

THE GOVERNMENT OF PAPUA NEW GUINEA


THE DETAILED DESIGN
ON
ROAD CONSTRUCTION PROJECT
IN
BEREINA - MALALAU

TENDER DOCUMENTS

(Volume II - 1)

JANUARY 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

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BEREINA TO MALALAU ROAD CONSTRUCTION PROJECT TENDER DOCUMENTS (Volume II - 1) JAN 1990

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DEPARTMENT OF WORKS

**TRANS-ISLAND HIGHWAY
BEREINA TO MALALAU ROAD CONSTRUCTION PROJECT
CENTRAL/GULF PROVINCES**

TENDER DOCUMENTS

FOR

**LOT I : BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A
CH 0+000 TO CH 33+500**

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VOLUME II-1

**FORM OF TENDER
APPENDIX TO FORM OF TENDER
SCHEDULES TO THE TENDER
CONDITIONS OF CONTRACT PART III
NOMINATED BORROW PITS
BILL OF QUANTITIES**

DOCUMENT NO. _____



国際協力事業団

20960

TRANS-ISLAND HIGHWAY
BEREINA TO MALALAU ROAD CONSTRUCTION PROJECT
CENTRAL/GULF PROVINCES

TENDER DOCUMENTS
(LOT I AND LOT II)

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TRANS-ISLAND HIGHWAY
BEREINA TO MALALAU ROAD CONSTRUCTION PROJECT
CENTRAL/GULF PROVINCES

VOLUME II-1

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FORM OF TENDER

FORM OF TENDER

SHORT DESCRIPTION OF WORKS :

CONTRACT NO. SC 120-33-814/A (LOT I)

All Permanent and Temporary Works in connection with the construction of the Bereina to Miaru River Section (33.5 km) of the Bereina to Malalaua Road Construction Project, Central/Gulf Provinces.

TO: The Chairman
Works, Supply and Tenders Board
P. O. Box 1142
Boroko
Papua New Guinea

Sir,

Having examined the Instructions to Tenderers, the Drawings, the Conditions of Contract and the Specification for the construction of the above-mentioned Works, I/We the undersigned, offer to construct, complete and maintain the whole of the said Works in conformity with the said Drawings, Conditions of Contract and Specification for the sum (hereinafter referred to as the Tender Sum) of
.....
.....(K)
or such other sum as may be ascertained in accordance with the said Conditions of Contract.

I/We undertake if my/our Tender is accepted to commence the Works within twenty eight (28) days of receipt of the Engineer's order to commence, and to complete and deliver the whole of the Works within the period specified in the Appendix annexed hereto.

In accordance with Clause 13 of the Instructions to Tenderers I/We request if my/our Tender is accepted that a proportion of the Contract Price, equivalent topercent of that Price be paid in, the currency of

If my/our Tender is accepted I/we will arrange that an Insurance Company or Bank located in Papua New Guinea or a foreign Bank or Insurance Company from an eligible source country, acceptable to the Employer, be jointly and severally bound with me/us in a sum not exceeding the percentage stated in the Appendix annexed hereto of the Tender Sum or such other sum as may be specified in Clause 10.1 of the Conditions of Contract for the due performance of the Contract under the terms of a Bond as given in the Form of Bond annexed to the Instructions to Tenderers.

I/We agree to abide by this Tender for the period stated in the Appendix annexed to the Instructions to Tenderers from the date fixed for receiving the same and it shall remain binding upon me/us and may be accepted at any time before the expiration of that period.

Unless and until a formal Contract Agreement (in the form of the Agreement annexed to the Instructions to Tenderers) is prepared and executed, this Tender, together with a written acceptance thereof, shall constitute a binding Contract.

On the basis that we are also submitting another Tender to you in respect of Lot II, we confirm that the abovenamed sum will be reduced by (K)
in the event of both Contracts for Lot I and Lot II being awarded to us.*

I/We understand that you are not bound to accept the lowest, any Tender or combination of Tenders you may receive.

I am/We are, Sir,

Name of Tenderer

Address

Dated thisday19.....

Signature

in the capacity of

duly authorized to sign Tenders for and on behalf of
.....

Witness Signature

Witness Name

Address

Occupation

Note: The Appendices attached form part of Tender. Tenderers are required to fill up all the blank spaces in this Tender Form, its Appendices and Schedules.

* In case the Tenderer is submitting a tender for Lot I only, this paragraph should be deleted and initialled by the Tenderer.

APPENDIX TO FORM OF TENDER

APPENDIX TO FORM OF TENDER

Description	Conditions of Contract Clause No.	Requirement
Amount of Performance Bond or Guarantee	10.1	7% of the Contract Price
Time for Submission of Programme	14.1	28 days
Time for Submission of Cashflow Estimate	14.3	42 days
Minimum Amount of Third Party Insurance	23.2	K500,000 for any one incident
Time for Completion of the Whole of the Works	43.1	36 Calendar months
Time for Completion of Engineer's Office, Laboratory and Staff Residences	43.2	3 Calendar months
Time for Completion for Provision of Vehicles for Engineer's Staff	43.3	1 Calendar month
Time for Completion for Centre-Line Survey	43.4	3 Calender months
Amount of Liquidated Damages	47.1	K4,000 per day
Amount of Liquidated Damages for Engineer's Office, Laboratory and Staff Residences	47.2	K750 per day
Amount of Liquidated Damages for Provision of Vehicles for Engineer's Staff	47.3	K100 per vehicle per day
Amount of Liquidated Damages for Centre-Line Survey	47.4	K500 per day
Period of Maintenance	49.1	12 Calendar Months
Method of Measurement	57.1	Incorporated in the Specification

APPENDIX TO FORM OF TENDER

- continued

Description	Conditions of Contract Clause No.	Requirement
Percentage of Retention	60.2	5%
Limit of Retention Money	60.2	3% of Contract Price
Minimum Amount of Interim Certificate	60.2	K400,000
Interest on Unpaid Interim certificate	60.10	Shall be the minimum lending rate as publish- ed by the Bank of Papua New Guinea from time to time
Advance Payment	60.11	10% of Contract Price
Increase or Decrease of Cost	70.4	Shall apply

SCHEDULES TO THE TENDER

SCHEDULES TO THE TENDER

CONTRACT NO. SC 120-33-814/A

- SCHEDULE A PROPOSED MAJOR PLANT AND EQUIPMENT TO BE UTILISED IN THE CONSTRUCTION OF THE WORKS
- SCHEDULE B PROPOSED SUPPLIERS OF MATERIALS
- SCHEDULE C PROPOSED SUPERINTENDENCE
- SCHEDULE D ANTICIPATED MONTHLY PROGRESS STATEMENTS TO CONTRACTORS FOR MEASURED WORK AT BILLED RATES
- SCHEDULE E TENDER INDEX FIGURES
- SCHEDULE F INCREASE OR DECREASE OF PRICE
- SCHEDULE G CONSTRUCTION PROGRAMME
- SCHEDULE H PROPOSED SUBCONTRACTORS
- SCHEDULE I FOREIGN CURRENCY REQUIREMENT
- SCHEDULE J PERCENTAGE REDUCTION IN CONTRACT PRICE
- SCHEDULE K DAYWORKS - LABOUR
- SCHEDULE L DAYWORKS - MATERIALS
- SCHEDULE M DAYWORKS - PLANT

SCHEDULE A

PROPOSED MAJOR PLANT AND EQUIPMENT TO BE
UTILISED IN THE CONSTRUCTION OF THE WORKS

The Tenderer shall fill in this form with his estimated deployment of plant and equipment for the Works based on his construction programme attached to the Tender (SCHEDULE G).

Provision of this information shall not limit the Contractor's obligation under Clause 8.1 of the General Conditions of Contract.

Description of Plant & Equipment	Rated Capacity (HP or Kw)	Model	Number of Units	Age (Years)	Value (kina)	Present Location	Ownership (Purchase or Hire)
--	------------------------------------	-------	-----------------------	----------------	-----------------	---------------------	------------------------------------

Note: State "New" for equipment to be purchased for the construction of the Works. The list of plant and equipment to be for Earthwork, Pavement, Bridgework and others.

SCHEDULE B

PROPOSED SUPPLIERS OF MATERIALS

The Tenderer shall indicate on this form the Suppliers that he proposes to use to supply materials for the construction of the Works.

Component
(Materials)

Name and Address
Supplier/Fabricator

SCHEDULE C

PROPOSED SUPERINTENDENCE

The Tenderer shall provide brief details of the staff that he proposes in accordance with Clauses 15.1, 15.2, 15.3, 15.4 and 16.1 of the Conditions of Contract including all superintendents, technical assistants and sub-agent staff. Provision of the information shall not limit the Contractor's obligations under Clause 8.1 of the Conditions of Contract.

1. Proposed position :
2. Name and age :
3. Nationality :
4. Education and degrees :
5. Speciality :
6. Registration :
7. Anticipated time on contract in months :
8. Brief description of past experience in Highway and Bridge Construction : (Shall cover the past 10 years experience)

Period	Project (Value in Kina)	Employer	Position and Work Performance
--------	-------------------------------	----------	----------------------------------

Note: Such forms must be submitted separately for each proposed staff member.

Substitution at the time of award and during the Contract shall require the approval of the Engineer.

SCHEDULE D

ANTICIPATED MONTHLY PROGRESS STATEMENTS FOR
MEASURED WORK AT BILLED RATES

Notwithstanding the schedule hereunder, actual payments due shall be determined in accordance with the Conditions of Contract.

Month	Advance Payment	Repayments of Advance Payment (Minus)	BoQ Groups (1 and 2)	BoQ Groups (3 to 18 Including Road Works and Bridge Works)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				

TOTAL

SCHEDULE E

TENDER INDEX FIGURES

As required by Clause 70.2 of the Conditions of Contract Part II, the figures shall be those applicable 28 days prior to the latest date for submission of tenders for the Works. The Schedule is subject to confirmation by the Engineer in accordance with Clause 70.2.

Index	Index Description	Nominated Suppliers	Tender Index in Kina
(a)	Unskilled Labour		
(b)	Skilled Labour		
(c)	Fuel		
	(i) Diesel		
	(ii) Petrol		
(d)	Steel		
(e)	Cement		
(f)	Timber		
(g)	Corrugated Steel Pipe, 1500mm Dia. Gauge 3.0 mm		
(h)	Geotextile Fabric*		
(i)	Plant		
	(i) 10 ton Dump Truck		
	(ii) 150 HP Tractor Shovel		
	(iii) 200 HP Bulldozer		
	(iv) 125 HP Motor Grader		
(j)	Bitumen Products		
	(i) Bitumen Class 170		
	(ii) Kerosene		

* Tenderer to state manufacturer's trade name for product that he intends to base his prices for this calculation.

SCHEDULE F

INCREASE OR DECREASE OF PRICE

Groups 1 and 2 of the Bill of Quantities, Prime Cost Items, Provisional Sums and Group 19 (Dayworks) shall be at fixed prices.

The provisions of Clause 70.2 of the Conditions of Contract shall apply to the other sections of the Bill of Quantities.

Tenderers shall complete the following table giving the percentage of the value of works (excluding Group 1 and 2 of the Bill of Quantities, Prime Cost Items, Provisional Sums and Group 19 (Dayworks)) that is attributable to each index.

The attention of the tenderer is drawn to Clause 29.5 of the Instructions to Tenderers.

Index Ref.	Description	Index	Percentage of Value
(a)	Unskilled Labour		
(b)	Skilled Labour		
(c)	Fuel		
(d)	Steel		
(e)	Cement		
(f)	Timber		
(g)	Corrugated Steel Pipe		
(h)	Geotextile Fabric		
(i)	Plant		
(j)	Bitumen Products		
Total Must Equal 100			100.00

Note: For index data see Clause 70.2 of the Conditions of Contract.

SCHEDULE G
CONSTRUCTION PROGRAMME

DESCRIPTION OF WORK	TIME FROM ORDER TO COMMENCE - MONTHS																																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
MOBILIZATION																																					
CLEARING AND GRUBBING																																					
EXCAVATION																																					
EMBANKMENT																																					
SUBBASE COURSE																																					
BASE COURSE																																					
BITUMINOUS SURFACING																																					
DRAINAGE WORK																																					
ROAD FURNITURES																																					
BRIDGE No 1 - TAIENA BRIDGE																																					
PILING																																					
SUBSTRUCTURE																																					
SUPERSTRUCTURE																																					
BRIDGE No 2 - AGOBINO BRIDGE																																					
PILING																																					
SUBSTRUCTURE																																					
SUPERSTRUCTURE																																					
BRIDGE No 3 - UNGONGO BRIDGE																																					
PILING																																					
SUBSTRUCTURE																																					
SUPERSTRUCTURE																																					

NOTE: RESPECTIVE COMMENCEMENT AND COMPLETION DATE SHALL BE IN ACCORDANCE WITH CLAUSE 43.1 OF THE CONDITIONS OF CONTRACT.

INDICATE WET SEASON (TROPICAL MONSOON SEASON) BY SHADING.

IT IS UNDERSTOOD THAT REQUIRED THIS CONSTRUCTION PROGRAMME IS NOT A SUBSTITUTE FOR THE DETAILED CONSTRUCTION SCHEDULE REQUIRED IN ACCORDANCE WITH THE CONDITIONS OF CONTRACT.

SCHEDULE H

PROPOSED SUBCONTRACTORS

The Tenderer shall list all the Subcontractors that he proposes to use in the execution of the Works.

Name of Subcontractor and Address	Nature of Work to be Executed by Subcontractor	Approx Value of Works to be Carried Out (Kina)
--------------------------------------	--	---

SCHEDULE I
FOREIGN CURRENCY REQUIREMENT

Net Tender Price In Local Currency (Note 1)	Type of Foreign Currency Required	Percentage of Each Foreign Currency Required	Currency Exchange Rates (Equivalent Value of 1 Kina) (NOTE 2)	Foreign Currency Amount In Equivalent Local Currency
(A)		(B)=%(A)		(D)= (A)x(B) /100
	(a) Japanese Yen			
	(b) US Dollars			

Currency Exchange Rates - Sources and Dates

- (a)
- (b)

- Notes: (1) Excluding Provisional Sums.
- (2) Sources and dates should be stated. See Clause 13 of the Instructions to Tenderers.

SCHEDULE I - ANNEX

BREAKDOWN OF FOREIGN CURRENCY REQUIREMENTS

Item	Foreign Currency		Approx % of Net Tender Price (% of Total A in Schedule I)
	Type	Amount	
1. Expatriate Staff and Labour			
1.1 Salaries and Wages			
1.2 Social Charges			
1.3 Overseas Allowances			
1.4 Insurance Coverage			
1.5 Medical Care			
1.6 Travel Expenses, etc.			
2. Imported Materials			
2.1 For Temporary Works			
2.2 For Permanent Works			
3. Constructional Plant			
3.1 Heavy Mobile Equipment			
3.2 Major Items of Non-Mobile Equipment (quarry, batching plant, etc.)			
3.3 Light Vehicles, Implements and Machinery			
3.4 Spare Parts and Tyres			
4. Overheads, Fees, etc.			
4.1 Overseas Head Office			
4.2 Finance Charges, Fees, Profit, etc.			
4.3 Freight			
4.4 Insurance, etc.			
5. Miscellaneous (describe below)			
5.1			
5.2			
5.3			
5.4			
5.5			

Total %

- Notes:
- (1) Tenderers may include additional items under Miscellaneous.
 - (2) Total Percentage in Annex and Schedule I must agree.
 - (3) Detailed supporting calculations shall be attached as separate sheets.

SCHEDULE J

REDUCTION PERCENTAGE IN CONTRACT PRICE

The Tenderer shall state clearly below the percentage reduction in Tender Sum he is prepared to give on this Contract, if he is also awarded other Contract on this Project, as combination of Contracts for Lot I and Lot II.

The Tenderer prequalified for undertaking one contract only is not required to complete this form.

Bill Description	Lot I Single Contract (Kina)	Reduction Percentage (%)	Reduction Amount (Kina)
Group 1 General			
Group 2 Preliminary			
Roadwork (Groups 3-18)			
Bridge No. 1 (Groups 3-18)			
Bridge No. 2 (Groups 3-18)			
Bridge No. 3 (Groups 3-18)			
GROUP 19 Dayworks			
Total (Lot I)			
To be Entered as the			
Tender Sum in the			
Form of Tender			

Reduction Percentage (.....%)
in Tender Sum

SCHEDULE K

DAYWORKS - LABOUR

Refer Group 19 of the Specification.

The Tenderer shall provide the following information.

A charge of percent would be applied to cover overhead administrative costs and profit for labour used in dayworks.

Labour Classification	Hourly Rate of Pay (Kina)
1. Foreman	
2. Skilled Labour	
3. General Labour	

SCHEDULE L

DAYWORKS - MATERIALS

Refer to Group 19 of the Specification.

The Tenderer shall provide the following information.

A charge of percent would be applied to cover overhead administrative costs and profit for materials used in dayworks.

SCHEDULE M

DAYWORKS - PLANT

Refer to Group 19 of the Specification.

The Tenderer shall provide full details of the Plant and Equipment that he proposes to use for the execution of the work together with hourly hire rates applicable to each item.

Tenderer's Proposal					
Plant Item	Description	Manufacture	Model	Year	Hourly Hire Rate (Kina)

CONDITIONS OF CONTRACT PART III
NOMINATED BORROW PITS

CONDITIONS OF CONTRACT PART III

NOMINATED BORROW PITS

Clause 28.2

The following areas are nominated materials sources for Lot I Contract, however no guarantee is given that these materials sources will provide sufficient suitable materials for the construction of the Works. The Contractor shall investigate these sources in accordance with Clauses 11.1 and 12.1 of the Conditions of Contract, and in the event of any shortfall of material, he shall locate additional materials sources.

In this event the Contractor shall seek permission to use such additional materials sources in accordance with Clause 28.3 of the Conditions of Contract.

1. Subbase Material:
 - Subbase Borrow Pit No. 1 (Bereina)
Chainage (km 1 + 600)
 - Subbase Borrow Pit No. 2 (Babanonga)
Chainage (km 14 + 200)
2. Base Course Material:
 - Quarry Site No. 1 (Eboa Quarry)
3. Concrete Aggregate, Cover Aggregate, Rubble and Cobble Materials:
 - River Deposit No. 1 (Angabanga River)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BILL OF QUANTITIES

Tender submitted by :

Name :
.....
Address :
.....
.....
.....
Telex :
Telephone :
Facsimile :
Date :

BILL OF QUANTITIES

PREAMBLE

1. Rates to be Inclusive

The items set forth in the Bill of Quantities and the price entered therefor ("the Contract Rates") shall, except insofar as may be otherwise expressly provided in the Contract, be deemed to cover all the Contractor's liabilities and obligations and all matters and things necessary for the proper construction and completion of the Works as specified in or reasonably to be inferred from the Contract. No further payment shall be made in respect of anything described in the Contract for which apparently no corresponding item is given in the Bill of Quantities and the cost thereof shall be deemed to be included in the Contract Rates as aforesaid. The cost of any item against which no Contract Rate has been entered shall be deemed to be covered by other Contract Rates.

2. Item Descriptions

The item descriptions in the Bill of Quantities are stated only in sufficient detail to ensure identification of the work covered with that shown on the Drawings and described in the Specification. Description of the work given on the Drawings or in the Specification is not necessarily repeated in the identifying descriptions of the items in the Bill of Quantities. A reference clause number set against any item in the Bill of Quantities indicates a clause in the Specification in which work or material covered by the item is described. Further requirements for the work or material in question may be stated in other clauses in the Specification or on the Drawings and the Contract Rates shall be deemed to cover also the cost of complying with any such further requirements.

3. Provisional Sums

All sums entered as Provisional Sums will be dealt with as provided by Clause 58 of the Conditions of Contract.

4. Lump Sum Quantities

In addition to items for measured work, Lump Sum items are provided to cover certain specified duties and obligations of the Contractor.

5. Payment of Lump Sums

Unless otherwise specified, Lump Sum items will become payable when in the opinion of the Engineer the obligations under the Lump Sum item have been completed.

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 1 - GENERAL
GROUP 2 - PRELIMINARIES

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 1 - GENERAL

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
1.1	Provision of Contractor's site establishment (Clause 1.7)	Lump Sum			
1.2	Maintenance of Contractor's site establishment (Clause 1.7)	Month	36		
1.3	Removal of Contractor's site establishment (Clause 1.7)	Lump Sum			
1.4	Centre line survey (Clause 1.16)	Lump Sum			
1.5	Helicopter charge for centre-line survey and preparatory works (Clause 1.20)	Lump Sum			
1.6	Allow for conforming to Clause 10.1 of the Conditions of Contract (Performance Security)	Lump Sum			
1.7	Allow for conforming to Clauses 21.1, 22.1, 22.2, 23.1, 23.2, 23.3, 24.1 and 24.2 of the Conditions of Contract (Insurances and Indemnities)	Lump Sum			
1.8	Allow for conforming to Group 1 of the Specification not covered elsewhere	Month	36		
1.9	Allow for conforming to the requirements of the Conditions of Contract not covered elsewhere	Lump Sum			
TOTAL GROUP 1 (GENERAL) CARRIED TO GRAND SUMMARY					

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 2 - PRELIMINARIES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
2.1	Provision of Engineer's office and laboratory including utility services (Clause 2.2)				
	(a) Office at Bereina	Lump Sum			
	(b) Office at Miaru	Lump Sum			
	(c) Laboratory at Bereina	Lump Sum			
2.2	Provision of Engineer's staff residences including utility services (Clause 2.3)				
	(a) Residence at Bereina	No.	4		
	(b) Residence at Miaru	No.	2		
2.3	Maintenance of Engineer's office and laboratory (Clause 2.9)	Month			
	(a) Office at Bereina	Office Month	33		
	(b) Office at Miaru	Office Month	33		
	(c) Laboratory at Bereina	Office Month	30		
2.4	Maintenance of Engineer's staff residence (Clause 2.9)				
Total Carried Forward					

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
	Brought Forward				
	(a) Residence at Bereina	Residence Month	132		
	(b) Residence at Miaru	Residence Month	66		
2.5	Dismantling Engineer's office and laboratory				
	(a) Office at Bereina	Lump Sum			
	(b) Office at Miaru	Lump Sum			
	(c) Laboratory at Bereina	Lump Sum			
2.6	Dismantling Engineer's residences				
	(a) Residence at Bereina	No.	4		
	(b) Residence at Miaru	No.	2		
2.7	Public utility charges, rates and local authority charges for Engineer's office (Clause 2.6)				
		Prov. Sum			300
2.8	Percentage on item 2.7 for handling (fill in percentage and extend)				
		Percent			
2.9	Master VHF radio transmitter/receiver equipment to Engineer's office (Clause 2.7)				
		Lump Sum			
Total Carried Forward					

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
Brought Forward					
2.10	Provision of Engineer's staff vehicles including VHF transceivers (Clause 2.10)				
	(a) Medium Sedan 4WD not less than 1700 cc	No.	1		
	(b) Large Utility 4WD, 4x4, long base, not less than 4000 cc	No.	1		
	(c) Medium utility 4WD double cab not less than 2000cc	No.	2		
	(d) Medium utility 4WD single cab not less than 2000cc	No.	1		
2.11	Maintenance of and fuel for Engineer's staff vehicles for distance traveled not exceeding 2,500km/vehicle month average in each 6 months period (Clause 2.11)				
	(a) Medium Sedan, 4WD not less than 1700 cc	Veh. Month	35		
	(b) Large utility, 4WD 4x4, long base, not less than 4000 cc	Veh. Month	35		
	(c) Medium utility 4WD double cab not less than 2000cc	Veh. Month	70		
	(d) Medium utility 4WD single cab not less than 2000cc	Veh. Month	35		
Total Carried Forward					

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
Brought Forward					
2.12	Maintenance of and fuel for Engineer's staff vehicles for distance in excess of 15,000km per 6 months period (Provisional)				
	(a) Medium Sedan, 4WD, not less than 1500 cc	km	25,000		
	(b) Large utility 4WD, 4x4 four door long base, not less than 4000 cc	km	25,000		
	(c) Medium utility 4WD double cab not less than 2000cc	km	40,000		
	(d) Medium utility 4WD single cab not less than 2000cc	km	30,000		
2.13	Provision of furniture and equipment (Clause 2.8 (i), (ii) and (iii))	Lump Sum			
2.14	Provision of miscellaneous equipment and supplies (Clause 2.8 (iv))	Prov. Sum			1,000
2.15	Contractor's charges on Item 2.14 (fill in percentage and extend)	Percent			
2.16	Provision for helicopter hire (Clause 2.14)	Prov. Sum			122,000
2.17	Contractor's charges on Item 2.16 (fill in percentage and extend)	Percent			
Total Carried Forward					

LOT I BEREINA TO MIARU RIVER SECTION
 CONTRACT NO. SC 120-33-814/A

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
Brought Forward					
2.18	Project Notice Board (Clause 2.13)	No.	2		
2.19	Ground investigation (Clause 2.16)	Prov. Sum.			32,500
2.20	Contractor's charges Item 2.19 (fill in percentage and extend)	Percent			
2.21	Assistance for the Engineer (Clause 2.15)	Lump Sum			

TOTAL GROUP 2 (PRELIMINARY)
 CARRIED TO GRAND SUMMARY

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)

- | | | | |
|-------|----|---|---|
| GROUP | 3 | - | CLEARING AND GRUBBING |
| | 4 | - | EARTHWORKS |
| | 5 | - | BASE AND SUBBASE |
| | 6 | - | BITUMINOUS SURFACING |
| | 7 | - | DRAINAGE |
| | 8 | - | ROAD FURNITURE AND MARKINGS |
| | 9 | - | MASONRY FOR STRUCTURES |
| | 10 | - | (NOT USED) |
| | 11 | - | (NOT USED) |
| | 12 | - | FORMWORK FOR CONCRETE |
| | 13 | - | STEEL REINFORCEMENT |
| | 14 | - | CONCRETE FOR STRUCTURES |
| | 15 | - | (NOT USED) |
| | 16 | - | (NOT USED) |
| | 17 | - | (NOT USED) |
| | 18 | - | RIVER TRAINING, BANK PROTECTION,
GABIONS AND RENO MATTRESSES |

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 3 - CLEARING AND GRUBBING

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
3.1	Clearing and Grubbing				
	(a) Dry land area	ha	135.8		
	(b) Borrow pits (Prov.)	ha	6.1		

TOTAL GROUP 3 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 4 - EARTHWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
4.1	Excavation				
	(a) Type A material	cu.m.	950		
	(b) Type B material	cu.m.	581,300		
	(c) Type C material (Prov.)	cu.m.	10		
	(d) Type D material	cu.m.	246,700		
4.2	Embankments	cu.m.	742,100		
4.3	Borrow (Prov.)	cu.m	5,000		
4.4	Excavation and disposal of unsuitable material				
	(a) Roadway (Prov.)	cu.m.	13,500		
4.5	Overhaul beyond 5.0km (Prov.)	cu.m. km	35,000		
4.6	Excavation for road structure				
	(a) Type B Material (Prov.)	cu.m.	100		
	(b) Type D Material (Prov.)	cu.m.	50		
4.7	Fill to road structure (Prov.)	cu.m.	300		
4.8	Excavation and filling of soft spots (Prov.)	cu.m	500		
4.9	(Not Used)				
4.10	(Not Used)				
4.11	(Not Used)				
Total Carried Forward					

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 4 - EARTHWORKS - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
	Brought Forward				
4.12	Geotextile fabric				
	(a) Type A (Prov.)	sq.m.	4,500		
	(b) Type B (Prov.)	sq.m.	1,500		
4.13	(Not Used)				
4.14	Intersections				
	(a) Excavation				
	(i) Type B (Prov.)	cu.m.	10		
	(ii) Type D	cu.m.	14,560		
	(b) Embankment	cu.m.	3,160		

TOTAL GROUP 4 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 5 - BASE AND SUBBASE

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
5.1	Lower subbase, sandy gravel				
	(a) From subbase borrow pit No. 1	cu.m.	11,500		
	(b) From subbase borrow pit No. 2	cu.m.	33,400		
5.2	Upper subbase, cement treated sandy gravel (1.5% cement)	cu.m.	30,900		
5.3	Base course, crushed stone	cu.m.	44,900		
5.4	Increase or decrease of cement for item 5.2 (Prov.)	Ton	150		

TOTAL GROUP 5 - (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 6 - BITUMINOUS SURFACING

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
6.1	Prime coat	litre	353,400		
6.2	Blotter material	sq.m.	588,900		
6.3	Residual bitumen, Class 170	litre	500,200		
6.4	Cutter (Prov.)	litre	10,000		
6.5	Adhesion agents	litre	5,000		
6.6	19.0mm cover aggregate	cu.m.	3,000		
6.7	9.5mm cover aggregate	cu.m.	1,800		
6.8	Precoating material	litre	43,700		

TOTAL GROUP 6 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 7 - DRAINAGE

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
7.1	Corrugated steel pipe culvert				
	(a) 600mm dia. (Prov.) (2.5 mm gauge)	lin.m.	30		
	(b) 900mm dia. (2.5 mm gauge)	lin.m.	761		
	(c) 1200mm dia. (2.5 mm gauge)	lin.m.	377		
	(d) 1500mm dia. (3.0 mm gauge)	lin.m.	167		
	(e) 1800mm dia. (3.0 mm gauge)	lin.m.	236		
	(f) 2100mm dia. (3.0 mm gauge)	lin.m.	1,210		
	(g) 2500mm dia. (Prov.) (3.0 mm gauge)	lin.m.	120		
7.2	Subsoil drain (Prov.)	lin.m.	300		
7.3	Excavation in inlet and outlet	cu.m.	900		

TOTAL GROUP 7 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 8 - ROAD FURNITURES AND MARKINGS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
8.1	Road signs				
	(a) Give way, R1-2A	No.	6		
	(b) Give way ahead, W3-2A	No.	1		
	(c) One lane bridge W4-1A/W8-16A	No.	1		
	(d) No overtaking or passing, R6-1A	No.	1		
	(e) School, W6-4A	No.	1		
	(f) Finger board, G3-1	No.	5		
	(g) Finger board, G3-2	No.	5		
	(h) Intersection direction sign	No.	5		
8.2	Road edge guide post, timber	No.	1,195		
8.3	Road edge markers (Prov).	No.	120		
8.4	Guardrails				
	(a) Guardrail	lin.m.	144		
	(b) End section	No.	24		
	(c) Post, steel	No.	108		
	(d) Fender posts, steel (Prov.)	No.	1		
8.5	Markings				
	(a) Edge line	lin.m.	66,890		
	(b) Separation line	lin.m.	22,690		
	(c) One way barrier line	lin.m.	9,780		
	(d) Two way barrier line	lin.m.	1,090		
	(e) Holding line	lin.m.	100		
	(f) Continuity line	lin.m.	80		

TOTAL GROUP 8 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 9 - MASONRY FOR STRUCTURE

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
9.1	Cement grouted stone pitching to aprons, headwalls (Prov.)	cu.m.	30		
9.2	Masonry wall (Prov.)	cu.m.	30		

TOTAL GROUP 9 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 12 - FORMWORK FOR CONCRETE

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
12.1	Formwork to road structure				
	(a) Class 2 (Prov.)	sq.m.	20		
	(b) Class 4 (Prov.)	sq.m.	20		

TOTAL GROUP 12 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. TC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 13 - STEEL REINFORCEMENT

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
13.1	High yield steel reinforcement "Tempcore" (Prov.)	tonne	5		
13.2	Plain round reinforcement Grade 230 (Prov.)	tonne	5		

TOTAL GROUP 13 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

ROAD WORK (GROUPS 3-18)
GROUP 14 - CONCRETE FOR STRUCTURES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
14.1	Concrete Grade 20 to road structures (Prov.)	cu.m	20		
14.2	Concrete Grade 15 to road structures (Prov.)	cu.m	20		

TOTAL GROUP 14 (ROAD WORK)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/B

ROAD WORKS (GROUPS 3-18)
GROUP 18 - RIVER TRAINING, BANK PROTECTION, GABIONS
AND RENO MATTRESSES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount (K)
18.1	(Not Used)				
18.2	(Not Used)				
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	10		
18.4	Gabions	cu.m	1,480		
18.5	Reno mattresses				
	(a) Type A	cu.m	530		
	(b) Type B (Prov.)	cu.m	10		

TOTAL GROUP 18 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

SUMMARY OF ROAD WORK

SUBTOTAL OF
GROUPS 3-18

GROUP 3

GROUP 4

GROUP 5

GROUP 6

GROUP 7

GROUP 8

GROUP 9

GROUP 12

GROUP 13

GROUP 14

GROUP 18

SUBTOTAL FOR
GROUPS 3-18
ROAD WORK
CARRIED TO
GRAND SUMMARY

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE
(GROUPS 3-18)

- | | | |
|-------|------|---|
| GROUP | 3 - | CLEARING AND GRUBBING |
| | 4 - | EARTHWORKS |
| | 5 - | (NOT USED) |
| | 6 - | (NOT USED) |
| | 7 - | (NOT USED) |
| | 8 - | (NOT USED) |
| | 9 - | (NOT USED) |
| | 10 - | PILING FOR STRUCTURES |
| | 11 - | (NOT USED) |
| | 12 - | FORMWORK FOR CONCRETE |
| | 13 - | STEEL REINFORCEMENT |
| | 14 - | CONCRETE FOR STRUCTURES |
| | 15 - | STRUCTURAL STEELWORK |
| | 16 - | PROTECTION TO STEELWORK |
| | 17 - | MISCELLANEOUS BRIDGEWORK ITEMS |
| | 18 - | RIVER TRAINING, BANK PROTECTION,
GABIONS AND RENO MATTRESSES |

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 3 - CLEARING AND GRUBBING

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
3.1	Clearing and grubbing at bridge site	ha	0.1		

TOTAL GROUP 3 (BRIDGE NO.1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 4 - EARTHWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
4.1	Excavation for structural foundations				
	(a) Type A material (Prov.)	cu.m.	5		
	(b) Type B material (Prov.)	cu.m.	10		
	(c) Type C material (Prov.)	cu.m.	1		
	(d) Type D material	cu.m.	20		
4.2	Backfill to excavations for structural foundations	cu.m.	8		
4.3	Backfill to bridge abutment	cu.m.	295		
4.4	Roadway embankment	cu.m.	721		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin. m	120		
	(b) Cross timber	lin. m	110		
4.6	(Not Used)				

TOTAL FOR GROUP 4 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 10 - PILING FOR STRUCTURES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
10.1	Setting up piling rig on site				
	(a) Setting up piling rig for abutments	No.	2		
10.2	Supply of steel pipe piles 500mm dia. 14mm thick, Grade 250	m	147		
10.3	(Not Used)				
10.4	Driving piles of 500mm dia.including positioning and pitching. Include for cutting pile heads to correct level	m	128		
10.5	(Not Used)				
10.6	Load Tests	No.	1		
10.7	(Not Uses)				
10.8	(Not Used)				
10.9	(Not Used)				

TOTAL GROUP 10 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
 CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
 GROUP 12 - FORMWORK FOR CONCRETE

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
12.1	Formwork to abutments and approach slabs				
	(a) Class 2	sq.m.	56		
	(b) Class 4	sq.m.	107		
12.2	(Not Used)				
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	50		
	(b) Class 3	sq.m.	108		

TOTAL GROUP 12 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 13 - STEEL REINFORCEMENT

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
13.1	Plain round reinforcement, Grade 230	tonne	0.5		
13.2	Reinforcement fabric	tonne	0.7		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	9.6		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, Grade 410	tonne	10.4		

TOTAL GROUP 13 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 14 - CONCRETE FOR STRUCTURES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
14.1	Concrete Grade 25 to abutments and approach slabs	cu.m.	97		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	40		
14.3	Blinding Concrete concrete	cu.m.	2		

TOTAL GROUP 14 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 15 - STRUCTURAL STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
15.1	(Not Used)				
15.2	Supply, fabrication, shop painting and delivery to site, universal beam girder, Grade 350. Include for all necessary bolts and fittings	tonne	20.4		
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	2.8		
15.4	Erection of structural steel work to bridge superstructure	tonne	23.2		

TOTAL GROUP 15 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 16 - PROTECTION TO STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
16.1	Site painting	sq.m.	277		

TOTAL GROUP 16 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 17 - MISCELLANEOUS BRIDGEWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts Type BP-B103 (Fixed)	No.	4		
17.2	Bearings including bearing plates and holding down bolts Type BP-B104 (Movable)	No.	4		
17.3	Impact angles	lin.m	50		
17.4	Seismic restraints				
	(a) At abutment	No.	8		
17.5	Scupper PVC pipes	lin.m	4		
17.6	Handrails	lin.m	43		

TOTAL GROUP 17 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 1 - TAIENA BRIDGE (GROUPS 3-18)
GROUP 18 - RIVER TRAINING, BANK PROTECTION, GABIONS
AND RENO MATTRESSES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
18.1	Excavation for bank protection works				
	(a) Type B material(Prov.)	cu.m.	5		
	(b) Type D material	cu.m.	52		
18.2	Excavation for river channel alignment				
	(a) Type D material	cu.m.	49		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	5		
18.4	Gabions	cu.m.	20		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	5		
	(b) Type B	cu.m.	32		

TOTAL GROUP 18 (BRIDGE NO. 1)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

SUMMARY OF BRIDGE NO. 1 - TAIENA BRIDGE

SUBTOTAL OF
GROUPS 3-18

GROUP 3

GROUP 4

GROUP 10

GROUP 12

GROUP 13

GROUP 14

GROUP 15

GROUP 16

GROUP 17

GROUP 18

SUBTOTAL FOR
GROUPS 3-18
BRIDGE NO. 1
TAIENA BRIDGE
CARRIED TO
GRAND SUMMARY

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE
(GROUPS 3-18)

- GROUP 3 - CLEARING AND GRUBBING
- 4 - EARTHWORKS
- 5 - (NOT USED)
- 6 - (NOT USED)
- 7 - (NOT USED)
- 8 - (NOT USED)
- 9 - (NOT USED)
- 10 - PILING FOR STRUCTURES
- 11 - (NOT USED)
- 12 - FORMWORK FOR CONCRETE
- 13 - STEEL REINFORCEMENT
- 14 - CONCRETE FOR STRUCTURES
- 15 - STRUCTURAL STEELWORK
- 16 - PROTECTION TO STEELWORK
- 17 - MISCELLANEOUS BRIDGEWORK ITEMS
- 18 - RIVER TRAINING, BANK PROTECTION,
GABIONS AND RENO MATTRESSES

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 3 - CLEARING AND GRUBBING

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
3.1	Clearing and grubbing at bridge site	ha	0.1		

TOTAL GROUP 3 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 4 - EARTHWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
4.1	Excavation for structural foundations				
	(a) Type A material (Prov.)	cu.m.	3		
	(b) Type B material (Prov.)	cu.m.	5		
	(c) Type C material (Prov.)	cu.m.	1		
	(d) Type D material	cu.m.	64		
4.2	Backfill to excavations for structural foundations	cu.m.	28		
4.3	Backfill to bridge abutment	cu.m.	220		
4.4	Roadway embankment	cu.m.	500		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	120		
	(b) Cross timber	lin.m	110		
4.6	(Not Used)				

TOTAL FOR GROUP 4 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 10 - PILING FOR STRUCTURES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
10.1	Setting up piling rig on site				
	(a) Setting up piling rig for abutments	No.	2		
10.2	Supply of steel pipe piles 500mm dia. 14mm thick, Grade 250	m	132		
10.3	(Not Used)				
10.4	Driving piles of 500mm dia. including positioning and pitching. Include for cutting pile heads to correct level	m	115		
10.5	(Not Used)				
10.6	Load test	No.	1		
10.7	(Not Used)				
10.8	(Not Used)				
10.9	(Not Used)				

TOTAL GROUP 10 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 12 - FORMWORK FOR CONCRETE

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
12.1	Formwork to abutments and approach slab				
	(a) Class 2	sq.m.	40		
	(b) Class 4	sq.m.	113		
12.2	(Not Used)				
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	63		
	(b) Class 3	sq.m.	123		

TOTAL GROUP 12 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 13 - STEEL REINFORCEMENT

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
13.1	Plain round reinforcement, Grade 230 (Prov.)	tonne	0.5		
13.2	Reinforcement fabric	tonne	0.7		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	10.7		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, Grade 410	tonne	10.4		

TOTAL GROUP 13 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 14 - CONCRETE FOR STRUCTURES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
14.1	Concrete Grade 25 to abutments and approach slabs	cu.m	46		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	40		
14.3	Blinding concrete	cu.m.	2		

TOTAL GROUP 14 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 15 - STRUCTURAL STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
15.1	(Not Used)				
15.2	Supply, fabrication, shop painting and delivery to site, universal beam girder, Grade 350. Include for all necessary bolts and fittings	tonne	29.9		
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	2.8		
15.4	Erection of structural steel work to bridge superstructure	tonne	32.7		

TOTAL GROUP 15 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 16 - PROTECTION TO STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
16.1	Site painting	sq.m.	317		

TOTAL GROUP 16 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 17 - MISCELLANEOUS BRIDGEWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts Type BP-B103 (Fixed)	No.	4		
17.2	Bearings including bearing plates and holding down bolts Type BP-B104 (Movable)	No.	4		
17.3	Impact angles	lin.m	50		
17.4	Seismic restraints				
	(a) At abutment	No.	8		
17.5	Scupper PVC pipes	lin.m	4		
17.6	Handrails	lin.m	49		

TOTAL GROUP 17 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 2 - AGOBINO BRIDGE (GROUPS 3-18)
GROUP 18 - RIVER TRAINING, BANK PROTECTION, GABIONS
AND RENO MATTRESSES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
18.1	Excavation for bank protection works				
	(a) Type B material (Prov.)	cu.m.	3		
	(b) Type D material	cu.m.	70		
18.2	Excavation for river channel alignment				
	(a) Type D material (Prov.)	cu.m.	10		
18.3	Backfilling to gabion protection works	cu.m.	3		
18.4	Gabions	cu.m.	24		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	10		
	(b) Type B	cu.m.	46		

TOTAL GROUP 18 (BRIDGE NO. 2)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

SUMMARY OF BRIDGE NO. 2 - AGOBINO BRIDGE

SUBTOTAL OF
GROUPS 3-18

GROUP 3

GROUP 4

GROUP 10

GROUP 12

GROUP 13

GROUP 14

GROUP 15

GROUP 16

GROUP 17

GROUP 18

SUBTOTAL FOR
GROUPS 3-18
BRIDGE NO. 2
AGOBINO BRIDGE
CARRIED TO
GRAND SUMMARY

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE
(GROUPS 3-18)

- | | | | |
|-------|----|---|---|
| GROUP | 3 | - | CLEARING AND GRUBBING |
| | 4 | - | EARTHWORKS |
| | 5 | - | (NOT USED) |
| | 6 | - | (NOT USED) |
| | 7 | - | (NOT USED) |
| | 8 | - | (NOT USED) |
| | 9 | - | (NOT USED) |
| | 10 | - | PILING FOR STRUCTURES |
| | 11 | - | (NOT USED) |
| | 12 | - | FORMWORK FOR CONCRETE |
| | 13 | - | STEEL REINFORCEMENT |
| | 14 | - | CONCRETE FOR STRUCTURES |
| | 15 | - | STRUCTURAL STEELWORK |
| | 16 | - | PROTECTION TO STEELWORK |
| | 17 | - | MISCELLANEOUS BRIDGEWORK ITEMS |
| | 18 | - | RIVER TRAINING, BANK PROTECTION,
GABIONS AND RENO MATTRESSES |

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UGONGO BRIDGE (GROUPS 3-18)
GROUP 3 - CLEARING AND GRUBBING

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
3.1	Clearing and grubbing at bridge site	ha	0.1		

TOTAL GROUP 3 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 4 - EARTHWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
4.1	Excavation for structural foundations				
	(a) Type A material (Prov.)	cu.m.	3		
	(b) Type B material (Prov.)	cu.m.	5		
	(c) Type C material (Prov.)	cu.m.	1		
	(d) Type D material	cu.m.	10		
4.2	Backfill to excavations for structural foundations	cu.m.	4		
4.3	Backfill to bridge abutment	cu.m.	350		
4.4	Roadway embankment	cu.m.	869		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	120		
	(b) Cross timber	lin.m	110		
4.6	(Not Used)				

TOTAL FOR GROUP 4 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UGONGO BRIDGE (GROUPS 3-18)
GROUP 10 - PILING FOR STRUCTURES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
10.1	Setting up piling rig on site				
	(a) Setting up piling rig for abutments	No.	2		
10.2	Supply of steel pipe piles 500mm dia. 14mm thick, Grade 250 steel	m	201		
10.3	(Not Used)				
10.4	Driving piles of 500mm dia. including positioning and pitching. Include for cutting pile heads to correct level	m	179		
10.5	(Not Used)				
10.6	Load tests	No.	1		
10.7	(Not Used)				
10.8	(Not Used)				
10.9	(Not Used)				

TOTAL GROUP 10 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 12 - FORMWORK FOR CONCRETE

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
12.1	Formwork to abutments and approach slabs				
	(a) Class 2	sq.m.	53		
	(b) Class 4	sq.m.	141		
12.2	(Not Used)				
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	46		
	(b) Class 3	sq.m.	123		

TOTAL GROUP 12 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 13 - STEEL REINFORCEMENT

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
13.1	Plain round reinforcement, Grade 230 (Prov.)	tonne	0.1		
13.2	Reinforcement fabric	tonne	0.8		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	12.4		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, Grade 410	tonne	12.2		

TOTAL GROUP 13 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 14 - CONCRETE FOR STRUCTURES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
14.1	Concrete Grade 25 to abutments and approach slabs	cu.m.	108		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	46		
14.3	Blinding concrete concrete	cu.m.	3		

TOTAL GROUP 14 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 15 - STRUCTURAL STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
15.1	(Not Used)				
15.2	Supply, fabrication, shop painting and delivery to site, universal beam girder, Grade 350. Include for all necessary bolts and fittings	tonne	29.9		
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	3.0		
15.4	Erection of structural steel work to bridge superstructure	tonne	32.8		

TOTAL GROUP 15 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 16 - PROTECTION TO STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
16.1	Site painting	sq.m.	321		

TOTAL GROUP 16 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 17 - MISCELLANEOUS BRIDGEWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts, Type BP-B103 (Fixed)	No.	4		
17.2	Bearings including bearing plates and holding down bolts, Type BP-B104 (Movable)	No.	4		
17.3	Impact angles	lin.m	53		
17.4	Seismic restraints				
	(a) At abutment	No.	8		
	(b) At pier				
17.5	Scupper PVC pipes	lin.m	4		
17.6	Handrails	lin.m	49		

TOTAL GROUP 17 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

BRIDGE NO. 3 - UNGONGO BRIDGE (GROUPS 3-18)
GROUP 18 - RIVER TRAINING, BANK PROTECTION, GABIONS
AND RENO MATTRESSES

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
18.1	Excavation for bank protection works				
	(a) Type B material (Prov.)	cu.m.	5		
	(b) Type D material	cu.m.	84		
18.2	Excavation for river channel alignment				
	(a) Type D material	cu.m.	123		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	3		
18.4	Gabions	cu.m.	22		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	3		
	(b) Type B	cu.m.	61		

TOTAL GROUP 18 (BRIDGE NO. 3)

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

SUMMARY OF BRIDGE NO. 3 - UNGONGO BRIDGE

SUBTOTAL OF
GROUPS 3-18

GROUP 3

GROUP 4

GROUP 10

GROUP 12

GROUP 13

GROUP 14

GROUP 15

GROUP 16

GROUP 17

GROUP 18

SUBTOTAL FOR
GROUPS 3-18
BRIDGE NO. 3
UNGONGO BRIDGE
CARRIED TO
GRAND SUMMARY

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 19 - DAYWORKS

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GROUP 19 - DAYWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
19.1	Provisional Sum for Labour	Prov. Sum			2,700
19.2	Contractor's charges on Item 19.1 (fill in percentage and extend)	Percent			
19.3	Provisional Sum for materials	Prov. Sum			70,000
19.4	Contractor's charges on Item 19.3 (fill in percentage and extend)	Percent			
19.5	Provisional Sum for Plant stated below or nearest equivalent				
	(a) 200 HP Bulldozer (Prov.)	hrs.	75		
	(b) 160 HP Bulldozer (Prov.)	hrs.	105		
	(c) 150 HP Tractor shovel (Prov.)	hrs.	75		
	(d) 150 HP Wheel loader (Prov.)	hrs.	75		
	(e) 100 HP Excavator (Prov.)	hrs.	75		
	(f) 125 HP Grader (Prov.)	hrs.	100		
	(g) 10 ton Tire roller (Prov.)	hrs.	100		
	(h) 10 ton Dump truck (Prov.)	hrs.	250		

TOTAL GROUP 19 (DAYWORKS)
CARRIED TO GRAND SUMMARY

LOT I BEREINA TO MIARU RIVER SECTION
CONTRACT NO. SC 120-33-814/A

GRAND SUMMARY

GROUP 1

GROUP 2

ROAD WORK
GROUPS 3-18

BRIDGE NO. 1 -
TAIENA BRIDGE
GROUPS 3-18

BRIDGE NO. 2 -
AGOBINO BRIDGE
GROUPS 3-18

BRIDGE NO. 3 -
UNGONGO BRIDGE
GROUPS 3-18

GROUP 19

TOTAL (LOT I) TO BE
ENTERED AS THE
TENDER SUM IN THE
FORM OF TENDER

JICA