Bitumen emulsion, (CRS 1, CRS 2, CSS 1)	ltr	10	195.00	1,950.00
10	Bitumen prime coat, cutback MC	ltr	10	255.00	2,550.00
11	Bitumen, sraight run, 60/70 penetration	ltr	10	220.00	2,200.00
12	Block, cement, 400*200*100mm	no	10	70.00	700.00
13	Cement, ordinary Portland	mt	10	30,300.00	303,000.00
14	Concrete pipe, reinforced 600mm diameter	m	10	13,530.00	135,300.00
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33	Reflective, thermoplastic road paint	kg	10	295.00	2,950.00
34	Timber, Class 2, Sri Lanka Timber Corporation	m ³	10	68,250.00	682,500.00
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	TOTAL	5,868,800.00

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