

No. 17

THE GOVERNMENT OF PAPUA NEW GUINEA

THE DETAILED DESIGN
ON
ROAD CONSTRUCTION PROJECT
IN
BEREINA - MALALAU

TENDER DOCUMENTS

(Volume II - 2)

JANUARY 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

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BEREINA TO MALALAU ROAD CONSTRUCTION PROJECT TENDER DOCUMENTS (Volume II - 2) JAN 1990

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PAPUA NEW GUINEA



DEPARTMENT OF WORKS

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

TENDER DOCUMENTS

FOR

**LOT II : MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B
CH 33+500 TO CH 80+596**

VOLUME II-2

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

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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-2

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FORM OF TENDER

FORM OF TENDER

SHORT DESCRIPTION OF WORKS :

CONTRACT NO. SC 120-33-814/B (LOT II)

All Permanent and Temporary Works in connection with the construction of the Miaru River to Malalaua Section (47.1 km) of the Bereina to Malalaua Road Construction Project, Gulf Province.

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 of 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 I, we confirm that the abovenamed sum will be reduced by
.....(K)
in the event of both the 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 II only, this paragraph should be deleted and initialled by the Tenderer.

FORM OF TENDER FOR THE COMBINED PACKAGE

(LOT I AND LOT II)

SHORT DESCRIPTION OF WORKS :

CONTRACTS NO. SC 120-33-814/A (LOT I) AND
SC 120-33-814/B (LOT II)

All Permanent and Temporary Works in connection with the construction of the combined package of Lot I and Lot II, for the Bereina to Malalaua Road Construction Project, Gulf/Central 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 combined 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 combined Works within twenty eight (28) days of receipt of the Engineer's order to commence, and to complete and deliver the Lot I Works and Lot II Works respectively within the period specified in each Appendix to Form of Tender.

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 to percent (Lot I) andpercent (Lot II) of that price be paid in
..... (Lot I) and (Lot II), 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 to Form of Tender 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.

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 one Lot only, this form is not necessary.

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	48 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 of Centre-Line Survey	43.4	6 Calendar 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
Percentage of Retention	60.2	5%

APPENDIX TO FORM OF TENDER

--continued

Description	Conditions of Contract Clause No.	Requirement
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 published 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/B

- 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 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 Earthworks, 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 in this schedule 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				
Total Carried Forward				

SCHEDULE D (continued)

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)
Brought Forward				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
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 Work. 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 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	37	38	39	40	41	42	43	44	45	46	47	48									
MOBILIZATION																																																									
CLEARING AND GRUBBING																																																									
EXCAVATION																																																									
SAND MAT, GEOTEXTILE FABRIC																																																									
EMBANKMENT																																																									
SUBBASE COURSE																																																									
BASE COURSE																																																									
BITUMINOUS SURFACING																																																									
DRAINAGE WORK																																																									
ROAD FURNITURES																																																									
BRIDGE No. 4 - MIARU BRIDGE																																																									
PILING																																																									
SUBSTRUCTURE																																																									
SUPERSTRUCTURE																																																									
BRIDGE No 5 - KAPURI BRIDGE																																																									
PILING																																																									
SUBSTRUCTURE																																																									
SUPERSTRUCTURE																																																									
BRIDGE No 6 - LAKEKAMU BRIDGE																																																									
PILING																																																									
SUBSTRUCTURE																																																									
SUPERSTRUCTURE																																																									
BRIDGE No 7 - TAURI BRIDGE																																																									
PILING																																																									
SUBSTRUCTURE																																																									
SUPERSTRUCTURE																																																									
BRIDGE No 8 - MAKARA BRIDGE																																																									
PILING																																																									
SUBSTRUCTURE																																																									
SUPERSTRUCTURE																																																									
BRIDGE No 9 - SAPPAHARO BRIDGE																																																									
PILING																																																									
SUBSTRUCTURE																																																									
SUPERSTURTURE																																																									

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)
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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 (D) = (A)x(B) /100
(A)		(B)=%(A)		

(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. Contractor's Plant and Equipment			
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 II Single Contract (Kina)	Reduction Percentage (%)	Reduction Amount (Kina)
Group 1 General			
Group 2 Preliminary			
Roadwork (Groups 3-18)			
Bridge No. 4 (Groups 3-18)			
Bridge No. 5 (Groups 3-18)			
Bridge No. 6 (Groups 3-18)			
Bridge No. 7 (Groups 3-18)			
Bridge No. 8 (Groups 3-18)			
Bridge No. 9 (Groups 3-18)			
Group 19 Dayworks			
Total (Lot II)			
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 II 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. Fill Material:

- Stockpile No. 1 (Spoil Bank No. 2 and No. 3 of lot I) Chainage (km 33+400)
- Borrow Pit No. 1 (Apanaipi Ridge) Chainage (km 34+200)
- Borrow Pit No. 2-1 (Palipalla Hill) Chainage (km 49+200)
- Borrow Pit No. 2-2 (Palipalla Hill) Chainage (km 49+200)
- Borrow Pit No. 3-1 (Palipalla Hill) Chainage (km 54+000)
- Borrow Pit No. 3-2 (Palipalla Hill) Chainage (km 54+000)
- Borrow Pit No. 4 (Ilabala Hill) Chainage (km 64+800)
- Borrow Pit No. 5 (Malalaua)

2. Sand Mat Material:

- Sand Borrow Pit No. 1 (Iokea)
- Sand Borrow Pit No. 2 (Ilabara Hill)
- Sand Borrow Pit No. 3 (Koaru)

3. Subbase Material

- Subbase Borrow Pit No. 3 (Malalaua)

4. Base Course Material:

- Base Borrow Pit No. 1 (Malalaua)

5. Concrete Aggregate, Cover Aggregate, Rubble and Cobble Materials:

- River Deposit No. 2 (Tauri River)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GROUP 1 - GENERAL

GROUP 2 - PRELIMINARIES

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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	48		
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	48		
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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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 Malalaua	Lump Sum			
	(b) Office at Terapo	Lump Sum			
	(c) Office at Miaru	Lump Sum			
	(d) Laboratory at Malalaua	Lump Sum			
2.2	Provision of Engineer's staff residences including utility services (Clause 2.3)				
	(a) Residence at Malalaua	No.	4		
	(b) Residence at Terapo	No.	2		
	(c) Residence at Miaru	No.	2		
2.3	Maintenance of Engineer's office and laboratory (Clause 2.9)				
	(a) Office at Malalaua	Office Month		45	
	(b) Office at Terapo	Office Month		45	
	(c) Office at Miaru	Office Month		45	
	(d) Laboratory at Malalaua	Office Month		42	
2.4	Maintenance of Engineer's staff residences (Clause 2.9)				
	(a) Residence at Malalaua	Residence Month	180		
	(b) Residence at Terapo	Residence Month	90		
Total Carried forward					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
	Brought Forward				
	(c) Residence at Miaru	Residence Month	90		
2.5	Dismantling Engineer's office and laboratory				
	(a) Office at Malalaua	Lump Sum			
	(b) Office at Terapo	Lump Sum			
	(c) Office at Miaru	Lump Sum			
	(d) Laboratory at Malalaua	Lump Sum			
2.6	Dismantling Engineer's residences				
	(a) Residence at Malalaua	No.	4		
	(b) Residence at Terapo	No.	2		
	(c) Residence at Miaru	No.	2		
2.7	Public utility charges rates and local authority charges for Engineer's office (Clause 2.6)	Prov. Sum			500
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			
2.10	Provision of Engineer's staff vehicles including VHF transceivers (Clause 2.10)				
	Total Carried Forward				

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
	Brought Forward				
	(a) Medium Sedan 4WD, not less than 1700 cc	No.	1		
	(b) Large utility 4WD, 4x4, long base, not less than 4000 cc	No.	2		
	(c) Medium utility 4WD double cab not less than 2000 cc	No.	2		
	(d) Medium utility 4WD single cab not less than 2000 cc	No.	2		
2.11	Maintenance of fuel for Engineer's staff vehicles for distance travelled 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	47		
	(b) Large utility 4WD, 4x4, long base, not less than 4000 cc	Veh. Month	94		
	(c) Medium utility 4WD double cab not less than 2000 cc	Veh. Month	94		
	(d) Medium utility 4WD single cab not less than 2000 cc	Veh. Month	94		
2.12	Maintenance of and fuel for Engineer's staff vehicles for distance in excess of 15,000km per 6 months period (Provisional)				
	Total Carried Forward				

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
Brought Forward					
	(a) Medium Sedan, 4WD, not less than 1700 cc	km	25,000		
	(b) Large utility 4WD, 4x4, long base, not less than 4000cc	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			1,500
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			220,000
2.17	Contractor's charges on Item 2.16 (fill in percentage and extend)	Percent			
2.18	Project Notice Board (Clause 2.13)	No.	2		
2.19	Ground investigation (Clause 2.16)	Prov. Sum			70,000
Total Carried Forward					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GROUP 2 - PRELIMINARIES - continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
	Brought Forward				
2.20	Contractor's charges on 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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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	159.3		
	(b) Swamp area, common	ha	25.4		
	(c) Swamp area, Alika Swamp	ha	1.8		
	(d) Borrow pits (No. 1 to No. 5)	ha	13.0		
	(e) Sand borrow pit (No. 2)	ha	2.6		

TOTAL GROUP 3 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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 (Prov.)	cu.m.	258		
	(b) Type B material	cu.m.	160,700		
	(c) Type C material (Prov.)	cu.m.	10		
	(d) Type D material	cu.m.	99,750		
4.2	Embankments	cu.m.	592,000		
4.3	Borrow	cu.m.	353,000		
4.4	Excavation and disposal of unsuitable material				
	(a) Roadway (Prov.)	cu.m.	16,500		
	(b) Alika Swamp (Dredging)	cu.m.	9,400		
4.5	Overhaul beyond 5.0km (Prov.)	cu.m. km	70,000		
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.	50		
4.8	Excavation and filling of soft spots (Prov.)	cu.m.	450		
4.9	Sand mat filling on soft ground	cu.m.	150,000		
4.10	Sand filling in Alika Swamp including replace- ment sand, sand borrow pit No. 1	cu.m.	21,500		
Total Carried Forward					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
Brought Forward					
4.11	Sand bag in Alika Swamp				
	(a) Common swamp	cu.m.	910		
	(b) Alika Swamp	cu.m.	3,700		
4.12	Geotextile fabric on soft ground				
	(a) Type A	sq.m.	111,900		
	(b) Type B	sq.m.	254,500		
4.13	Settlement measuring apparatus				
	(a) Settlement plate	set		195	
	(b) Displacement peg	set		122	
4.14	Intersections				
	(a) Excavation				
	(i) Type B (Prov.)	cu.m.	30		
	(ii) Type D (Prov.)	cu.m.	30		
	(b) Embankment	cu.m.	2,100		

TOTAL GROUP 4 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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	cu.m.	61,650		
5.2	Upper subbase, cement treated sandy gravel (1.5% cement)	cu.m.	42,400		
5.3	Base course, cement treated sandy gravel (4.5% cement)	cu.m.	60,900		
5.4	Increase or decrease of cement for item 5.2 and 5.3 (Prov.)	ton	500		

TOTAL GROUP 5 - (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
6.1	Prime coat	litre	487,300		
6.2	Blotter material	sq.m.	812,200		
6.3	Residual bitumen Class 170	litre	720,700		
6.4	Cutter (Prov.)	litre	14,500		
6.5	Adhesion agents	litre	7,200		
6.6	19.0mm cover aggregate	cu.m.	4,400		
6.7	9.5mm cover aggregate	cu.m.	2,600		
6.8	Precoating material	litre	62,800		

TOTAL GROUP 6 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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.	1,778		
	(c) 1200mm dia. (2.5 mm gauge)	lin.m.	251		
	(d) 1500mm dia. (3.0 mm gauge)	lin.m.	959		
	(e) 1800mm dia. (3.0 mm gauge)	lin.m.	50		
	(f) 2100mm dia. (3.0 mm gauge)	lin.m.	560		
	(g) 2500mm dia. (Prov.) (3.0 mm gauge)	lin.m.	50		
7.2	Subsoil Drain	lin.m	5,630		
7.3	Excavation in inlet and outlet	cu.m.	830		

TOTAL GROUP 7 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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.	23		
	(b) Give way ahead, W3-2A	No.	6		
	(c) One lane bridge W4-1A/W8-16A	No.	12		
	(d) No overtaking or passing, R6-1A	No.	6		
	(e) School, W6-4A	No.	3		
	(f) Finger board, G3-1	No.	5		
	(g) Finger board, G3-2	No.	5		
	(h) Intersection direction sign	No.	1		
8.2	Road edge guide post, timber	No.	1,412		
8.3	Road edge markers (Prov).	No.	150		
8.4	Guardrails				
	(a) Guardrail	lin.m.	672		
	(b) End section	No.	48		
	(c) Post, steel	No.	312		
	(d) Fender post, steel	No.	24		
8.5	Markings				
	(a) Edge line	lin.m.	94,190		
	(b) Separation line	lin.m.	42,700		
	(c) One way barrier line	lin.m.	3,310		
	(d) Two way barrier line	lin.m.	200		
	(e) Holding line (Prov.)	lin.m.	100		
	(f) Continuity line (Prov.)	lin.m.	100		

TOTAL GROUP 8 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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.	100		
9.2	Masonry wall (Prov.)	cu.m.	50		

TOTAL GROUP 9 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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.	100		
	(b) Class 4 (Prov.)	sq.m.	20		

TOTAL GROUP 12 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
13.1	High yield reinforcement "Tempcore" (Prov.)	tonne	1.0		
13.2	Plain round reinforcement Grade 230 (Prov.)	tonne	1.0		

TOTAL GROUP 13 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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.	50		
14.2	Concrete Grade 15 to road structures (Prov.)	cu.m.	10		

TOTAL GROUP 14 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU 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	30		
18.4	Gabions	cu.m	1,380		
18.5	Reno mattresses				
	(a) Type A	cu.m	1,360		
	(b) Type B (Prov.)	cu.m	30		

TOTAL GROUP 18 (ROAD WORK)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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.	1		
	(b) Type B material (Prov.)	cu.m.	5		
	(c) Type C material (Prov.)	cu.m.	1		
	(d) Type D material	cu.m.	75		
4.2	Backfill to excavations for structural foundations	cu.m.	38		
4.3	Backfill to bridge abutment	cu.m.	208		
4.4	Roadway embankment	cu.m.	495		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	300		
	(b) Cross timber	lin.m	160		
4.6	Sand mat filling	cu.m	143		

TOTAL FOR GROUP 4 (BRIDGE NO. 1)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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		
	(b) Setting up piling rig for piers	No.	2		
10.2	Supply of steel pipe piles 600mm dia. 14mm thick, Grade 250	lin.m.	96		
10.3	Supply of steel pipe piles 800mm dia. 12mm thick, Grade 250	lin.m.	246		
10.4	Driving piles of 600mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	89		
10.5	Driving piles of 800mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	154		
10.6	Load tests	No.	2		
10.7	Filling concrete in steel pipe piles				
	(a) Plain round reinforcement Grade 230	tonne	2.2		
	(b) High yield steel reinforcement "Tempcore" Grade 410	tonne	15.7		
	(c) Concrete, Grade 30	cu.m.	87		
10.8	(Not Used)				
10.9	Rubber buffers	No.	6		
TOTAL GROUP 10 (BRIDGE NO. 4)					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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.	44		
	(b) Class 4	sq.m.	104		
12.2	Formwork to pile caps and piers				
	(a) Class 2	sq.m.	49		
	(b) Class 4	sq.m.	33		
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	256		
	(b) Class 3	sq.m.	271		

TOTAL GROUP 12 (BRIDGE NO. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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	1.5		
13.2	Reinforcement fabric	tonne	0.3		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	25.6		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, Grade 410	tonne	17.9		

TOTAL GROUP 13 (BRIDGE NO. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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, pile caps, piers and approach slabs	cu.m	134		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	115		
14.3	Blinding Concrete concrete	cu.m.	2		

TOTAL GROUP 14 (BRIDGE NO. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU BRIDGE (GROUPS 3-18)
GROUP 15 - STRUCTURAL STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount (K)
15.1	Supply, fabrication, shop painting and delivery to site built-up steel plate girder, Grade 350. Include for all necessary bolts and fittings	tonne	85.4		
15.2	(Not used)				
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	12.9		
15.4	Erection of structural steel work to bridge superstructure	tonne	98.3		

TOTAL GROUP 15 (BRIDGE NO. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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.	1,200		

TOTAL GROUP 16 (BRIDGE NO. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU BRIDGE (GROUPS 3-18)
GROUP 17 - MISCELLANEOUS BRIDGEWORK ITEMS

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.	9		
17.2	Bearings including bearing plates and holding down bolts, Type BP-B104 (Movable)	No.	9		
17.3	Impact angles	lin.m.	40		
17.4	Seismic restraints				
	(a) At abutment	No.	6		
	(b) At pier	No.	6		
17.5	Scupper PVC pipes	lin.m.	13		
17.6	Handrails	lin.m.	194		

TOTAL GROUP 17 (BRIDGE NO. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 4 - MIARU 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.	342		
18.2	Excavation for river channel alignment				
	(a) Type D material (Prov.)	cu.m.	50		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	30		
18.4	Gabions	cu.m.	90		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	30		
	(b) Type B	cu.m.	342		

TOTAL GROUP 18 (BRIDGE NO. 4)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

SUMMARY OF BRIDGE NO. 4 - MIARU 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. 4
MIARU BRIDGE
CARRIED TO
GRAND SUMMARY

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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.	1		
	(b) Type B material (Prov.)	cu.m.	5		
	(c) Type C material (Prov.)	cu.m.	1		
	(d) Type D material	cu.m.	41		
4.2	Backfill to excavations for structural foundations	cu.m.	20		
4.3	Backfill to bridge abutment	cu.m.	103		
4.4	Roadway embankment	cu.m.	297		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	300		
	(b) Cross timber	lin.m	155		
4.6	Sand mat filling	cu.m	262		

TOTAL GROUP 4 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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		
	(b) Setting up piling rig for piers	No.	2		
10.2	Supply of steel pipe piles 500mm dia. 14mm thick, Grade 250	lin.m.	101		
10.3	Supply of steel pipe piles 800mm dia. 12mm thick, Grade 250	lin.m.	243		
10.4	Driving piles of 600mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	93		
10.5	Driving piles of 800mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	172		
10.6	Load tests	No.	1		
10.7	Filling concrete in steel pipe piles				
	(a) Plain round reinforcement Grade 230	tonne	1.9		
	(b) High yield steel reinforcement "Tempcore" Grade 410	tonne	13.4		
	(c) Concrete, Grade 30	cu.m.	74		
10.8	(Not Used)				
10.9	(Not Used)				
TOTAL GROUP 10 (BRIDGE NO.5)					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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.	27		
	(b) Class 4	sq.m.	108		
12.2	Formwork to pile caps and piers				
	(a) Class 2	sq.m.	49		
	(b) Class 4	sq.m.	33		
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	164		
	(b) Class 3	sq.m.	197		

TOTAL GROUP 12 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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	1.5		
13.2	Reinforcement fabric	tonne	0.3		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	22.5		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, Grade 410	tonne	14.6		

TOTAL GROUP 13 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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, pile caps, piers and approach slab	cu.m	113		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	82		
14.3	Blinding concrete	cu.m	2		

TOTAL GROUP 14 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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	51.1		
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	5.6		
15.4	Erection of structural steel work to bridge superstructure	tonne	56.7		

TOTAL GROUP 15 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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.	693		

TOTAL GROUP 16 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 2 - KAPURI BRIDGE (GROUPS 3-18)
GROUP 17 - MISCELLANEOUS BRIDGEWORK ITEMS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts, Type BP-B101 (Fixed)	No.	9		
17.2	Bearings including bearing plates and holding down bolts, Type BP-B102 (Movable)	No.	9		
17.3	Impact angles	lin.m	40		
17.4	Seismic restraints				
	(a) At abutment	No.	6		
	(b) At pier	No.	6		
17.5	Scupper PVC pipes	lin.m	13		
17.6	Handrails	lin.m	144		

TOTAL GROUP 17 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 5 - KAPURI 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 (Prov.)	cu.m.	3		
18.2	Excavation for river channel alignment				
	(a) Type D material (Prov.)	cu.m.	5		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	5		
18.4	Gabions (Prov.)	cu.m.	10		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	10		
	(b) Type B (Prov.)	cu.m.	5		

TOTAL GROUP 18 (BRIDGE NO. 5)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

SUMMARY OF BRIDGE NO. 5 - KAPURI 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. 5
KAPURI BRIDGE
CARRIED TO
GRAND SUMMARY

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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.	30		
	(b) Type B material (Prov.)	cu.m.	50		
	(c) Type C material (Prov.)	cu.m.	1		
	(d) Type D material	cu.m.	186		
4.2	Backfill to excavations for structural foundations	cu.m.	105		
4.3	Backfill to bridge abutment	cu.m.	446		
4.4	Roadway embankment	cu.m.	883		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	280		
	(b) Cross timber	lin.m	160		
4.6	(Not Used)				

TOTAL FOR GROUP 4 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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		
	(b) Setting up piling rig for piers	No.	2		
10.2	Supply of steel pipe piles 800mm dia. 12mm thick, Grade 250	lin.m.	113		
10.3	Supply of steel pipe piles 1000mm dia. 12mm thick, Grade 250	lin.m.	102		
10.4	Installing and driving piles of 800mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m	113		
10.5	Installing and driving piles of 1000 mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m	36		
10.6	Load tests	No.	1		
10.7	Filling concrete in cast-in-situ bored pile and steel pipe piles				
	(a) Plain round reinforcement Grade 230	tonne	4.7		
	(b) High yield steel reinforcement "Tempcore" Grade 410	tonne	49.1		
	(c) Concrete, Grade 30	cu.m.	205		
Total Carried Forward					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU BRIDGE (GROUPS 3-18)
GROUP 10 - PILING FOR STRUCTURES
- continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount (K)
	Brought Forward				
10.8	Boring and excavation of cast-in-situ bored pile	cu.m.	150		
10.9	Rubber buffers	No.	6		

TOTAL GROUP 10 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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.	62		
	(b) Class 4	sq.m.	164		
12.2	Formwork to pile caps and piers				
	(a) Class 2	sq.m.	52		
	(b) Class 4	sq.m.	20		
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	354		
	(b) Class 3	sq.m.	274		

TOTAL GROUP 12 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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	1.5		
13.2	Reinforcement fabric	tonne	0.3		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	49.6		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, Grade 410	tonne	28.7		

TOTAL GROUP 13 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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, pile caps, piers and approach slab	cu.m	177		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	172		
14.3	Blinding concrete	cu.m	2		

TOTAL GROUP 14 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU BRIDGE (GROUPS 3-18)
GROUP 15 - STRUCTURAL STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
15.1	Supply, fabrication, shop painting and delivery to site, built up steel plate girder, Grade 350. Include for all necessary bolts and fittings	tonne	100.6		
15.2	(Not Used)				
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	18.8		
15.4	Erection of structural steel work to bridge superstructure	tonne	119.4		

TOTAL GROUP 15 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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.	1,760		

TOTAL GROUP 16 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU BRIDGE (GROUPS 3-18)
GROUP 17 - MISCELLANEOUS BRIDGEWORK ITEMS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts, Type BP-B101 (Fixed)	No.	4		
17.2	Bearings including bearing plates and holding down bolts, Type BP-B102 (Movable)	No.	4		
17.3	Impact angles	lin.m	24		
17.4	Seismic restraints				
	(a) At abutment	No.	4		
17.5	Scupper PVC pipes	lin.m	14		
17.6	Handrails	lin.m	144		

TOTAL GROUP 17 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 6 - LAKEKAMU 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 (Prov.)	cu.m.	10		
18.2	Excavation for river channel alignment				
	(a) Type D material (Prov.)	cu.m.	10		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	15		
18.4	Gabions (Prov.)	cu.m.	10		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	5		
	(b) Type B (Prov.)	cu.m.	5		

TOTAL GROUP 18 (BRIDGE NO. 6)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

SUMMARY OF BRIDGE NO. 6 - LAKEKAMU 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. 6
LAKEKAMU BRIDGE
CARRIED TO
GRAND SUMMARY

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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.	10		
	(b) Type B material (Prov.)	cu.m.	5		
	(c) Type C material (Prov.)	cu.m.	1		
	(d) Type D material	cu.m.	166		
4.2	Backfill to excavations for structural foundations	cu.m.	91		
4.3	Backfill to bridge abutment	cu.m.	485		
4.4	Roadway embankment	cu.m.	968		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	278		
	(b) Cross timber	lin.m	160		
4.6	(Not Used)				

TOTAL GROUP 4 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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		
	(b) Setting up piling rig for piers	No.	2		
10.2	Supply of steel pipe piles 800mm dia. 12mm thick, Grade 250	lin.m.	98		
10.3	Supply of steel pipe piles 1000 mm dia. 12mm thick, Grade 250	lin.m.	102		
10.4	Installing and driving piles of 800mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m	98		
10.5	Installing and driving piles of 1000mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m	40		
10.6	Load tests	No.	1		
10.7	Filling concrete in cast-in-situ bored pile and steel pipe piles				
	(a) Plain round reinforcement Grade 230	tonne	4.5		
	(b) High yield steel reinforcement "Tempcore" Grade 410	tonne	48.4		
	(c) Concrete, Grade 30	cu.m.	198		
Total Carried Forward					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI BRIDGE (GROUPS 3-18)
GROUP 10 - PILING FOR STRUCTURES
- continued

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount (K)
	Brought Forward				
10.8	Boring and excavation of cast-in-situ bored pile	cu.m.	164		
10.9	Rubber buffers	No.	6		

TOTAL GROUP 10 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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.	62		
	(b) Class 4	sq.m.	164		
12.2	Formwork to pile caps and piers				
	(a) Class 2	sq.m.	52		
	(b) Class 4	sq.m.	20		
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	354		
	(b) Class 3	sq.m.	274		

TOTAL GROUP 12 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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	0.3		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	49.6		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, 410	tonne	28.7		

TOTAL GROUP 13 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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, pile caps, piers and approach slabs	cu.m.	177		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	172		
14.3	Blinding concrete concrete	cu.m.	2		

TOTAL GROUP 14 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI BRIDGE (GROUPS 3-18)
GROUP 15 - STRUCTURAL STEELWORK

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
15.1	Supply, fabrication, shop painting and delivery to site, built-up steel plate girder, Grade 350. Include for all necessary bolts and fittings	tonne	100.6		
15.2	(Not Used)				
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	18.8		
15.4	Erection structural steel work to bridge superstructure	tonne	119.4		

TOTAL GROUP 15 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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.	1,760		

TOTAL GROUP 16 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI BRIDGE (GROUPS 3-18)
GROUP 17 - MISCELLANEOUS BRIDGEWORK ITEMS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts, Type BP-B117 (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.	24		
17.4	Seismic restraints				
	(a) At abutment	No.	4		
17.5	Scupper PVC pipes	lin.m	14		
17.6	Handrails	lin.m	144		

TOTAL GROUP 17 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 7 - TAURI 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 (Prov.)	cu.m.	5		
18.2	Excavation for river channel alignment				
	(a) Type D material (Prov.)	cu.m.	3		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	1		
18.4	Gabions (Prov.)	cu.m.	10		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	5		
	(b) Type B (Prov.)	cu.m.	5		

TOTAL GROUP 18 (BRIDGE NO. 7)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

SUMMARY OF BRIDGE NO. 7 -TAURI 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. 7
TAURI BRIDGE
CARRIED TO
GRAND SUMMARY

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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.	65		
4.2	Backfill to excavations for structural foundations	cu.m.	32		
4.3	Backfill to bridge abutment	cu.m.	60		
4.4	Roadway embankment	cu.m.	180		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	300		
	(b) Cross timber	lin.m	160		
4.6	Sand mat filling	cu.m	238		

TOTAL FOR GROUP 4 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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		
	(b) Setting up piling rig for piers	No.	1		
10.2	Supply of steel pipe piles 500mm dia. 14mm thick, Grade 250	lin.m.	222		
10.3	Supply of steel pipe piles 800mm dia. 12mm thick, Grade 250	lin.m.	135		
10.4	Driving piles of 500mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	214		
10.5	Driving piles of 800mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	92		
10.6	Load tests	No.	1		
10.7	Filling concrete in steel pipe piles				
	(a) Plain round reinforcement Grade 230	tonne	0.9		
	(b) High yield steel reinforcement "Tempcore" Grade 410	tonne	6.2		
	(c) Concrete, Grade 30	cu.m.	34		
10.8	(Not Used)				
10.9	(Not Used)				
TOTAL GROUP 10 (BRIDGE NO. 8)					

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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.	29		
	(b) Class 4	sq.m.	106		
12.2	Formwork to pile caps and piers				
	(a) Class 2	sq.m.	25		
	(b) Class 4	sq.m.	16		
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	108		
	(b) Class 3	sq.m.	126		

TOTAL GROUP 12 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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	0.3		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less Grade 410	tonne	12.6		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, Grade 410	tonne	11.3		

TOTAL GROUP 13 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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, pile caps, piers and approach slabs	cu.m.	95		
14.2	concrete Grade 25 to bridge deck slab	cu.m	53		
14.3	Blinding concrete	cu.m	2		

TOTAL GROUP 14 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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	33.9		
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	4.0		
15.4	Erection of structural steel work to bridge superstructure	tonne	37.9		

TOTAL GROUP 15 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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.	422		

TOTAL GROUP 16 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
 CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 8 - MAKARA BRIDGE (GROUPS 3-18)
 GROUP 17 - MISCELLANEOUS BRIDGEWORK ITEMS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts, Type BP-B101 (Fixed)	No.	6		
17.2	Bearings including bearing plates and holding down bolts, Type BP-B102 (Movable)	No.	6		
17.3	Impact angles	lin.m.	32		
17.4	Seismic restraints				
	(a) At abutment	No.	6		
	(b) At pier	No.	3		
17.5	Scupper PVC pipes	lin.m	9		
17.6	Handrails	lin.m	93		

TOTAL GROUP 17 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. TC 120-33-814/B

BRIDGE NO. 8 - MAKARA 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 (Prov.)	cu.m.	3		
18.2	Excavation for river channel alignment				
	(a) Type D material (Prov.)	cu.m.	5		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	3		
18.4	Gabions (Prov.)	cu.m.	10		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	15		
	(b) Type B (Prov.)	cu.m.	15		

TOTAL GROUP 18 (BRIDGE NO. 8)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. TC 120-33-814/B

SUMMARY OF BRIDGE NO. 8 - MAKARA 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. 8
MAKARA BRIDGE
CARRIED TO
GRAND SUMMARY

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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 II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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.	1		
	(b) Type B material (Prov.)	cu.m.	5		
	(c) Type C material (Prov.)	cu.m.	50		
	(d) Type D material	cu.m.	77		
4.2	Backfill to excavations for structural foundations	cu.m.	41		
4.3	Backfill to bridge abutment	cu.m.	28		
4.4	Roadway embankment	cu.m.	100		
4.5	Bearing units for bridge approach				
	(a) Timber pile	lin.m	300		
	(b) Cross timber	lin.m	160		
4.6	Sand mat filling	cu.m	205		

TOTAL FOR GROUP 4 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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		
	(b) Setting up piling rig for piers	No.	1		
10.2	Supply of steel pipe piles 500mm dia. 14mm thick, Grade 250	lin.m.	265		
10.3	Supply of steel pipe piles 800mm dia. 12mm thick, Grade 250	lin.m.	158		
10.4	Driving piles of 500mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	257		
10.5	Driving piles of 800mm dia. including positioning and pitching. Include for cutting pile heads to correct level	lin.m.	119		
10.6	Load tests	No.	1		
10.7	Filling concrete in steel pipe piles				
	(a) Plain round reinforcement Grade 230	tonne	0.8		
	(b) High yield steel reinforcement "Tempcore" Grade 410	tonne	5.9		
	(c) Concrete, Grade 30	cu.m.	32		
10.8	(Not Used)				
10.9	(Not Used)				
TOTAL GROUP 10 (BRIDGE NO. 9)					

LOT II MIARU RIVER TO MALALAU SECTION
 CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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.	117		
12.2	Formwork to pile caps and piers				
	(a) Class 2	sq.m.	23		
	(b) Class 4	sq.m.	14		
12.3	Formwork to bridge deck slab				
	(a) Class 2	sq.m.	108		
	(b) Class 3	sq.m.	126		

TOTAL GROUP 12 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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	0.3		
13.3	High yield steel reinforcement "Tempcore" 16mm dia. or less, Grade 410	tonne	12.0		
13.4	High yield steel reinforcement "Tempcore" 20mm dia. or greater, 410	tonne	10.9		

TOTAL GROUP 13 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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, pile caps, piers and approach slabs	cu.m.	88		
14.2	Concrete Grade 25 to bridge deck slab	cu.m	53		
14.3	Blinding concrete	cu.m.	2		

TOTAL GROUP 14 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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	33.8		
15.3	Supply, fabrication, shop painting and delivery to site, structural steel, Grade 250. Include for all necessary bolts and fittings	tonne	4.0		
15.4	Erection of structural steel work to bridge superstructure	tonne	37.8		

TOTAL GROUP 15 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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.	422		

TOTAL GROUP 16 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
 CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO BRIDGE (GROUPS 3-18)
 GROUP 17 - MISCELLANEOUS BRIDGEWORK ITEMS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
17.1	Bearings including bearing plates and holding down bolts, Type BP-B101 (Fixed)	No.	6		
17.2	Bearings including bearing plates and holding down bolts, Type BP-B102 (Movable)	No.	6		
17.3	Impact angles	lin.m.	32		
17.4	Seismic restraints				
	(a) At abutment	No.	6		
	(b) At pier	No.	3		
17.5	Scupper PVC pipes	lin.m.	9		
17.6	Handrails	lin.m.	93		

TOTAL GROUP 17 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

BRIDGE NO. 9 - SAPPAHARO 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 (Prov.)	cu.m.	5		
18.2	Excavation for river channel alignment				
	(a) Type D material (Prov.)	cu.m.	5		
18.3	Backfilling to gabion protection works (Prov.)	cu.m.	2		
18.4	Gabions (Prov.)	cu.m.	15		
18.5	Reno mattresses				
	(a) Type A (Prov.)	cu.m.	10		
	(b) Type B (Prov.)	cu.m.	10		

TOTAL GROUP 18 (BRIDGE NO. 9)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

SUMMARY OF BRIDGE NO. 9 - SAPPAHARO 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. 9
SAPPAHARO BRIDGE
CARRIED TO
GRAND SUMMARY

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GROUP 19 - DAYWORKS

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GROUP 19 - DAYWORKS

Item	Description	Unit	Estimated Quantity	Rate (K)	Tender Amount(K)
19.1	Provisional Sum for Labour	Prov. Sum			6,900
19.2	Contractor's charges on Item 19.1 (fill in percentage and extend)	Percent			
19.3	Provisional Sum for materials	Prov. Sum			220,000
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.	150		
(b)	160 HP Bulldozer (Prov.)	hrs.	300		
(c)	150 HP Tractor Shovel (Prov.)	hrs.	150		
(d)	150 HP Wheel loader (Prov.)	hrs.	150		
(e)	100 HP Excavator (Prov.)	hrs.	150		
(f)	125 HP Grader (Prov.)	hrs.	200		
(g)	10 ton Tire roller (Prov.)	hrs.	200		
(h)	10 ton Dump truck (Prov.)	hrs.	500		

TOTAL GROUP 19 (DAYWORKS)

LOT II MIARU RIVER TO MALALAU SECTION
CONTRACT NO. SC 120-33-814/B

GRAND SUMMARY

GROUP 1

GROUP 2

ROAD WORK
GROUPS 3-18

BRIDGE NO. 4 -
MIARU BRIDGE
GROUPS 3-18

BRIDGE NO. 5 -
KAPURI BRIDGE
GROUPS 3-18

BRIDGE NO. 6 -
LAKEKAMU BRIDGE
GROUPS 3-18

BRIDGE NO. 7 -
TAURI BRIDGE
GROUPS 3-18

BRIDGE NO. 8 -
MAKARA BRIDGE
GROUPS 3-18

BRIDGE NO. 9
SAPPAHARO BRIDGE
GROUPS 3-18

GROUP 19

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

JICA