

2.2.4 Implementation Plan

2.2.4.1 Implementation Policies

Assuming the implementation of the Project within the framework of the grant aid scheme of the Government of Japan, the following implementation policies will be adopted.

- Maximum use of local technicians, workers and materials to contribute to the creation of employment opportunities, promotion of the transfer of skills and vitalisation of the local economy
- Establishment of a close communication system involving the Government of Kiribati, the Consultant and the Contractor to ensure the smooth implementation of the Project
- Formulation of a temporary road work plan based on the efficient delivery of materials and operation of equipment, fully reflecting the local topographical, geological and other conditions
- Formulation of a realistic implementation plan in consideration of the mode of rainfall, period required for the procurement of equipment and materials and need to employ an appropriate construction method, etc.
- Planning of detours and the field work schedule to avoid any significant disruption to current traffic
- Careful planning of the transportation of the construction equipment and materials from Japan to avoid any delay of the planned work in view of the fact that there is only a bi-monthly regular cargo ship service

2.2.4.2 Implementation Conditions

The important points in relation to the implementation of the Project are described below.

(1) Observance of the Labour Standards

The Contractor will observe the existing construction-related laws and regulations in Kiribati, respect proper working conditions and customs in relation to the employment of workers to prevent any disputes with workers and ensure labour safety.

(2) Environmental Conservation During the Work Period

At the time of receiving the “work permit” prior to the commencement of the work, proper guidance and supervision will be provided in consideration of the environmental requirements of which the observance is a precondition of such permit. Measures to deal with dust and muddy water produced by the disposal of waste materials, disposal of surplus soil and paving work, etc.

accompanying the removal of existing structures will be employed based on the precondition that the current environment will be conserved.

(3) Necessity for Means of Field Communication

The target roads for improvement under the Project are considered to be urban roads which are subject to traffic congestion in the morning and evening. In the daytime, they are subject to travelling buses and use by residents. Under these circumstances, the provision of the minimum communication system will be considered to ensure the safety of moving traffic and residents along the routes and also the safety of workers at work at the time of an emergency.

(4) Traffic Safety

A plan for the efficient diversion of traffic will be prepared to ensure smooth and timely traffic on the target roads during the work period while paying careful attention to safety as the work progresses.

(5) Customs Clearance

Leeway will be provided in the implementation plan in consideration of the time required for the transportation, unloading and customs clearance of the goods to be imported.

(6) Adjustment of the Schedule

If necessary, the planned schedule will be adjusted to a certain extent in consideration of the progress of the work to be conducted by the Kiribati side.

2.2.4.3 Scope of Work

For the implementation of the Project, the Japanese side and the Kiribati side will be responsible for the work described below.

(1) Scope of Work for the Japanese Side

1) Construction Work

- Repair of existing roads (with a total length of 10.631 km) and construction of drainage facilities
- Road work, including base course work and paving work, and the temporary work required to proceed with the road work
- Construction of drainage facilities and related temporary work
- Repair of existing bus lay-bys and construction of new bus lay-bys

- Setting up of temporary facilities (such as a stockyard and base camp, etc.)
- 2) Procurement of Equipment and Materials

Procurement of equipment and materials to construct roads and roadside structures as shown in 2.2.4.6 – Procurement Plan
 - 3) Safety Measures

Safety measures during the work period
 - 4) Consultancy Work

Assistance for the preparation of the implementation plan, tender as well as contract documents, assistance for and the tender as described in 2.2.4.4 – Detailed Design and Consultant Supervision and supervision of the construction work
- (2) Scope of Work for the Kiribati Side
- 1) Obtaining of Approval and Permits Relating to the Construction Work and the Environment

Obtaining of approval and permits relating to the construction work and the environment in connection with the Project by the Ministry of Public Works and Utilities prior to the tender for the Contractor
 - 2) Customs Clearance and Tax Exemption Measures

Provision of facilities to ensure smooth customs clearance at the port of landing in Kiribati and tax exemption of the construction equipment and materials to be imported prior to the commencement of the work based on the list of items to be imported
 - 3) Land Expropriation and Compensation

Provision of the land required for the construction of a stockyard and other facilities indicated in the work plan and for a disposal site for the waste materials and surplus soil generated by the construction work
 - 4) Relocation of Public Facilities
 - Relocation of the public facilities (telephone lines and electric cables, etc.) running across roads
 - Relocation of items (drums and containers, etc.) on the sidewalks which will hinder the planned work

- Work on soak drains
- 5) Others
- Accordance of facilities for the entry to Kiribati and stay therein by Japanese and third country nationals (i.e. other than Kiribati nationals) engaged in the Project
 - Exemption from or refund of customs duties, domestic taxes and other levies imposed by the Government of Kiribati
 - Appointment of counterpart personnel and provision of their means of transport and funds to cover their expenses

2.2.4.4 Detailed Design and Consultant Supervision

(1) Implementation Schedule for the Consultancy Work

The precondition for the implementation of the Project is the signing of the E/N regarding the grant aid for the Project between the Government of Japan and the Government of Kiribati. Following the signing of the E/N, the Consultant will conclude a consultancy contract with the Ministry of Public Works and Utilities, which will be the implementation body on the part of the Government of Kiribati, in accordance with the scope and procedure of Japan's grant aid scheme based on a letter of recommendation issued by the JICA. In accordance with this contract, the Consultant will proceed with the work to assist the tender and work supervision. The range of the main work included in this consultancy contract is described below.

1) Preparation of the Tender Documents (Detailed Design Stage)

Based on the findings stated in the Report for the Basic Design Study, the detailed design of various facilities will be conducted, the tender documents will be prepared and their approval by the Ministry of Public Works and Utilities will be obtained.

2) Tender Stage

With the assistance of the Consultant, the Ministry of Public Works and Utilities will select the Contractor which will have Japanese nationality through the open competitive bidding system with a pre-qualification process. The agent(s) for the Government of Kiribati who will participate in this tender and contract process must have the authority to approve the contract and must be capable of judging technical issues. At this tender stage, the Consultant will conduct the following support work.

- ① Announcement of the tender
- ② Pre-qualification
- ③ Tender and tender evaluation
- ④ Conclusion of the contract

(2) Implementation System

The staff assignment by the Consultant at the detailed design stage and tender stage and the responsibilities of the staff members are described below.

1) Detailed Design and Preparation of Tender Documents

The detailed design will be conducted by a design team headed by the chief consultant. The roles of each engineer to be included in this design team are described in Table 2-29.

Table 2-29 Staff Assignment for Detailed Design Work

Assignment	Grade	Activities	Work in Japan	Field Work	Total M/M
(1) Chief Consultant	2	Overall control of the work	0.45	1.20	2.15
(2) Road Design (1)	3	Planning of road design, including longitudinal and transverse slopes, paving and quantity estimation	0.95	1.20	2.15
(3) Road Design (2)	4	Drawing and checking	0.95	0.00	0.05
(4) Structural Design	3	Survey on drainage structures and flow regime, design, drawing and quantity estimation	0.95	0.83	1.78
(5) Implementation Plan and Estimation	3	Temporary plan, dealing with disruptive issues for the work, price survey, implementation plan and estimation	0.95	0.83	1.78
(6) Tender Documents	4	Preparation of tender documents	0.93	0.00	0.95
Total					9.76

The detailed design work will include the work to prepare the tender documents. Bearing in mind the fact that the Project will be implemented with Japanese grant aid, the following matters must be taken into careful consideration for the preparation of the tender documents.

- The forms, etc. for the tender instructions and the contract will follow the Guidelines for Japan's grant aid cooperation.
- The technical specifications will be prepared with the main emphasis on sufficient quality, taking the technical specifications on the Kiribati side into consideration.
- The person to be responsible for the preparation of the tender documents must have in-depth knowledge regarding the findings of the basic design study and the required contents of the detailed design.

2) Implementation System to Assist the Tender

Two persons will be assigned to ensure the smooth execution of the tender-related work.

Table 2-30 Staff Assignment for Tender-Related Work

Assignment	Grade	Activities	Work in Japan	Field Work	Total M/M
(1) Work Leader	2	Overall control of the tender process, including coordination, to ensure the smooth execution of the tender	0.25	0.37	0.62
(2) Tender Specialist	3	The same person as Road Design (1); checking of the tender documents, announcement of the tender, handing over and explanation of the drawings, evaluation of bids and all other tender-related work	0.25	0.37	0.62
Total					1.24

In addition, the assignment of an assistant will be planned. The work hours of this assistant will not be accounted for in the Consultant's M/M figure.

- Tender assistant : checking of the tender-related drawings and assistance for the tender specialist

The tender assistance work by the Consultant will include the signing of the contractor contract and confirmation of the approval of the contract.

3) Work Supervision System (On-Site Supervision System by the Consultant)

After the conclusion of the contractor contract, the Consultant will issue an instruction to start the work to the Contractor as the first step of its own work supervision. As part of this work supervision, the Consultant will directly report the progress situation of the work to the Ministry of Public Works and Utilities while supervising the Contractor in terms of the work progress, quality, safety, payment and measures and proposals to improve the work. Moreover, the Consultant will conduct the completion inspection one year after the end of the work supervision period. With the completion of this inspection, the consultancy service will come to an end. The staff assignment by the Consultant and the responsibilities at the work supervision stage are described in Table 2-31.

Table 2-31 Staff Assignment for Work Supervision

Assignment	Grade	Activities	Work in Japan	Field Work	Total M/M
(1) Work Supervision	2	Overall supervision	0.00	1.00	1.00
(2) Full-Time On-Site Supervision	3	On-site supervision	0.00	9.00	9.00
(3) Completion Inspection	3	Witnessing of completion inspection	0.00	0.37	0.37
Total					10.37

2.2.4.5 Quality Control Plan

A laboratory will be set up at the base camp and the minimum range of equipment, etc. will be procured in Japan to enable the quality testing of the base course materials, prime coat materials, asphalt, concrete and reinforcing bars. It is planned to assign technical staff to this laboratory so that any tests required for the on-site work can be conducted at this laboratory. The main quality control items related to the construction work under the Project are listed in Table 2-32.

Table 2-32 Quality Control Items

Item			Testing Method	Testing Frequency
Base Course (Crushed Stone)	Mixing Material		Liquid limit; plasticity index	Each mixture
			Size distribution (mixture)	
			Aggregate strength test (TFV)	
			Aggregate density test	
			Maximum dry density (compaction test)	
Laying		Density test (compaction rate)	Once/day	
Prime Coat	Material	Bitumen	Quality certificate	Each material
			Storage and spraying temperatures	Each delivery
Asphalt	Material	Bitumen	Quality certificate; components analysis sheet	Each material
		Aggregates	Size distribution (mixture)	Each mixture; once/month
			Percentage of water absorption	Each material
			Aggregate strength test (TFV)	
	Laying		Sampling; Marshall test	Approx. once/day
Concrete	Material	Cement	Quality certificate; chemical and physical test results	Each material
		Water	Water analysis results	Each material
		Mixing agent	Quality certificate; components analysis sheet	Each material
		Fine Aggregates	Specific gravity in absolute dry condition	Each material
			Size distribution; fineness modulus	
			Ratio of clay lumps and soft minute ingredients	
		Coarse Aggregates	Specific gravity in absolute dry condition	Each material
	Size distribution (mixture)			
	At Mixing Test		Compressive strength test (specimen cube)	Each mixture
	At Time of Placing	Slump (concrete)		Each material
		Air volume		Each material
Temperature		Each material		
Strength		Compressive strength test (7 days and 28 days)	Each material	
Reinforcing Bars	Material		Quality certificate; tensile test results	Per lot

2.2.4.6 Procurement Plan

(1) Procurement of Construction Materials

The procurement sources for the main construction materials for the Project are listed in Table 2-33.

Table 2-33 Procurement Sources for the Main Construction Materials

Item	Procurement Source		
	Kiribati	Japan	Third Country
Sub-Grade Material			○ (Fiji)
Aggregates for Concrete			○ (Fiji)
Normal Portland Cement			○ (Fiji)
Mixing Agent for Concrete			○ (Fiji)
Reinforcing Bars		○	
Wood for Forms	○		
Asphalt			○ (Fiji)
Gas Oil	○		
Petrol	○		
Testing Equipment		○	

(2) Procurement Sources for Construction Machinery

The procurement sources for the main construction machinery for the Project are shown in Table 2-34.

Table 2-34 Procurement Sources for the Main Construction Machinery

Item	Procurement Source		
	Kiribati	Japan	Third Country
Bulldozer		○	
Backhoe		○	
Dump Truck		○	
Motor Grader		○	
Road Roller		○	
Wheel Loader		○	
Truck with a Crane		○	
Distributor		○	
Air Compressor		○	
Asphalt Kettle		○	
Sprinkler Truck		○	
Forklift		○	
Tamper		○	
Concrete Plant		○	
Truck Mixer		○	
Chip Spreader		○	
Engine Generator		○	

2.2.4.7 Equipment Supply Plan

The equipment will be delivered CIP to the equipment storage site (near Port Betio) of the Ministry of Public Works and Utilities. After the delivery inspection and post-delivery guidance, it will be deployed to the two paved road repair teams of the Ministry of Public Works and Utilities.

As concrete cutters are not produced in Kiribati, these will be procured in either Japan or a third country.

Through discussions with the Ministry of Public Works and Utilities on possible procurement sources, the Ministry side praised Japanese equipment and machinery in terms of both the performance and quality as it possesses much construction machinery and vehicles made in Japan. As the operators and mechanics of the Ministry are familiar with Japanese products, the Ministry is hoping that Japanese concrete cutters will be procured. There is no local agent in Kiribati for construction machinery manufacturers and the Ministry of Public Works and Utilities directly procures the parts required for repair or periodic replacement from Japan and other sources. This practice has not encountered any problems. If it is found that sufficient competitiveness cannot be guaranteed by only Japanese products, potential procurement from a third country will be included in the project planning.

2.2.4.8 Soft Component Plan

The input of a soft component is judged to be unnecessary for the Project as road maintenance has been conducted by the MPWU in a planned manner.

2.2.4.9 Implementation Schedule

The project implementation schedule which has been prepared in accordance with the process stipulated by Japan's grant aid scheme is shown in Table 2-35.

Table 2-35 Project Implementation Schedule

Calendar Year		2007												2008		
Fiscal Year		FY 2006			FY 2007											
Item		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Contract	Exchange of the E/N	▼														
	Consultancy Agreement		▲													
Detailed Design	Field Survey		■													
	Analysis in Japan; Detailed Design			□												
	Preparation of the Tender Documents			□												
	Approval of the Tender Documents			■												
	Announcement of the Tender			△												
	Handing Over and Explanation of the Drawings			□												
	Tender					▲										
	Tender Evaluation					■										
Contract						▲										
Construction Work	Procurement and Transportation of the Equipment and Materials						■	■	■	■						
	Preparatory Work						■	■	■	■						
	Temporary Work (Base Camp and Plant, etc.)						■	■	■	■						
	Structural Work (Road Drainage and Auxiliary Road Structures)										■	■	■	■		
	Sub-Grade Work										■	■	■	■	■	
	Paving Work											■	■	■	■	■
	Auxiliary Road Work															■
	Clearance Work															

2.3 Obligations of the Recipient Country

2.3.1 General Obligations under Japan's Grant Aid Scheme

The general undertakings of the Kiribati side in connection with the Project have already been confirmed in the M/D agreed upon by the governments of the two countries. Their contents are briefly reproduced here.

- Securing of the land required for the Project
- Exemption of Japanese nationals from customs duties, internal taxes and other fiscal levies imposed in Kiribati in respect to the supply of products and services under the verified contracts
- Accordance of Japanese nationals and third country nationals (other than Kiribati nationals) whose services may be required in connection with the supply of products and services under the verified contracts such facilities as may be necessary for the entry into Kiribati and stay therein for the performance of their work

2.3.2 Specific Obligations under the Project

In addition to the general issues briefly mentioned above, there are some specific issues to be undertaken for the Project in view of the fact that it is a grant aid project.

(1) Obtaining of Permission for the Implementation of the Project

- Permission to implement the construction work for the Project
- Permission regarding the environmental impacts of the Project

(2) Relocation of Obstacles (Such Buried Items as Telephone Cables and Electric Cables)

As far as the Government of Kiribati is aware, such items as power cables, telephone cables and water pipes are buried deeper than the depth of the planned work under the Project and, therefore, will not be affected. The service cables, etc. installed by individual persons should be checked and, if necessary, relocated by the Kiribati side.

(3) Removal of Obstacles on Sidewalks (Drums and Containers, etc.)

As items left on sidewalks will obstruct the planned construction work as well as the smooth and safe passage of pedestrians after the completion of the work, they should be removed by their owners prior to the work. Any improvement required for the existing sidewalks will be conducted by the Kiribati side.

(4) Soak Pits

The existing soak pits have not only failed to perform their designed function but are also posing problems of hygiene and safety. The Kiribati side has been requested by the Japanese side to bury these pits and to firmly and safely level the surface.

(5) Temporary Yard

Land (80 m x 80 m) should be provided to accommodate the temporary construction yard of the Contractor.

2.3.3 Requests to the Recipient Country

The following requests will be made to the Kiribati side to ensure the smooth implementation of the work.

(1) Public Meeting to Explain the Project to Residents Along the Target Road Sections

Following the official decision on the implementation of the Project with the signing of the E/N, the Ministry of Public Works and Utilities should organize a public meeting to explain the Project to residents along the target road sections or their representatives.

(2) Traffic Safety

A publicity campaign should be conducted to ensure that ordinary road users follow the instructions of traffic controllers during the construction period.

(3) Notification of Inconvenience During the Road Work

As the planned road work is expected to cause some inconvenience to road users, road users should be notified of inconvenience by means of the radio and other mass media.

2.4 Project Operation and Maintenance Plan

2.4.1 Operation and Maintenance Setup

(1) Road Maintenance Setup

Since the Civil Engineering Section (CES) of the Public Works Division, Ministry of Public Works and Utilities is the only agency able to implement road maintenance in Kiribati, it is entrusted with road repairs of not only national roads but also city roads managed by Betio City.

Moreover, although road repair is the main activity of the CES, it also implements maintenance on causeway embankments and airport runways, etc.

The CES hardly conducts any new works but is mainly concerned with maintenance of existing facilities. It has 38 staff members and is divided into the department in charge of Tarawa and the department in charge of outer islands.

Since roads in South Tarawa are badly deteriorated and suffer from poor drainage, the completed repair work is immediately followed by a need to repair other places. To combat this situation, the CES compiles an annual repair plan and conducts road repairs based on the said plan.

(2) Equipment Maintenance Setup

The CES previously rented equipment from the PVU. Following the supply of equipment from Taiwan, four operators and two mechanics with at least 10 years of experience have been assigned to the CES.

The mechanics carry out the daily inspection and regular maintenance of equipment. The CES does not own repair equipment but only has general tools. Accordingly, it can conduct the simple repair of concrete cutters, etc. concrete repairs. When large equipment breaks down, it has to entrust the repair work to the PVU. When vehicles break down, it may be forced to contact a private repair shop.

2.4.2 Maintenance Work following Project Implementation

In connection with the maintenance of the roads and concrete cutters in the post-project period, the following types of maintenance work will be required.

2.4.2.1 Road Maintenance

(1) Routine Maintenance

The repair work, etc. which will be necessary all year round is listed below.

- Patching of the asphalt surface (pot hole patching)
- Base course repair if necessary
- Reshaping of the shoulders (slope reshaping)
- Cleaning of drainage ditches and transverse drainage facilities

(2) Periodic Maintenance

- Base course repair
- Overlay
- Shoulder repair

At present, the above maintenance work is directly conducted by the Civil Engineering Section of the Public Works Division, Ministry of Public Works and Utilities and the present system should be sufficient. However, the key to good maintenance is the early detection of damage and the Civil Engineering Section is requested to conduct routine inspection and patrols as frequently as possible.

2.4.2.2 Maintenance of Concrete Cutters

(1) Routine Maintenance

Regarding routine maintenance, it is necessary to conduct daily inspection before the work (engine oil and fuel, blade rotation V belt looseness inspections, etc.) as well as end of work inspection (cleaning and bolt tightening, etc.), and periodic maintenance comprising 50-hour inspection (engine oil replacement and inspection of ignition plug gaps, etc.) and 200-hour inspection (cleaning of fuel strainer, etc.) in accordance with the inspection manual. The two mechanics at the CES will conduct this work.

(2) Breakdown Repairs

The concrete cutter has a relatively simple structure and the CES mechanics should be able to deal with ordinary breakdowns. As the CES only has general tools (i.e. it does not have tools for the overhaul of engines), however, it will need to entrust repair work to a private car repair shop in the case that it cannot conduct the required repair work itself.

2.5 Estimated Project Cost

2.5.1 Estimated Cost of the Requested Japanese Assistance

The estimated total project cost required to implement the Project is ¥1,275 million and the Japanese and Kiribati portions are estimated in (1) and (2) below based on the estimation conditions given below. This cost estimated is provisional and would be further examined by the Government of Japan for approval of the Grant.

(1) Estimated Project Cost

Table 2-36 shows the breakdown of the estimated project cost (to be borne by the Japanese side).

Table 2-36 Estimated Project Cost

Total Road Length for Repair: 10.631 km Estimated Project Cost: ¥1,272 million

Item				Estimated Cost (¥ million)		
Construction Cost	Facilities (Direct Work Cost)	Paving Work	Removal of surface layer; correction of uneven surface; subgrade work; DBST; BST; concrete paving	463	941	
		Drainage Work	L-gutters; U-ditches; collecting pits; out-falls	336		
		Auxiliary Work	Kerbstone work; hump work; ___; manhole adjustment work	92		
		Others	Direct expenses; dispatch cost of skilled workers; packaging and transportation cost	50		
	Cost for Common Temporary Works				119	
	Site Expenses				66	
	Head Office Expenses				84	
	Equipment Procurement Cost				1	
Design and Supervision Fees				61		
Total				1,272		

(2) Cost to be Borne by the Kiribati Side

As explained in 2.3, the project cost to be borne by the Kiribati side relates to sidewalk improvement and treatment of soak pits and the cost is estimated to be AU\$ 29,910 (approx. ¥2.68 million). Table 2-37 shows the estimated cost to be borne by the Kiribati side.

Table 2-37 Estimated Cost to be Borne by the Kiribati Side

Cost Area	Formula	Local Currency (AUS\$)
Sidewalk improvement	1.0m x 8,700m x AUS\$1.7/m ²	AUS\$14,790
Soak pit treatment	28 sites x AUS\$540/site	AUS\$15,120
	Total	AUS\$29,910 (¥2.68 million)

(3) Estimation Conditions

The estimation conditions are listed below.

- ① Timing of estimation: August, 2006
- ② Foreign exchange rate: US\$ 1 = ¥116.77 AU\$ 1 = ¥87.98
- ③ Work and procurement periods: The detailed design period and work period are shown in Table 2-35 Project Implementation Schedule
- ④ Other: Estimation is based on the grant aid scheme of the Government of Japan.

2.5.2 Operation and Maintenance Cost

Table 2-38 shows the estimated maintenance cost based on the maintenance plan for the Project described earlier.

(1) Road Maintenance Cost

Table 2-38 Main Maintenance Items and Estimated Cost

AU\$ 1 = ¥87.98, (Unit: AU\$)

Type	Cycle	Work Description	Specifications	Unit	Unit Cost	Work Volume	Frequency per 10 Years	Cost
Routine	Every year	Patching	10% of the entire paved area	m ²	65	77	9	45,045
		Base course repair	0.1% of the entire paved area	m ²	45	77	9	31,185
		Shoulder repair	0.1% of the entire length	m	17	21	9	3,213
		Cleaning of U ditches		m	3	3,174	9	85,698
	Sub-Total (per 10 Years)							①
Periodic	Every 8 years	Base course repair	2% of the entire paved area	m ²	45	1,548	1	69,660
		Overlay	2% of the entire paved area	m ²	20	1,548	1	30,960
		Shoulder repair	3% of the total length	m	17	641	1	10,897
	Sub-Total							②
Total of Routine and Periodic Maintenance	① + ②			-	-	-	-	276,658
	Sub-Total (per 10 years)							③
Operation and Maintenance Cost		Routine Inspection and Management	10% of ③	Set	27,666	1	1	27,666
Grand Total	Maintenance Cost per 10 Years							304,324
	Maintenance Cost per Year							30,432

Yen conversion = ¥2,677,411

(2) Concrete Cutter Maintenance Cost

1) Annual Fuel and Oil Cost

Table 2-39 shows the estimated cost of fuel and oil for the case of road maintenance using the two concrete cutters to be provided under the Project.

Table 2-39 Annual Fuel and Oil Cost

(AUS\$ = ¥87.98)

Concrete cutter specifications	Quantity	Fuel consumption Ltr (2 units/year)	Oil consumption Ltr (2 units/year)	Annual fuel cost (AUS\$)	Annual oil cost (AUS\$)	Annual fuel and oil cost (AUS\$)
3.7kw	2	1,194	12	1,283	72	1,355

Yen conversion = ¥119,000

2) Maintenance Cost

Table 2-40 shows the annual maintenance cost which is required to properly maintain the two concrete cutters to be provided under the Project

Table 2-40 Maintenance Cost

Concrete cutter specifications	Quantity	Maintenance and repair ratio (40%, 6 years use)	New purchase price (AUS\$/unit)	Annual maintenance cost (AUS\$/2 units)
3.7kw	2	0.4/6	3,410	477

Yen conversion = ¥42,000

Based on the above estimate, the annual cost for routine and periodic maintenance will be AU\$ 32,264 (approximately ¥2.9 million). As this figure is equivalent to 4.8% of the annual maintenance budget of the Civil Engineering Section of the Ministry of Public Works and Utilities of AU\$ 665,893 in 2006, the Ministry should be able to easily absorb this cost.

2.6 Important Issues for the Implementation of the Project

The presence of containers and obstructions has been observed along the target roads of the Project, such as South Tarawa Road and Taasirerei Road, etc. As these will hinder the planned road improvement work, they must be removed or relocated by the Kiribati side. For this reason, the Kiribati side is required to appropriate a sufficient budget and to conduct the removal/relocation work without fail. This requirement was fully discussed and agreed at the time of explaining the outline of the Basic Design and was noted in the M/D.

Such public facilities as telephone cables and power cables buried under roads to serve houses may also obstruct the planned construction work and their relocation must be conducted by the Kiribati side if necessary. It will be necessary for the Ministry of Public Works and Utilities to play a central role in informing road users and residents living along the target roads of the planned construction work and possible inconvenience in advance to reduce traffic congestion during the work period and to avoid any unnecessary friction with local residents.

CHAPTER 3 PROJECT EVALUATION AND RECOMMENDATIONS

CHAPTER 3

PROJECT EVALUATION AND RECOMMENDATIONS

3.1 Project Effects

As the implementation of the Project will improve the road conditions in Betio, Bairiki and Bikenibeu to ensure safe and smooth traffic in these districts, the Project is expected to benefit some 40,000 residents in South Tarawa who routinely use the roads in question. The expected effects of the Project are compiled in Table 3-1.

Table 3-1 Project Effects

Present Situation and Problems	Measures to be Taken Under the Requested Japanese Assistance	Direct Effects and Degree of Improvement	Indirect Effects and Degree of Improvement
<p>The existing roads have ruts and pot-holes which cause the following problems.</p> <ul style="list-style-type: none"> • The traveling time is increased due to the slow traveling speed. • Abrasion and damage to tyres, damage to suspension and the fuel cost are increased. • A few vehicles currently travel on the shoulders to avoid the ruts and pot-holes, causing traffic safety problems, including possible contact with pedestrians and fishermen selling their catch on the shoulders. • The ruts and pot-holes make it difficult to transport such heavy cargoes as fishing gear, etc. over a long distance to the homes of fishermen, fishing boats and sales sites, etc. • The present road conditions cannot respond to an expected future situation where the distribution of marine products will become very active due to the division of industrial areas, i.e. commercial area centered in Betio and fisheries industry area in the east. 	<p>Road repair and/or improvement</p>	<ul style="list-style-type: none"> • In urban Betio, the current average traveling speed is approximately 25 km (based on the field survey) but the rehabilitation of the roads will enable vehicles to travel at approximately 40 km/hour. • The traveling cost of road users will fall due to less abrasion and damage to the tyres and the lower fuel cost, etc. • The elimination of vehicles traveling on the shoulders will ensure traffic safety and the number of accidents will decrease. • The transportation of fishing gear, etc. will become much easier. 	<ul style="list-style-type: none"> • Vehicles traveling on the shoulders reduce the commercial value of fish sold on the shoulders as they splash muddy water and dust over the fish. As no vehicles will travel on the shoulders after the road improvement, degradation of the commercial value of fish will not occur. • The improvement of the travelability of the roads will enable the FPP to supply fresh fish to various facilities, such as hospitals and schools, improving the transportation efficiency of marine products and maintaining the freshness of the fish. • The improved travelability of the roads will increase the transportation efficiency of marine products in the future, making it possible to efficiently respond to the division of industrial areas.
<p>The lack of road repair equipment means that road repair work at present is only of an emergency nature. As a result, the service life of the roads is short.</p>	<p>Provision of concrete cutters</p>	<ul style="list-style-type: none"> • Maintenance will become easier. • The proper repair of damaged roads will prolong the service life of roads. 	<ul style="list-style-type: none"> • The longer service life of roads will reduce the labour and cost of road maintenance work.

3.2 Tasks and Recommendations

3.2.1 Tasks to be Dealt with by the Recipient Country and Recommendations

At roads in South Tarawa, small potholes emerge first and their size then rapidly increases due to interaction between rain and passing vehicles. Although the maintenance work conducted by the Ministry of Public Works and Utilities has been relatively good, the absence of a concrete cutter has made it impossible to conduct repair work as recommended by the manual. For this reason, there have been cases where repaired places are damaged again fairly quickly. In the coming years, it will be essential to maintain good road conditions using a concrete cutter to conduct work which complies with the manual. In addition, the drainage ditches should be frequently cleaned to facilitate water discharge from the road surface.

Meanwhile, it is desirable to bury the soak pits which are not performing their intended function at all and are posing problems of hygiene and safety and to create a steady surface in an appropriate manner.

3.2.2 Technical Cooperation and Collaboration with Other Donors

The aid of other donors primarily features the fisheries industry, such as the training of fisheries-related officials and the provision of marine product processing equipment. As these aid activities are not closely related to road repair which is the principal objective of the Project, it is believed that there is few opportunities to collaborate with other donors. The grant aid of Taiwan has involved the procurement of equipment and road maintenance. However, the Taiwanese aid consists only of funding and it should be unnecessary to consider technical cooperation with Taiwan at present.

APPENDICES

1. Member List of the Study Team
2. Study Schedule
3. List of Parties Concerned in the Recipient Country
4. Minutes of Discussions
5. Advance Project Planning (At the Basic Design Stage)
6. Other Relevant Data

APPENDIX 1 MEMBER LIST OF THE STUDY TEAM

(1) Basic Design Study Team

Name	Assigned Work	Current Position
Teiji Takeshita	Team Leader	Head of JICA Fiji Office
Naoki Nagasawa	Planning and Management	Agricultural and Fishery Village Development Team, Business Company III, Grant Aid Management Department, JICA
Jiro Koyama	Project Manager/Road Transport Planning/Environmental and Social Considerations	Construction Project Consultants, Inc.
Ryoichi Yamazaki	Road Design/Natural Conditions Survey	CTI Engineering International Co., Ltd.
Tsuyoshi Yamazaki	Equipment and Procurement Planning/Estimation	Construction Project Consultants, Inc.
Koji Koga	Work Planning/Estimation	Mitsui Consultants Co., Ltd.
Kanji Watanabe	Work Coordination	Construction Project Consultants, Inc.

(2) Team to Explain Outline of the Basic Design

Name	Assigned Work	Current Position
Hideki Fujii	Assistant Team Leader	Accounting Department, JICA
Jiro Koyama	Project Manager/Road Transport Planning/Environmental and Social Considerations	Construction Project Consultants, Inc.
Ryoichi Yamazaki	Road Design/Natural Conditions Survey	CTI Engineering International Co., Ltd.

APPENDIX 2 STUDY SCHEDULE

(1) Basic Design Study

Day No.	Date	Travelling	Overnight Stay	Activity	Remarks
1	18 July Tues.	Tokyo →	On board	Travelling day	Koyama, Yamazaki, Inoue and Koga
2	19 July Wed.	Sydney →	Nadi	Travelling day	
3	20 July Thur.	Nadi →	Tarawa	Travelling; discussions at the MFMRD	
4	21 July Fri.		Tarawa	Discussions at the MFMRD and MPWU	
5	22 July Sat.		Tarawa	Field Survey	
6	23 July Sun.		Tarawa	Sorting of the gathered data and materials	
7	24 July Mon.		Tarawa	Discussions at the MPWU	
8	25 July Tues.		Tarawa	Discussions at the MFMRD	
9	26 July Wed.		Tarawa	Discussions at the MPWU	
10	27 July Thur.		Tarawa	Survey to confirm the target sections to be witnessed by MPWU and MFMRD officials	Arrival of Watanabe
11	28 July Fri.		Tarawa	Discussions at the MPWU; field survey	
12	29 July Sat.		Tarawa	Field Survey	
13	30 July Sun.		Tarawa	Sorting of the gathered data and materials	
14	31 July Mon.		Tarawa	Discussions at the MPWU and MFMRD	
15	1 Aug. Tues.		Tarawa	Sorting of the gathered data and materials; field survey	
16	2 Aug. Wed.		Tarawa	Discussions at the MFMRD and MPWU	
17	3 Aug. Thur.		Tarawa	Sorting of the gathered data and materials; field survey	Departure of Inoue
18	4 Aug. Fri.		Tarawa	Field survey; sorting of the gathered data and materials	
19	5 Aug. Sat.		Tarawa	Field survey; sorting of the gathered data and materials	Arrival of Takeshita and Nagasawa
20	6 Aug. Sun.		Tarawa	Sorting of the gathered data and materials; team meeting	
21	7 Aug. Mon.		Tarawa	Field survey	
22	8 Aug. Tues.		Tarawa	Courtesy visit to the MFMRD and MPWU; discussions on the Minutes	
23	9 Aug. Wed.		Tarawa	Discussions on the Minutes; signing of the M/D	
24	10 Aug. Thur.	Tarawa → Suva	Suva	Travelling day	Department of Takeshita, Nagasawa, Koyama and Koga
25	11 Aug. Fri.		Nadi	Reporting to the JICA Fiji Office and Embassy of Japan	Takeshita, Nagasawa, Koyama and Koga
26	12 Aug. Sat.		Tarawa	Field survey and sorting of the gathered data and materials	
27	13 Aug. Sun.		Tarawa	Field survey and sorting of the gathered data and materials	
28	14 Aug. Mon.		Tarawa	Field survey and sorting of the gathered data and materials	
29	15 Aug. Tues.		Tarawa	Field survey and sorting of the gathered data and materials	
30	16 Aug. Wed.		Tarawa	Field survey and sorting of the gathered data and materials	
31	17 Aug. Thur.		Tarawa	Field survey and sorting of the gathered data and materials	

Day No.	Date	Travelling	Overnight Stay	Activity	Remarks
32	18 Aug. Fri.		Tarawa	Field survey and sorting of the gathered data and materials	
33	19 Aug. Sat.		Tarawa	Field survey and sorting of the gathered data and materials	
34	20 Aug. Sun.		Tarawa	Field survey and sorting of the gathered data and materials	
35	21 Aug. Mon.		Tarawa	Field survey and sorting of the gathered data and materials	
36	22 Aug. Tues.		Nadi	Travelling day	
37	23 Aug. Wed.			Travelling day	

(2) Team to Explain Outline of the Basic Design

Day No.	Date	Travelling	Overnight Stay	Activity	Remarks
1	31 Oct. Tues.	Tokyo →	On board	Travelling day	
2	1 Nov. Wed.	Sydney →	Nadi	Travelling day	
3	2 Nov. Thur.	Nadi →	Tarawa	Travelling; discussions at the MFMRD and MPWU	
4	3 Nov. Fri.		Tarawa	Explanation of the Basic Design Report (Draft) at the MFMRD and MPWU	
5	4 Nov. Sat.		Tarawa	Field survey	
6	5 Nov. Sun.		Tarawa	Team meeting	
7	6 Nov. Mon.		Tarawa	Discussions at the MFMRD and MPWU	
8	7 Nov. Tues.		Tarawa	Discussions at the MFMRD and MPWU; signing of the M/D	
9	8 Nov. Wed.		Tarawa	Field survey; discussions at the MELAD	
10	9 Nov. Thur.	Tarawa → Suva	Suva	Travelling day	
11	10 Nov. Fri.	Suva → Nadi	Nadi	Reporting to the Embassy of Japan and JICA Office in Fiji	
12	11 Nov. Sat.	Nadi → Tokyo	Tokyo	Travelling; return to Japan	

APPENDIX 3

LIST OF PARTIES CONCERNED IN THE RECIPIENT COUNTRY

Ministry of Fisheries and Marine Resources Development

Mr. David Yeeting	Permanent Secretary
Mr. Peter Tong	Secretary
Mr. Takuia Uakeia	Deputy Secretary
Mr. Kasuse Teviariti	Senior Assistance Secretary
Ms. Tooti Telkinaiti	Principal Fisheries Officer
Mr. Kaon Tianere	Senior Resource Economist
Mr. Hantaro Okada	Fisheries Development Expert

Ministry of Public Works and Utilities

Mr. James Taom Redfern	Minister
Mr. Taakei Taoaba	Permanent Secretary
Mrs. Reina Timau	Secretary
Mr. Eita Metai	Director of Public Works Division
Mr. Moanataake Beiabure	Acting Ag. Director
Mr. Tiaon Kabaua	Civil Engineer

Ministry of Environment, Lands and Agriculture Development

Mr. Forran Redfern	Environment Inspector
Mr. Puta Tofinga	Assistant Environment Impact Assessment Officer
Ms. Taouea Titaake	Development Control Officer
Mr. Romano Reo	Chief Surveyor

Ministry of Communication, Transport and Tourism

Mr. Moreti Tibiriano	Chief of Weather Center
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Ministry of Finance and Economic Development

Mrs. Wiriki Tooma	Deputy Secretary
Mrs. Nooma Yeeting	Senior Economist
Mrs. Saitofi Milka	Economist

Betio Town Council

Mr. Boutaake Tengkam Clerk

Embassy of Japan in the Republic of Fiji

Mr. Kenji Miyata Ambassador of Japan

Mr. Shigeki Takaya First Secretary

JICA Fiji Office

Teiji Takeshita Resident Representative

Tetuhiko Ike Deputy Resident Representative

Hiroshi Suzuki Office staff

APPENDIX 4 MINUTES OF DISCUSSIONS

(1) Basic Design Study

Minutes of Discussions
on the Basic Design Study on
the Project for Improvement of Fisheries Transportation
in South Tarawa in the Republic of Kiribati

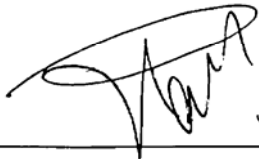
In response to the request from the Government of the Republic of Kiribati (hereinafter referred to as "Kiribati"), the Government of Japan decided to conduct a Basic Design Study on the Project for Improvement of Fisheries Transportation in South Tarawa (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Kiribati the Basic Design Study Team (hereinafter referred to as "the Team"), headed by Mr. Teiji Takeshita, Resident Representative, JICA Fiji Office, and is scheduled to stay in the country from July 20 to August 24, 2006.

The Team held discussions with the relevant officials concerned of the Government of Kiribati and conducted a field survey at the study area.

In the course of the discussions and field survey, both sides have confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.


Tarawa, August 9, 2006



Teiji Takeshita
Leader
Basic Design Study Team
Japan International Cooperation Agency



David Yeefing
Permanent Secretary
Ministry of Fisheries and Marine Resources
Development
the Republic of Kiribati



Taakei Taoaba
Permanent Secretary
Ministry of Public Works and Utilities
the Republic of Kiribati

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve safety and efficient transportation by rehabilitation of roads in South Tarawa.

2. Project Site

The sites of the Project are located at Betio, Bairiki and Bikenibeu in South Tarawa of Kiribati as shown in ANNEX-1.

3. Responsible and Implementing Organizations

3-1. The Responsible Organization is the Ministry of Fisheries and Marine Resources Development (MFMRD).

3-2. The Implementing Organization is the Ministry of Public Works and Utilities (MPWU) which will conclude the contract with the Japanese contractor if the Project would be implemented.

3-3. The Organization charts of MFMRD and MPWU are shown in ANNEX-2.

4. Items requested by the Government of Kiribati

After discussions with the Team, the items described in ANNEX-3 were finally requested by the Kiribati side. JICA will assess the appropriateness of each item and recommend to the Government of Japan for approval.

5. Japan's Grant Aid System

5-1. The Kiribati side understands "The Japan's Grant Aid Scheme" explained by the Team as described in ANNEX-4.

5-2. The Kiribati side will make the necessary arrangement with appropriate authorities to meet its major undertaking, as described in Annex-5, for the smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented.

6. Schedule of the Study

6-1. The Team will proceed to further studies in Kiribati until August 24, 2006.

6-2. JICA will prepare the draft report in English and dispatch a mission to Kiribati to explain its contents in November 2006.

6-3. In case that the contents of the report are accepted in principle by the Government of Kiribati, JICA will complete the final report and send it to the Government of Kiribati in January, 2007.

7. Other relevant issues

7-1 Land relevant issues

Kitibati side explained that the need to acquire land will not arise, as the land necessary for the project is the current road and any widening of the road is not expected to exceed the road reserve.

7-2. Permissions necessary for the Project

Kiribati side shall obtain the following permissions for the Project and submit those to JICA Fiji office by September 30, 2006.

- Environmental Permission
- Construction Permission

7-3. Construction equipment utilized by contractor

The Team asked Kiribati side about possibility of lending construction equipment of MPWU as shown in ANNEX-6 during construction to the Japanese contractor, when the Project would be implemented. Kiribati side will answer to the Team by August 16, 2006.

7-4. Temporary construction yard

Kiribati side promised to secure the vacant lot for the temporary construction yard not less than 80m×80m at the location indicated in ANNEX-7 or elsewhere near the Betio port.

7-5. Road maintenance

The Kiribati side promised to secure enough budget and personnel to properly maintain the roads constructed by the Project.

7-6. Utilization and maintenance of machineries

The Kiribati side promised to secure enough budget and personnel to utilize and properly maintain machineries if provided by the Project.

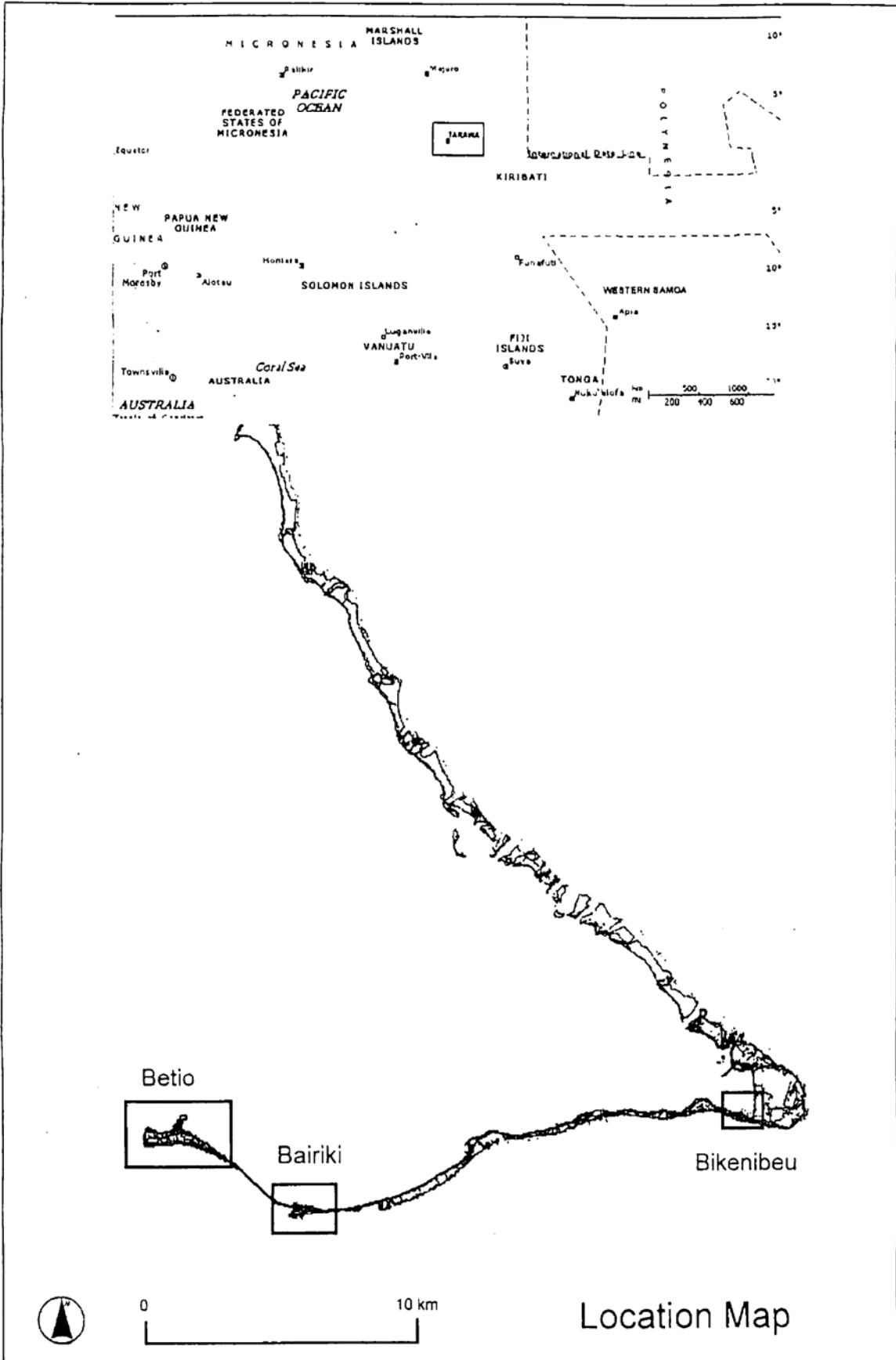
7-7. Questionnaire

The Kiribati side should submit answers in English to the Questionnaire which the Team handed to the Kiribati side by August 16, 2006.

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ANNEX-1



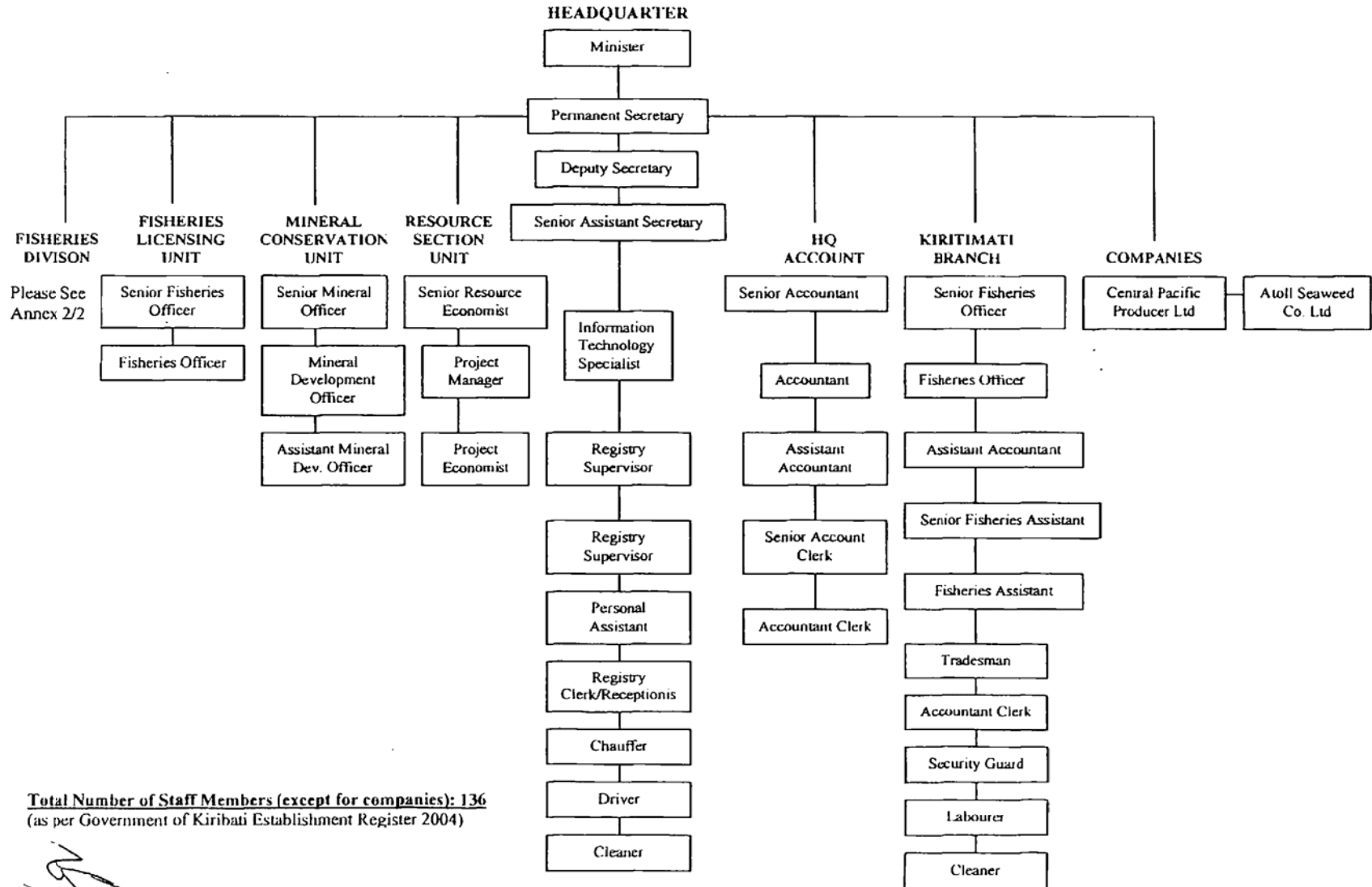
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ANNEX-2/1

MINISTRY OF FISHERIES & MARINE RESOURCES DEVELOPMENT ORGANIZATION CHART



Total Number of Staff Members (except for companies): 136
 (as per Government of Kiribati Establishment Register 2004)

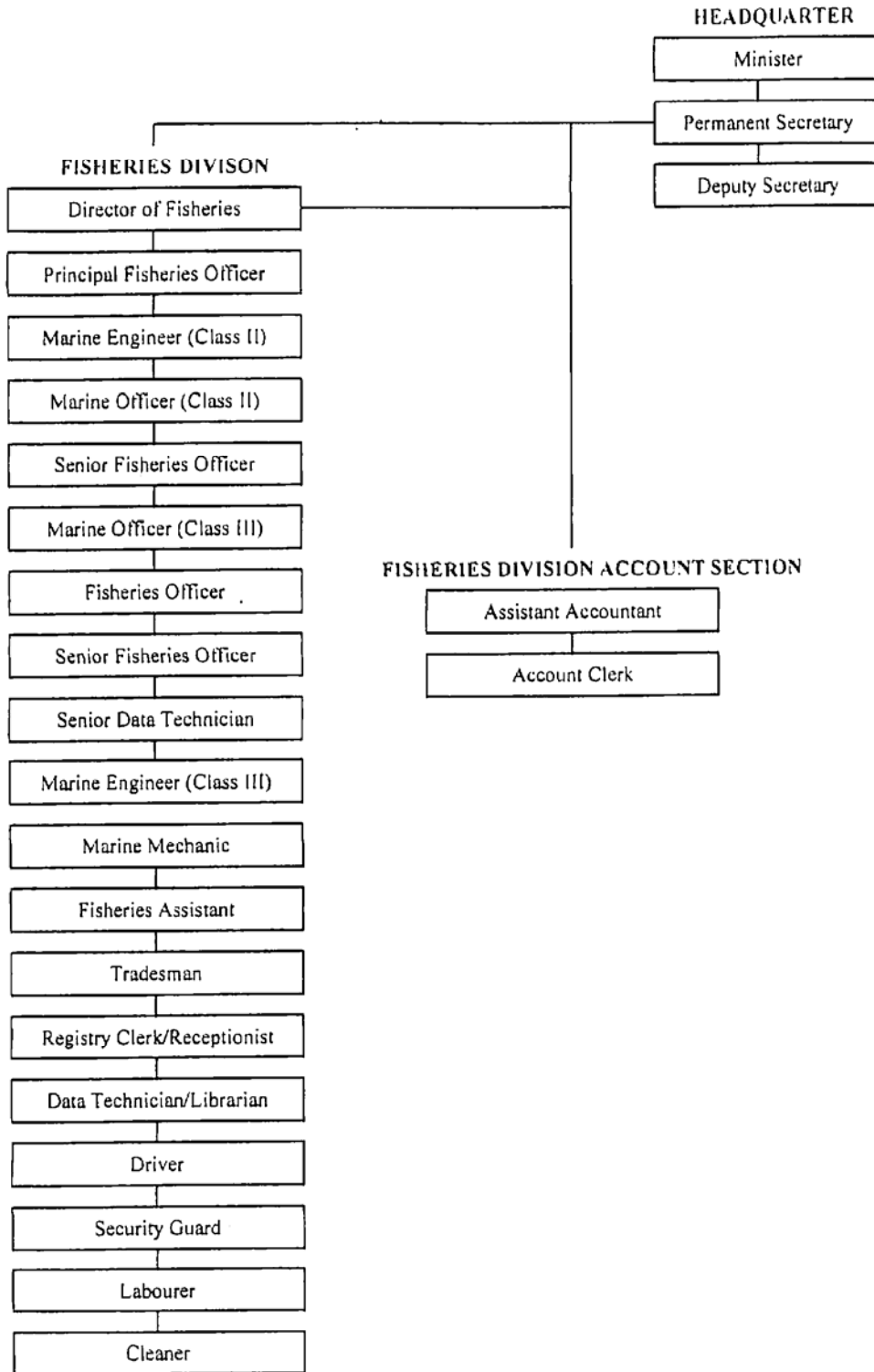
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ANNEX-2/2

Ministry of Fisheries & Marine Resources Development Fisheries Division Organization Chart

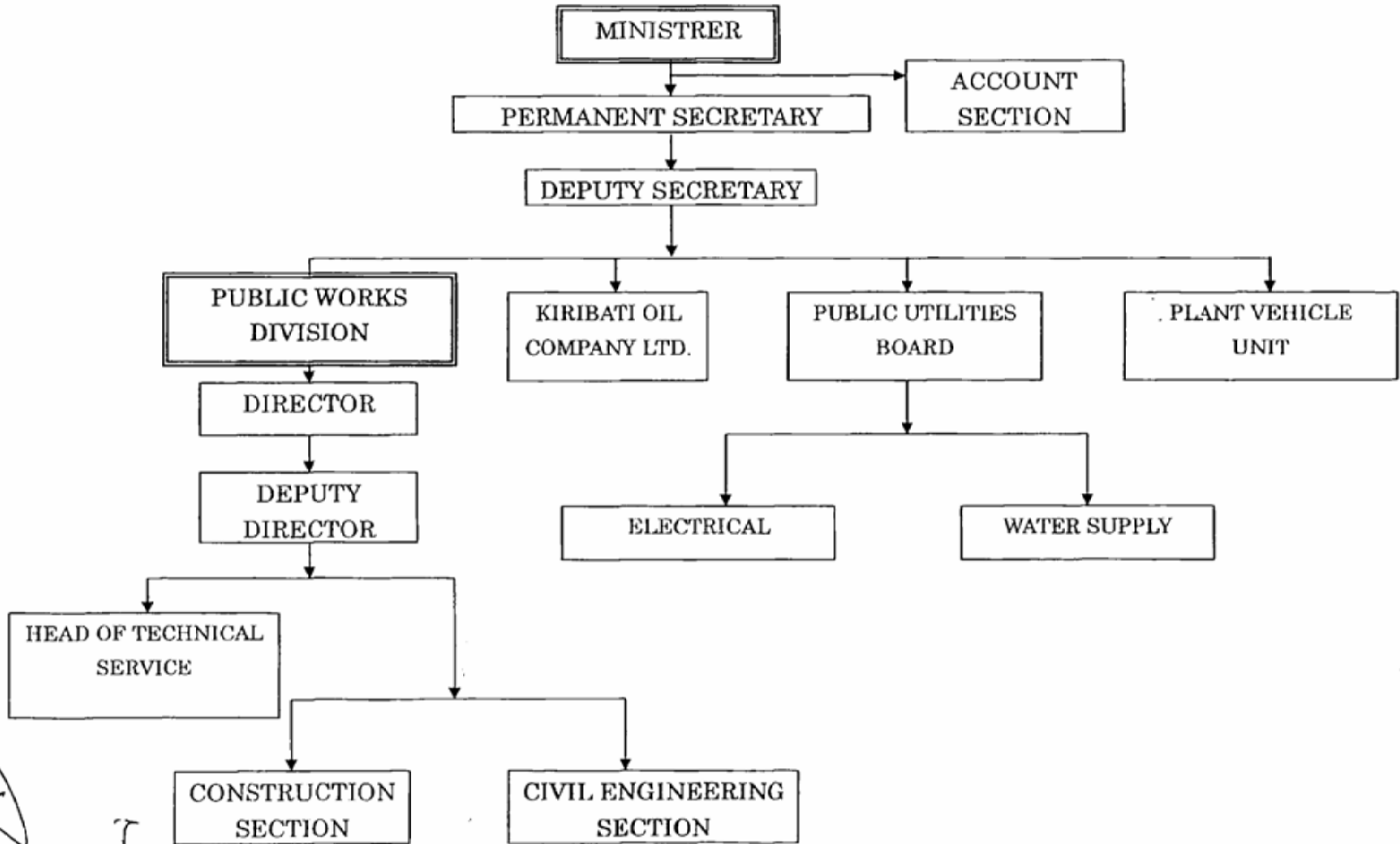


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ANNEX-2/3

MINISTRIES OF PUBLIC WORKS & UTILITIES



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ANNEX-3/1

1. Priority for the requested portions of road by Kiribati side

Town	Section	Length ^{*1} (km)	Length ^{*2} (km)	Priority		
				A	B	C
Betio	South Tarawa Road (Whole stretch of Betio Town)	7.0	6.49	○		
	Jetty Road (Access road to the fishery jetty and the CPP)	0.6	0.54	○		
	Tatirerei Road (Intersection near MCTT-Intersection at Tatirerei)	0.6	0.44		○	
	Betio Police Line Road (Intersection near the Ministry of Public Works and Utilities-Intersection near the High Court)	0.5	0.40		○	
	Subtotal	8.7	7.87	/	/	/
Bairiki	South Tarawa Road (Whole stretch of Bairiki Town)	1.5	1.47	○		
	Frontage Road (Road in front of Ministry of Fisheries and Marine Resources Development)		0.14			○
	Tabonikabauea Road (Bairiki Square Intersection-State House)	0.3	0.25		○	
	TAP Road (Access Road to the fisheries jetty)	0.2	0.16			○
	Bairiki Wharf Road (Near former British High Commission Office- TSKL)	0.4	0.50		○	
	Subtotal	2.4	2.47	/	/	/
Bikenibeu	South Tarawa Road in Bikenibeu (in front of the Tungaru Central Hospital)	0.3	0.30	○		
	Subtotal	0.3	0.30	/	/	/
Total		11.4	10.69	/	/	/

Drainage improvement and pedestrian sidewalks are included in the road sections. (partial)

*1: Length described in the Application Form

*2: Length measured with GPS by the Study Team

Priority A: the top priority or very urgent portion

Priority B: unavoidable but not the top priority

Priority C: desirable if improved within the Project

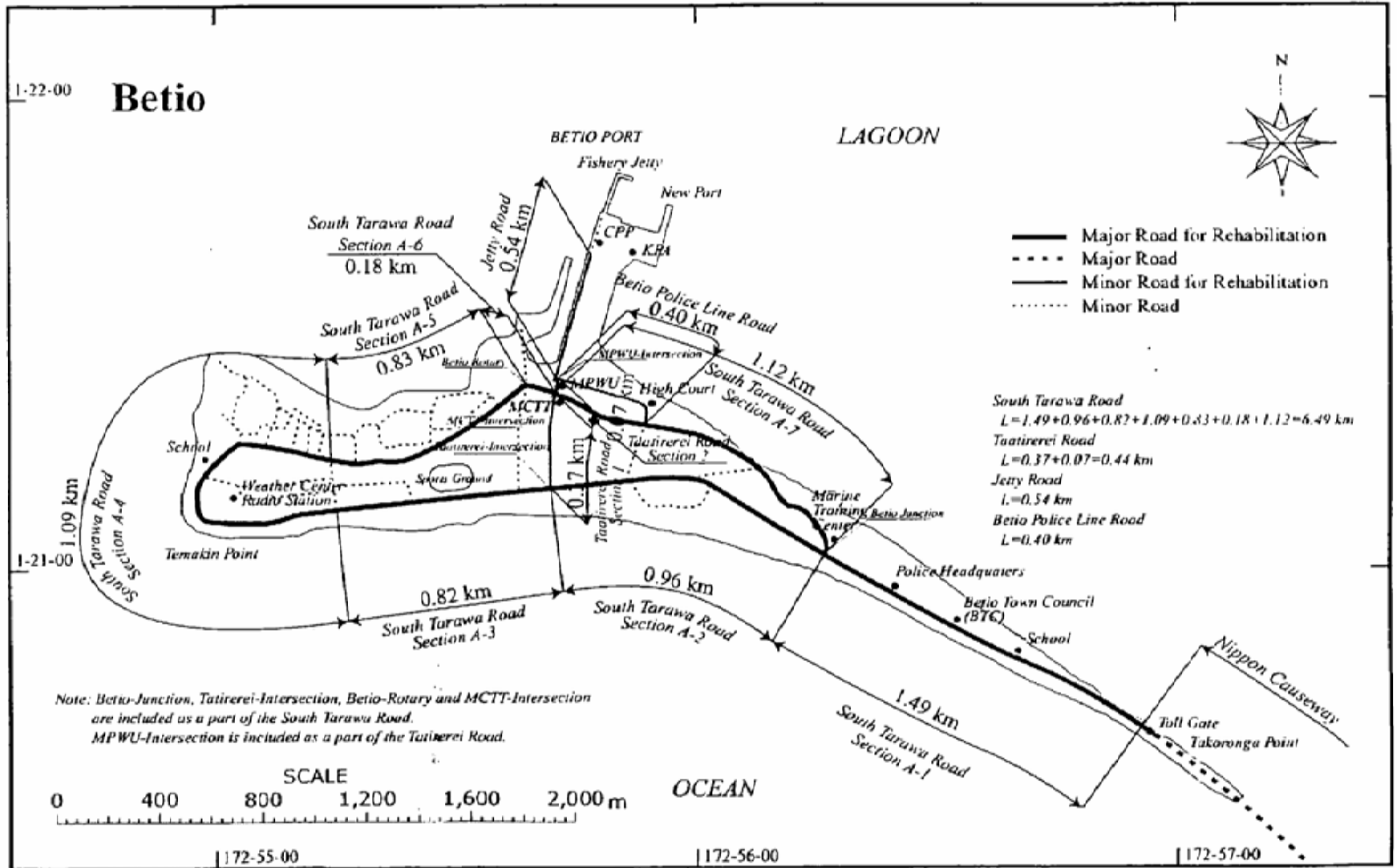
2. Equipments requested by the Kiribati side.

- Two sets of concrete cutter (Blade:254-356mm)

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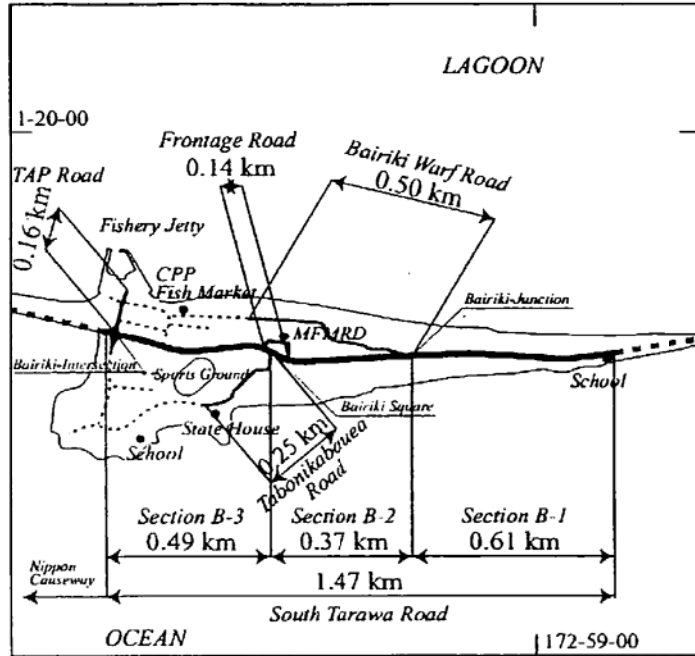
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Bairiki

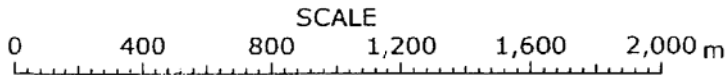


South Tarawa Road
 $L=0.49+0.37+0.61=1.47$ km
 Frontage Road
 $L=0.14$ km
 Tabonikabauea Road
 $L=0.25$ km
 TAP Road
 $L=0.16$ km
 Bairiki Warf Road
 $L=0.50$ km

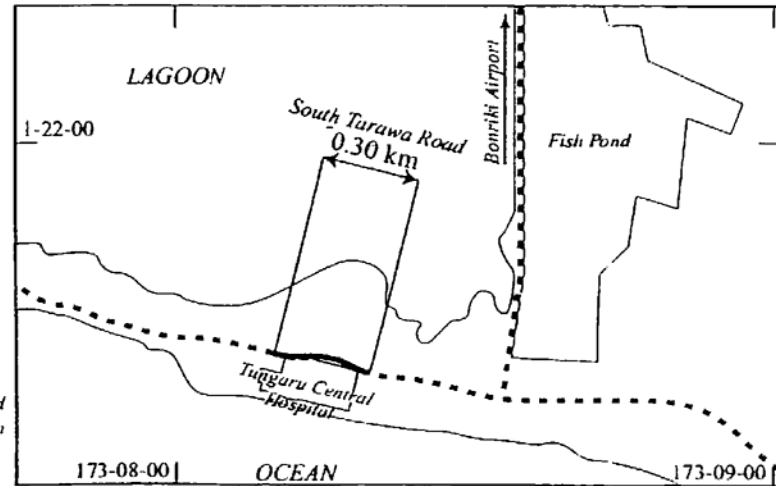
- Major Road for Rehabilitation
- - -** Major Road
- Minor Road for Rehabilitation
-** Minor Road



Note: Bairiki-Intersection and Bairiki Junction are included as a part of the South Tarawa Road.



Bikenibeu



South Tarawa Road
 $L=0.30$ km

APP - 15

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JAPAN'S GRANT AID SCHEME

The Grant Aid Scheme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

Japan's Grant Aid Scheme is executed through the following procedures.

Application	(Request made by the recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by the Cabinet)
Determination of Implementation	(The Note exchanged between the Governments of Japan and recipient country)

Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study) using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Scheme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes (E/N) signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

(1) Contents of the study

The aim of the Basic Design Study (hereafter referred to as "the Study") conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of the Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consultant firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

(1) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(2) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However, in case of delays in delivery, installation or construction due to unforeseen factors such as national disaster, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(3) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, consulting, constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(4) Necessity of "Verification"

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The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

(5) Undertakings required of the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as the following:

- a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction,
- b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) To secure buildings prior to the procurement in case the installation of the equipment,
- d) To ensure all the expenses and prompt excursion for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
- f) To accord Japanese nationals, whose services may be required in connection with the supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(6) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

(7) "Re-export"

The products purchased under the Grant Aid should not be re-exported from the recipient country.

(8) Banking Arrangements (B/A)

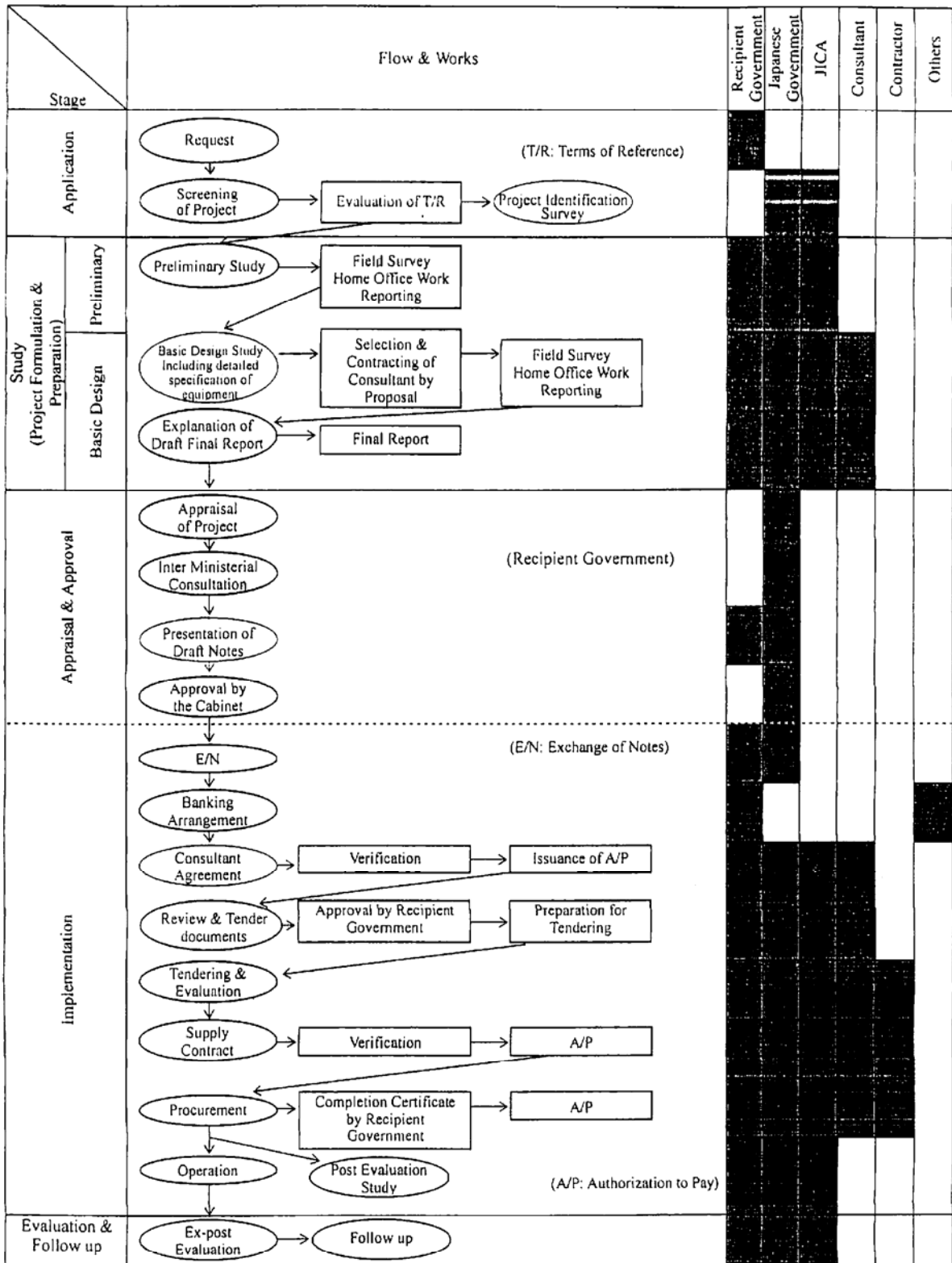
a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

Flow Chart of Japan's Grant Aid Procedures



Note: This chart shows the procedures in case of the Basic Design Study will include preparation of detailed specification of equipment

ANNEX-5

Major Undertaking to be Taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	To secure land		•
2	To Clear, level and reclaim the site when needed		•
3	To prepare the temporary construction yard at the Betio port area		•
4	To prepare temporary roads when needed		
	1) Within the site	•	
	2) Outside the site		•
5	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1) Electricity to the temporary construction yard		
	a. The distribution line		•
	b. The drop wiring and internal wiring	•	
	c. The main circuit breaker and transformer	•	
	2) Water supply to the temporary construction yard		
	a. The city water distribution main		•
	b. The supply system (receiving and elevated tanks)	•	
	3) Drainage within the temporary construction yard		
	a. The city drainage main (for storm, sewer and others)		•
	b. The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	•	
6	To bear the following commissions to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		•
	2) Payment commission		•
7	To ensure unloading and customs clearance at port of disembarkation in Kiribati		
	1) Marine (Air) transportation of the products imported to Kiribati	•	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		•
	3) Internal transportation from the port of disembarkation to the project site	(•)	(•)
8	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract, such facilities as may be necessary for their entry into Kiribati and stay therein for the performance of their work.		•
9	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imported into Kiribati with respect to the supply of the products and services under the verified contract.		•
10	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		•
11	To bear all the expenses , other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		•

(B/A: Banking Arrangement, A/P: Authorization to Pay)

11

ANNEX-6

List of equipments lent from the Kiribati Side

The Team requests the Kiribati side to lend some of the listed equipments for the Project owned by the Ministry of Public Works and Utilities.

All the expenses other than fuel and operators shall be at the cost of the Kiribati side.

Kiribati side offers the equipment under conditions of A, B or C, where

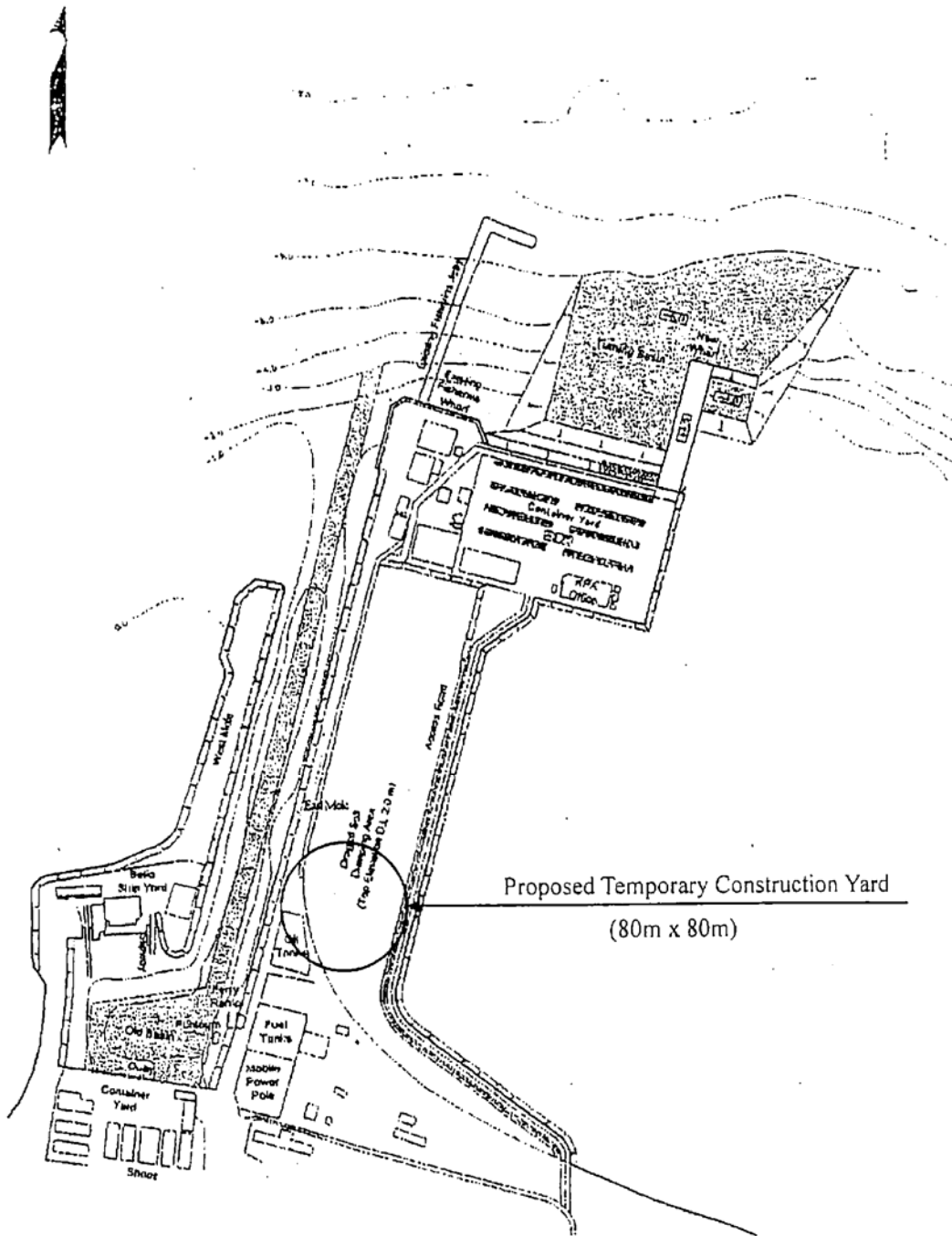
A : the equipment can be freely used at any time by the Japanese contractor for the Project during the construction period,

B : Japanese contractor can use the equipment for the Project, only when Kiribati side does not use the equipment,

C : Kiribati side will not be able to lend the equipment.

No.	ITEMS	Manufacturer	Model	Year of Production	Condition
1	Motor grader	KOMATSU	GD511A-1	2004	
2	Motor grader	KOMATSU	GD511A-1	2004	
3	Steel Roller (Combine type)	SAKAI	SV512D	2004	
4	Steel Roller (Combine type)	SAKAI	SV512D	2004	
5	Tire roller	SAKAI	TS200	2004	
6	Tire roller	SAKAI	TS200	2004	
7	Tipper truck	NICHIDE	FE6B	2004	
8	Tipper truck	NICHIDE	FE6B	2004	
9	Wheel type hydraulic excavator	KOMATSU	PW110	2004	
10	Concrete cutter				

ANNEX-7



Proposed Temporary Construction Yard
(80m x 80m)

Handwritten mark resembling a stylized 'T' or '11'.

Handwritten initials or signature, possibly 'AB' and 'DV'.

(2) Explanation on Draft Report

MINUTES OF DISCUSSIONS
ON BASIC DESIGN STUDY ON
THE PROJECT FOR THE IMPROVEMENT OF THE FISHERIES TRANSPORTATION
IN SOUTH TARAWA IN THE REPUBLIC OF KIRIBATI
(EXPLANATION ON DRAFT REPORT)

In August 2006, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on The Project for the Improvement of the Fisheries Transportation in South Tarawa (hereinafter referred to as "the Project") to the Republic of Kiribati (hereinafter referred to as "Kiribati"), and through discussion, field survey, and technical examination of its results in Japan, JICA prepared a draft report of the study.

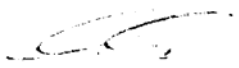
In order to explain and to consult Kiribati on the components of the draft report, JICA sent to Kiribati the Draft Report Explanation Team (hereinafter referred to as " the Team "), which is headed by Mr. Hideki Fujii, JICA, from 2nd November 2006 to 9th November 2006.

As a result of discussions, both parties confirmed the main items described on the attached sheets.


Tarawa, 7th November, 2006

藤井秀樹

Hideki Fujii
Leader
Draft Report Explanation Team
Japan International Cooperation Agency
(JICA)



Peter Tong
Secretary
Ministry of Fisheries and Marine Resources
Development
the Republic of Kiribati



Reina Timau
Secretary
Ministry of Public Works and Utilities
the Republic of Kiribati

ATTACHMENT

1. Components of the Draft Report

The Government of Kiribati agreed and accepted in principle the components of the draft report explained by the Team including obligations of the recipient country which are mentioned in Chapter 3 of the draft report.

2. Japan's Grant Aid scheme

The Kiribati side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Kiribati as explained by the Team and described in Annex- 4 of the Minutes of Discussions signed by Kiribati side and the Basic Design Study Team on 9th August, 2006.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Kiribati by January 2007.

4. Other relevant issues

(1) Relocation of Public Facilities

The Kiribati side shall ensure that the public facilities (telephone lines and electric cables, etc.) which may impede the progress of the Project are to be relocated before the commencement of the construction work.

(2) Environmental and Construction Permission of the Project

The Kiribati side shall ensure to take necessary measures to obtain environmental and construction permission from the Ministries concerned and to report to the JICA Fiji Office in the Republic of Fiji by the end of November, 2006.

(3) Temporary construction yard

The Kiribati side shall secure and provide the vacant lot for the temporary construction yard not less than 80mx80m at the location indicated in Annex- 7 of the Minutes of Discussions signed by Kiribati side and the Basic Design Study Team on 9th August, 2006 or elsewhere near the Betio port before the commencement of the construction work.

A
7/11/06

C

H. Fujii

(4) Road and machinery maintenance

The Kiribati side shall be responsible to secure sufficient budget and personnel to utilize and maintain the roads constructed and the equipment provided by the Project.

D. 9/14/02

Q

H. Fuji

APPENDIX 5

ADVANCE PROJECT PLANNING (AT THE BASIC DESIGN STAGE)

1. Project Title
Basic Design Study on the Project for Improvement of Fisheries Transportation in South Tarawa in the Republic of Kiribati
2. Background of the Request (Necessity and Status of the Japanese Assistance)
<p>The fisheries industry in Kiribati is an important source of income as evidenced by the fact that 75% of households (3,397 households) on South Tarawa are engaged in fisheries activities in one way or another. On outer islands in particular, fisheries are actively sought for the purpose of primarily supplying the catch to Tarawa. As marine products are a supply source of animal protein, the fisheries industry in Kiribati is closely linked to the national economy as well as national life. For the distribution of marine products, Central Pacific Producers, Ltd. (CPP) based next to Port Betio supplies fish from outer islands, etc. to such large consumption facilities as hospitals, schools and hotels in South Tarawa. Fishermen in general use roads not only for the transportation of fishing gear and fuel but also for travelling by mini-bus to the mooring sites of fishing boats. Because of the use of vehicles for the transportation of marine products and the movement of fishermen, the road transport infrastructure plays a crucial role in not only the daily lives of the islands and general economic activities but also in the transportation of marine products and the movement of fishermen.</p> <p>However, the roads on Tarawa are facing multiple problems, including ① an increased traffic volume in recent years due to the population increase, ② concentration of traffic on existing roads due to the difficulty of constructing new parallel roads, in turn caused by the long and narrow shape of the island, ③ severe deterioration of the roads due to aging as many roads were originally constructed in the 1950's and ④ lack of drainage ditches and such safety facilities as sidewalks and bus lay-bys. As a result, safe and smooth transport is disrupted, causing adverse impacts on the transportation of marine products and the movement of fishermen.</p> <p>Under these circumstances, the Government of Kiribati has decided that the improvement of roads should be an important policy objective, has formulated a plan to improve the roads in South Tarawa and has requested the Government of Japan's provision of grant aid assistance for the improvement of urban roads in South Tarawa to reverse the worsening situation of distribution and transport in recent years, typically indicated by an increase of the number of traffic accidents.</p> <p>The objective of the Project is to improve the worsening situation described above with a view to contributing to the development of local fisheries by means of improving the roads in Betio, Bairiki and Bikenibeu to secure safe and smooth traffic and distribution and ensuring sufficient road maintenance through the provision of the necessary equipment.</p>

3. Outline of the Project

(The underlined are the outcomes, activities and inputs directly related to the requested Japanese assistance.)

(1) Project targets (scope and scale of the beneficiaries)

To improve the road conditions in Betio, Bairiki and Bikenibeu, thereby guaranteeing safe and smooth traffic

Target beneficiaries: some 40,000 residents in South Tarawa

(2) Project outcomes

- Improvement of roads totalling 10.6 km (the original request for 11.4 km has been reduced to 10.6 km based on the field survey results) in South Tarawa (Betio, Bairiki and Bikenibeu)
- Provision of road maintenance equipment (concrete cutters and spare parts) to ensure regular road repair

(3) Main activity under the Project

Road improvement work featuring 10.6 km target sections in South Tarawa in FY 2007 (single year)

(4) Inputs

1) Japanese side (= the Project): grant aid of ¥1,272 million

2) Recipient side

- ① Improvement of sidewalks
- ② Treatment of soak pits
- ③ Relocation of buried objects
- ④ Provision of a temporary yard(s)

(5) Implementation system

Responsible ministry : Kiribati Ministry of Fisheries and Marine Resources Development

Implementing ministry : Kiribati Ministry of Public Works and Utilities

4. Contents of the Grant Aid Project

(1) Sites

Repair of roads in the following districts

- Betio : South Tarawa Road, Jetty Road, Taatirerei Road, Police Line Road
- Bairiki : South Tarawa Road, Frontage Road, Tabonikabauea Road, TAP Road, Bairiki Wharf Road
- Bikenibeu : South Tarawa Road (in front of Central Hospital)

(2) Outline

Road improvement over 10.63 km in Betio (7.86 km), Bairiki (2.49 km) and Bikenibeu (0.28 km) and provision of equipment (concrete cutters and spare parts)

(3) Undertakings by the recipient country

- ① Improvement of sidewalks
- ② Treatment of soak pits

(4) Estimated project cost

Estimated project cost: ¥1,288 million (grant aid of ¥1,285 million, contribution by the recipient country of ¥3 million)

(5) Duration

Approximately 14 months (planned), including the detailed design and tender periods

(6) Issues relating to poverty, gender and/or environmental/social considerations
 The improved travelability due to the repaired roads will not only enable the efficient transportation of fresh fish but will also increase the commercial value of fish. In this manner, economic assistance for fishermen and the stable transportation of food will become a reality, leading to poverty reduction and human security in the long run.

5. External Risks (Affecting the Achievement of the Project Targets)

No disaster exceeding the expected severity will occur due to the flood tide or earthquake, etc.

6. Utilisation of Lessons from Similar Projects in the Past

None

7. Proposal for Ex-Post Facto Evaluation of the Project

(1) Indicator for achievement of the Project

Indicator	Present (2006)	Future (2008 Onwards)
Travelling speed (in Betio)	Approx. 25 km/hour	Approx. 40 km/hour

(2) Other indicators

None

(3) Timing of evaluation

2008 onwards (after the commencement of the use of the improved roads)

APPENDIX 6 OTHER RELEVANT DATA

No.	Name	Form	Original/ Copy	Issue organization	Issue year
1	Environment Act 1999	Book	Copy	Ministry of Environment and Social Development, Environment and Conservation Division	1999
2	Environment Act 1999 Section 53 Environment Regulations 2001, Republic of Kiribati	Book	Copy	Ministry of Environment and Social Development, Environment and Conservation Division	2001
3	Establishment Register 2006	Book	Copy	Government of Kiribati	2006
4	Betio Port Dues, Fees & Tariff	Book	Copy	Kiribati Ports Authority	2004
5	Harmonized System Nomenclature of Kiribati	Book	Copy	Ministry of Finance & Economic Development	-
6	Maintenance Procedures for Bitumen Road Repairs	Book	Copy	Australia Aid	1998
7	Handbook, Recommendations for the Construction and Maintenance of Bitumen Road Surfaces	Book	Copy	British Development	-
8	Budget of Civil Engineering Section	Book	Copy	Ministry of Public Works and Utilities	2006
9	BTC and TUC Sealed Roads Maintenance Work Programme 2004	Book	Copy	Civil Engineering Services	2004
10	Project Document	Book	Copy	Civil Engineering Services	2004
11	Civil Weekly Report	Book	Copy	Civil Engineering Services	2006
12	Road Summary	Book	Copy	Civil Engineering Services	1999
13	Allocation of Vehicles-December 2005	Book	Copy	Kiribati Government Plant & Vehicle unit	2005
14	Plant and Vehicle Unit Structure	Book	Copy	Kiribati Government Plant & Vehicle unit	-
15	Heavy Plant List	Book	Copy	Kiribati Government Plant & Vehicle unit	2006
16	Cost Estimate, Construction Repair Work	Book	Copy	Civil Engineering Section	2005
17	Cost Estimate, Matabou-Tebuange Nonouti Island	Book	Copy	Civil Engineering Services	2006