

4. 討議議事録 (M/D)

MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY
ON
THE PROJECT FOR IMPROVEMENT
OF GULU MUNICIPAL COUNCIL ROADS
IN
THE REPUBLIC OF UGANDA

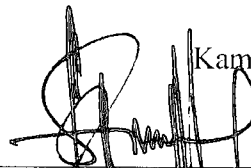
In response to the official request of the Republic of Uganda (hereinafter referred to as “Uganda”), Japan International Cooperation Agency (hereinafter referred to as “JICA”) in consultation with the Government of Japan had decided to conduct a Preparatory Survey for Outline Design on the Project for Improvement of Gulu Municipal Council Roads (hereinafter referred to as “the Project”), and dispatch a Preparatory Survey Team (hereinafter referred to as “the Team”) to Uganda.

The Team is headed by Mr. Tomoki KANENAWA, Advisor, Infrastructure and Peacebuilding Department, JICA, and is scheduled to stay in Uganda from March 1st to March 11th, 2015.

The Team held a series of discussions with officials concerned in Uganda and conducted field surveys in the Project area. In the course of discussions and field surveys, both sides have confirmed the main items described in the attached sheets. The team will proceed to further studies and prepare a Preparatory Survey Report.

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Tomoki KANENAWA
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan

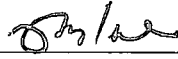


Kampala, March 10th, 2015


Alex B. Okello
Permanent Secretary
Ministry of Works and Transport
Uganda

Witness

Maris Wanyera
Commissioner, Development Assistance and
Regional Cooperation Department
Ministry of Finance, Planning and Economic
Development
Uganda



Barabanawe Francis
Town Clerk
Gulu Municipality
Uganda



Ongom Justine
Director of Operations
Uganda National Road Authority
Uganda

ATTACHMENTS

1. Title of the Project

Both sides confirmed that the title of the Project shall be “The Project for Improvement of Gulu Municipal Council Roads”.

2. Objective of the Project

Both sides confirmed that the objective of the Project is to improve and rehabilitate the roads and drainage facilities in Gulu Municipality.

3. Project Site

The Project site is located in Gulu Municipality, Uganda, which is shown in **Annex 1**.

4. Objective of the Preparatory Survey

Both sides confirmed the objective of the Survey as follows:

- 4-1. To understand the background and objective of the Project and examine its impacts and appropriateness;
- 4-2. To identify the components, and conduct outline design and cost estimation of the Project, based on the data and information collected from and the results of discussions with the Ugandan side; and
- 4-3. To study the issues of environmental and social considerations through the Survey.

5. Responsible and Implementing Organization

The Responsible Organization of the Project is Ministry of Works and Transport (hereinafter referred to as “MoWT”). The organization chart is shown in **Annex 2**.

6. Items requested by the Government of Uganda

- 6-1. It is written on the application form that the Ugandan side requests for improvement and rehabilitation of the road and drainage facilities in Gulu Municipality. JICA will assess the appropriateness of the request that would be examined in accordance with further studies and analysis in Japan and the final components of the Project would be decided by the Japanese side mainly from the viewpoints of necessity, technical and financial viability, sustainability and cost-effectiveness.
- 6-2. Both sides confirmed that there was no duplication for the Project to be conducted by other development partners or private enterprises.
- 6-3. Both sides confirmed the tentative priority of the target roads as described in **Annex 1**. The priority would be finally decided on the explanation of the Draft Final Report



which is scheduled around September, 2015.

7. Japan's Grant Aid Scheme

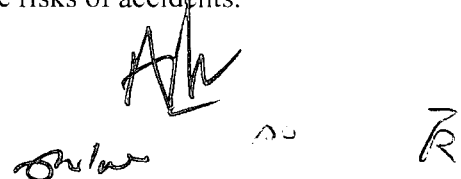
- 7-1. The Ugandan side understands the Japan's Grant Aid scheme explained by the Team, as described in **Annex 3** and **Annex 4**.
- 7-2. The Ugandan side will take the necessary measures, as described in **Annex 5**, to facilitate the smooth implementation of the Project, as a condition for the Japan Grant Aid to be implemented.

8. Environmental and Social Considerations

- 8-1. The Team explained that environmental and social considerations for the Project is categorized as "Category B" according to the JICA Environmental and Social Consideration Guidelines, since the construction work will be conducted in right of way (ROW) and land acquisition will not be involved, which mean that the impact on the environment from the Project may be limited.
- 8-2. Both sides confirmed that the Ugandan side shall conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Initial Environmental Examination (IEE) etc.) and make IEE report of the Project. The IEE approval shall be received from the responsible authorities and submitted to JICA Uganda office before the commencement of the construction.
- 8-3. The Ugandan side agreed to arrange the budget allocation for IEE study, land acquisition, resettlement and compensation for the Project Affected Persons (PAPs) or Indigenous People's Plan (IPP) and secure the land before the detailed design of the Project.

9. Operation and Maintenance

- 9-1. The Ugandan side explained that the maintenance works on the target roads would be conducted by Gulu Municipality. The organization structure of Gulu Municipality is described in **Annex 2**.
- 9-2. The Ugandan side will take every necessary action including securing enough budget and personnel for the operation and maintenance of the facilities implemented by the Project. The Ugandan side also understands that the continuous and emergency measures, maintenance and cleaning of drainage for securing the durability are especially important.
- 9-3. The Team explained to the Ugandan side that it would be necessary to let the road users respect traffic regulations regarding the following three issues in order to effectively maintain the facilities and also to ensure road safety.
 - 9-3-1. Although the project includes some facilities to ensure traffic safety such as humps and signage, increased traffic will inevitably raise the risks of accidents.

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9-3-2. Overloaded trucks which exceed designed axle loads would cause early failure and shorter life.

9-3-3. Proper asset management will impact greatly on maintenance cost and lifespan.

The Ugandan side explained that they shall conduct the road safety sensitization for the residents to reduce traffic accidents. The Ugandan side also explained that the overloaded trucks would not pass through central business district (CBD) Gulu since the axle load control is conducted at the border posts. Besides, the Ugandan side understood that preventive maintenance is important.

10. Safety Measures

10-1. To avoid accidents on site during the implementation of the Project, the Ugandan side agreed to cause the consultant and the contractor to enforce safety measures such as setting safety assurance to the site, providing information for security control to public, and deploying adequate security personnel, based on “The Guidance for the Management of Safety for Construction Works in Japanese ODA Projects” which has been published on JICA’s URL below.

http://www.jica.go.jp/activities/schemes/oda_safety/ku57pq00001nz4eu-att/guidance_en.pdf

10-2. The Team recommended to the Ugandan side to explain to the residents about the Project (necessity and significance, construction period, sites, impact etc.), so that consensus support can be obtained from them for the smooth operation of the Project.

11. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, MoWT and relevant organizations shall provide JICA with additional such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations in Uganda.

MoWT and relevant organizations shall not, unfairly or unfavourably treat the person(s) and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

12. Schedule of the Survey

Both sides confirmed the schedule of the Survey are as below, the schedule may be subject to change during the preparation and the course of the Survey:

12-1. The Team will conduct further studies in Uganda from March 31st to May 11th, 2015;

12-2. JICA will dispatch a mission team to check the situation in rainy season around August 2015;

12-3. JICA will prepare the Draft Final Report and dispatch a mission team to explain the

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details of the Project including the final components and cost estimation to the Ugandan side around September 2015; and

12-4. JICA will finalize the Final Report and send it to the Ugandan side around January 2016.

13. Other Relevant Issues

13-1. Provision of Conveniences to the Team by the Ugandan Side

The Ugandan side shall, at its own expenses, provide the Team with the following items in collaboration with MoWT and other organizations concerned:

- (1) Security-related information as well as measures to ensure the safety of the Team members;
- (2) Information as well as support in obtaining medical service;
- (3) Data and information related to the Preparatory Survey;
- (4) Counterpart personnel;
- (5) Suitable office space with necessary equipment and services in both Kampala and Gulu;
- (6) Credentials or identification cards;
- (7) Entry permits necessary for the survey team members to conduct field surveys; and
- (8) Support in obtaining other privileges and benefits where necessary.

13-2. Provision of Conveniences to the Project by the Ugandan Side

The Ugandan side confirmed that undertakings described in **Annex 6** should be taken by the Ugandan side at its own expense if implementation of the Project is approved by the Government of Japan.

13-3. Relocation of Existing Utilities

Both sides agreed that the existing utilities in the project site will be relocated by the Ugandan side. The Ugandan side agreed to secure the budget allocation for relocation in next fiscal year and relocation itself would be conducted by the Ugandan side before the commencement of the construction.

13-4. Diverging Point between JICA's and UNRA's Project

Both sides agreed that the diverging point is on the T-junction where Sir Samuel Baker Road diverges from Kampala Road. The improvement of T-junction itself will be conducted by JICA.

13-5. Soft Component

Japanese side explained that the operation and maintenance as soft component

would be implemented during the construction stage. The detail will be determined through the Preparatory Survey.

Annex 1: Project Site

Annex 2: Organization Charts of MoWT and Gulu Municipality

Annex 3: Japan's Grant Aid

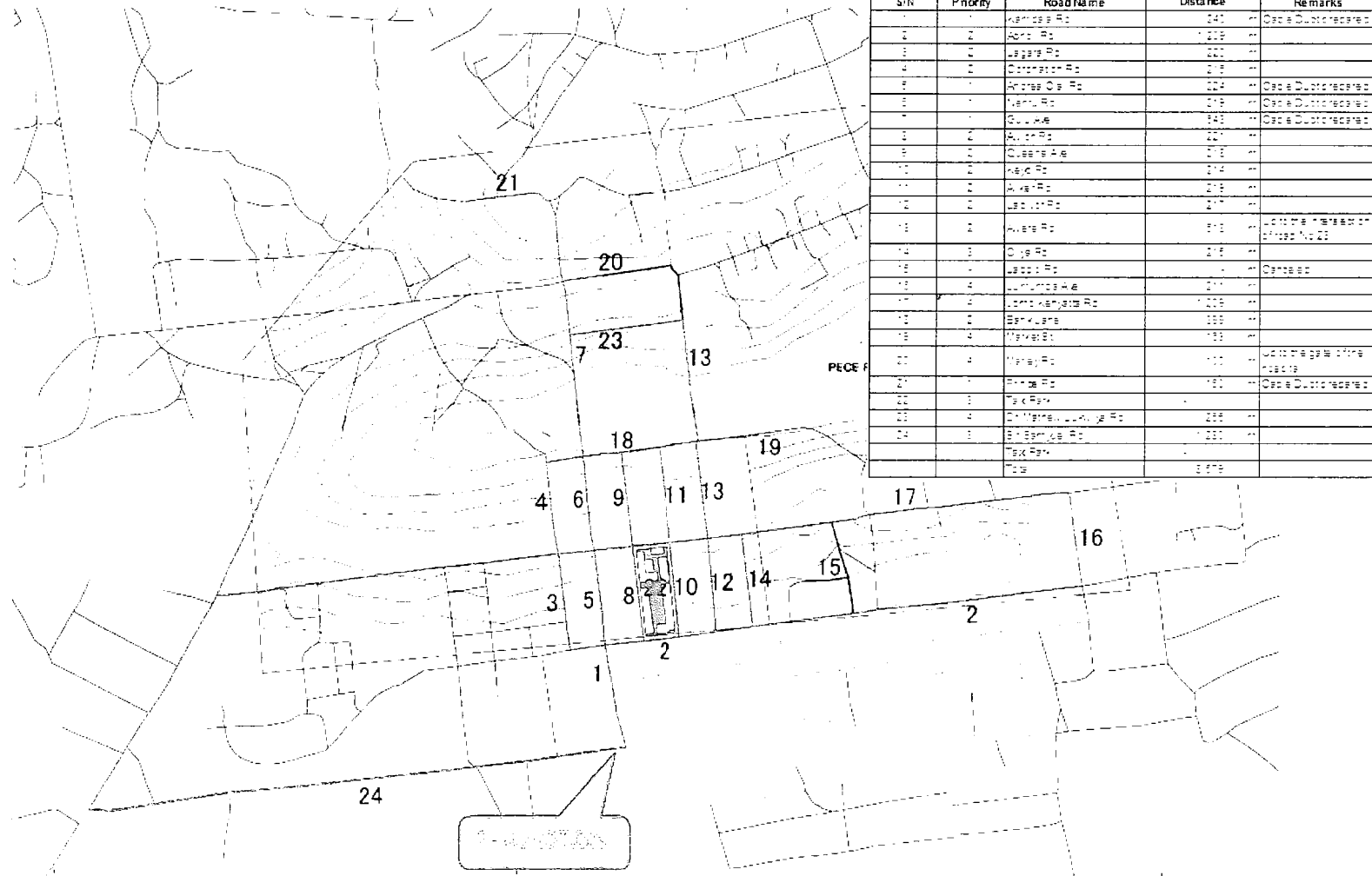
Annex 4: Flow Chart of Japan's Grant Aid Procedures

Annex 5: Major Undertakings to be taken by Each Government as a condition for the Japan Grant Aid to be implemented

Annex 6: Major Undertakings to be taken by Each Government after an approval of Project implementation

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Project Site



S/N	Priority	Road Name	Distance	Remarks
1	1	Kemsa Rd	247	Case Discontinued
2	2	Kora Rd	239	
3	2	Lappa Rd	222	
4	2	Chikwaka Rd	218	
5	1	Amere Os Rd	224	Case Discontinued
6	1	Nam Rd	218	Case Discontinued
7	1	Quana	243	Case Discontinued
8	2	A. J. Rd	227	
9	2	Quana Ave	218	
10	2	h/c Rd	214	
11	2	Kaka Rd	218	
12	2	Lappa Rd	217	
13	2	Amere Rd	212	Jointly owned by Plot No 23
14	2	Quana Rd	218	
15	1	Lappa Rd	218	Case Discontinued
16	4	Quana Ave	218	
17	2	Jointly owned Rd	222	
18	2	Emkuma	222	
19	4	Ngwara Rd	232	
20	4	Ngwara Rd	232	Jointly owned by Plot No 19
21	1	Amere Rd	222	Case Discontinued
22	1	Tax Rd	-	
23	4	Emkuma Lappa Rd	228	
24	1	Emkuma Rd	222	
		Tax Rd	-	
		Total	2878	

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Emkuma

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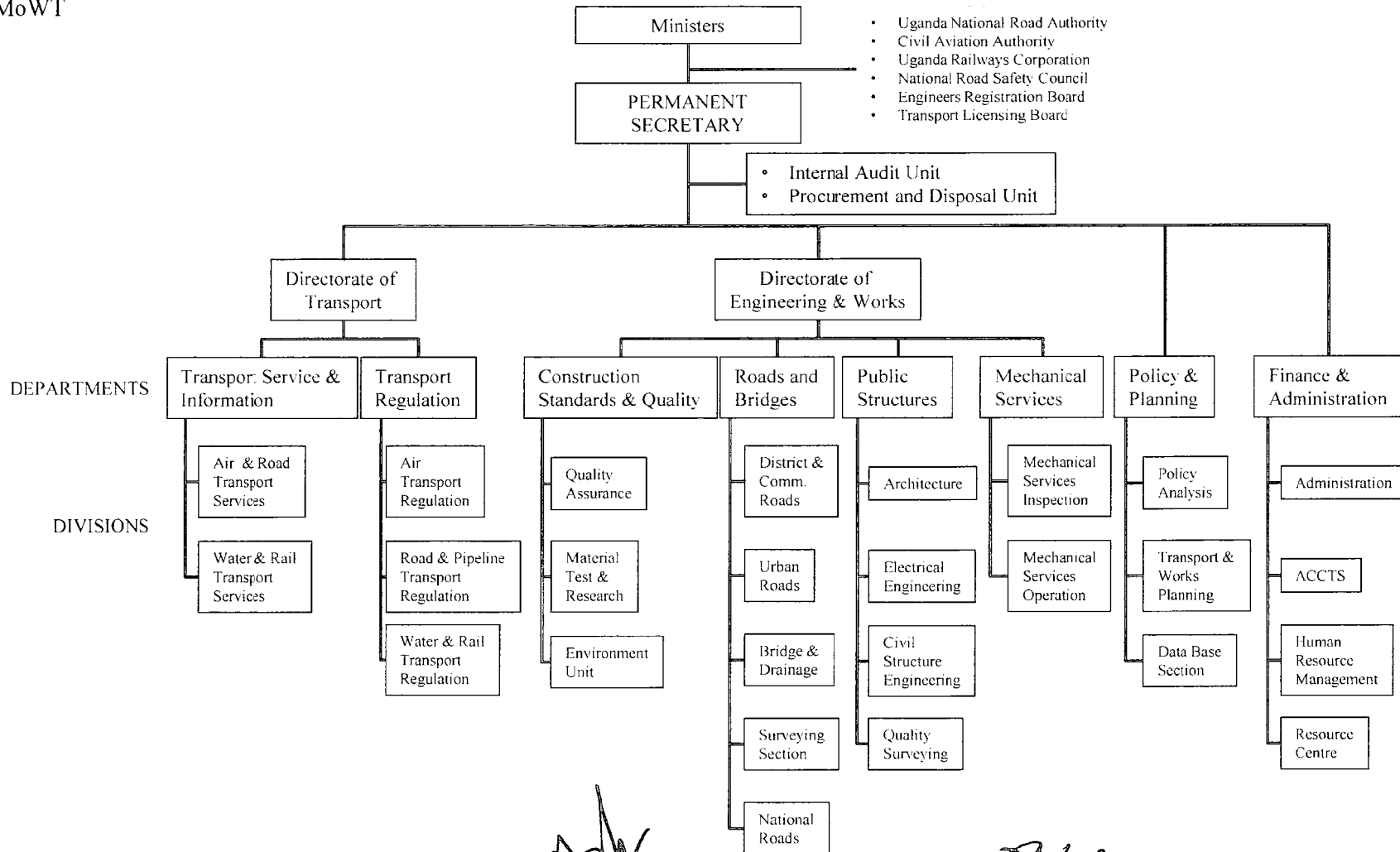
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Organization Charts

1. MoWT



- Uganda National Road Authority
- Civil Aviation Authority
- Uganda Railways Corporation
- National Road Safety Council
- Engineers Registration Board
- Transport Licensing Board

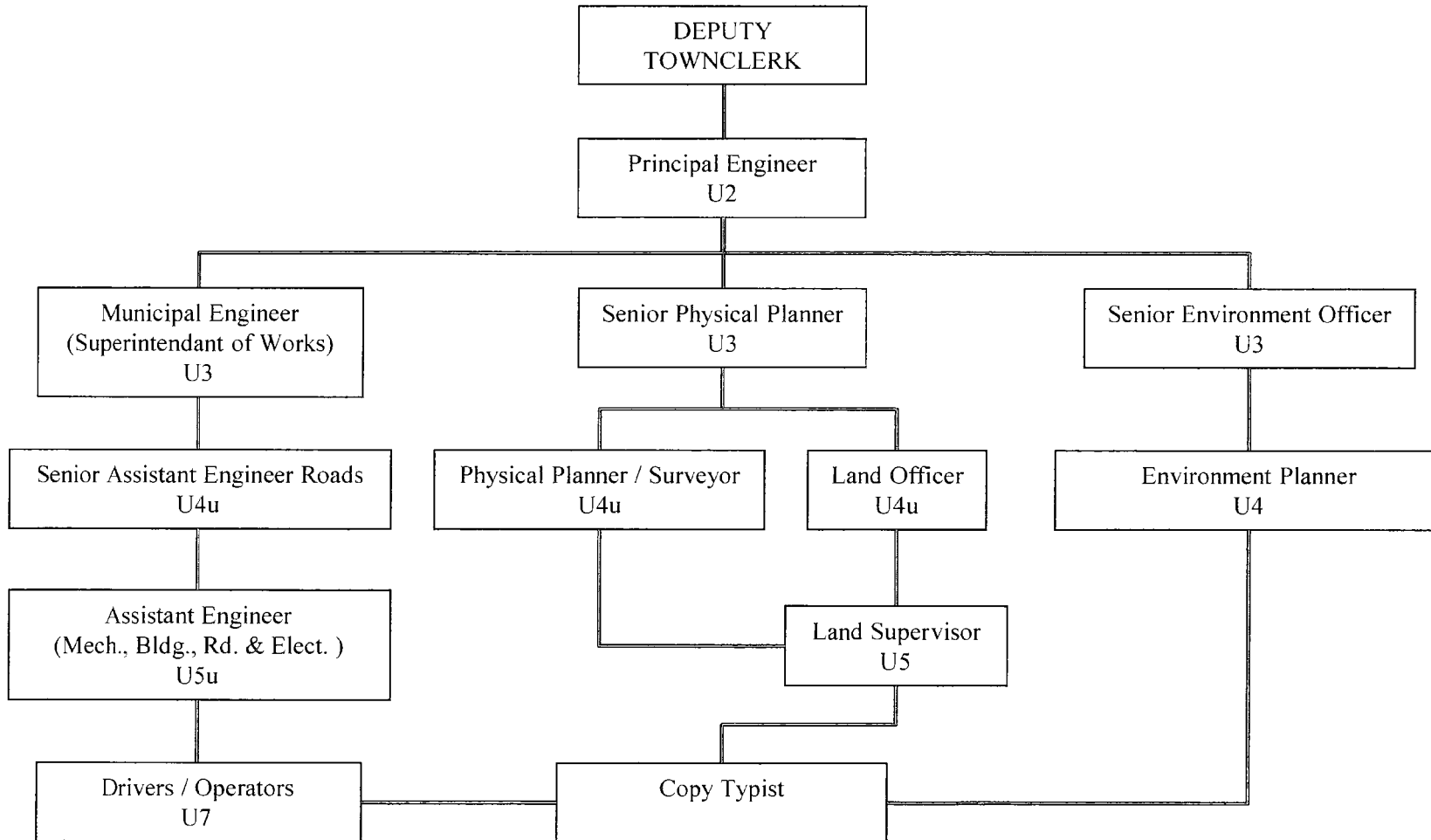
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2. Gulu Municipality (Only Engineering Department)



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Japan's Grant Aid

The Government of Japan (hereinafter referred to as “the GOJ”) is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

The Grant Aid is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development 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

The Japanese Grant Aid is supplied through following procedures:

- a) Preparatory Survey
 - The Survey conducted by JICA
- b) Appraisal and Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- c) Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- d) Grant Agreement (hereinafter referred to as “the G/A”)
 - Agreement concluded between JICA and a recipient country
- e) Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.

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- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve 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 of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

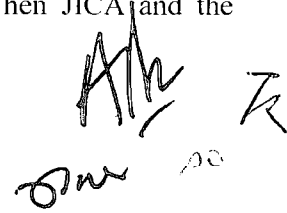
After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When JICA and the



Government of the recipient country or its designated authority 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, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

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

(5) Major undertakings to be taken by 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 Annex 6.

(6) "Proper Use"

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

(7) "Export and Re-export"

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

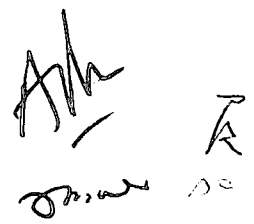
(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA 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 JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

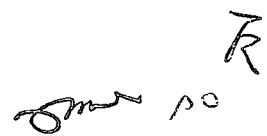
(9) Authorization to Pay (A/P)

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

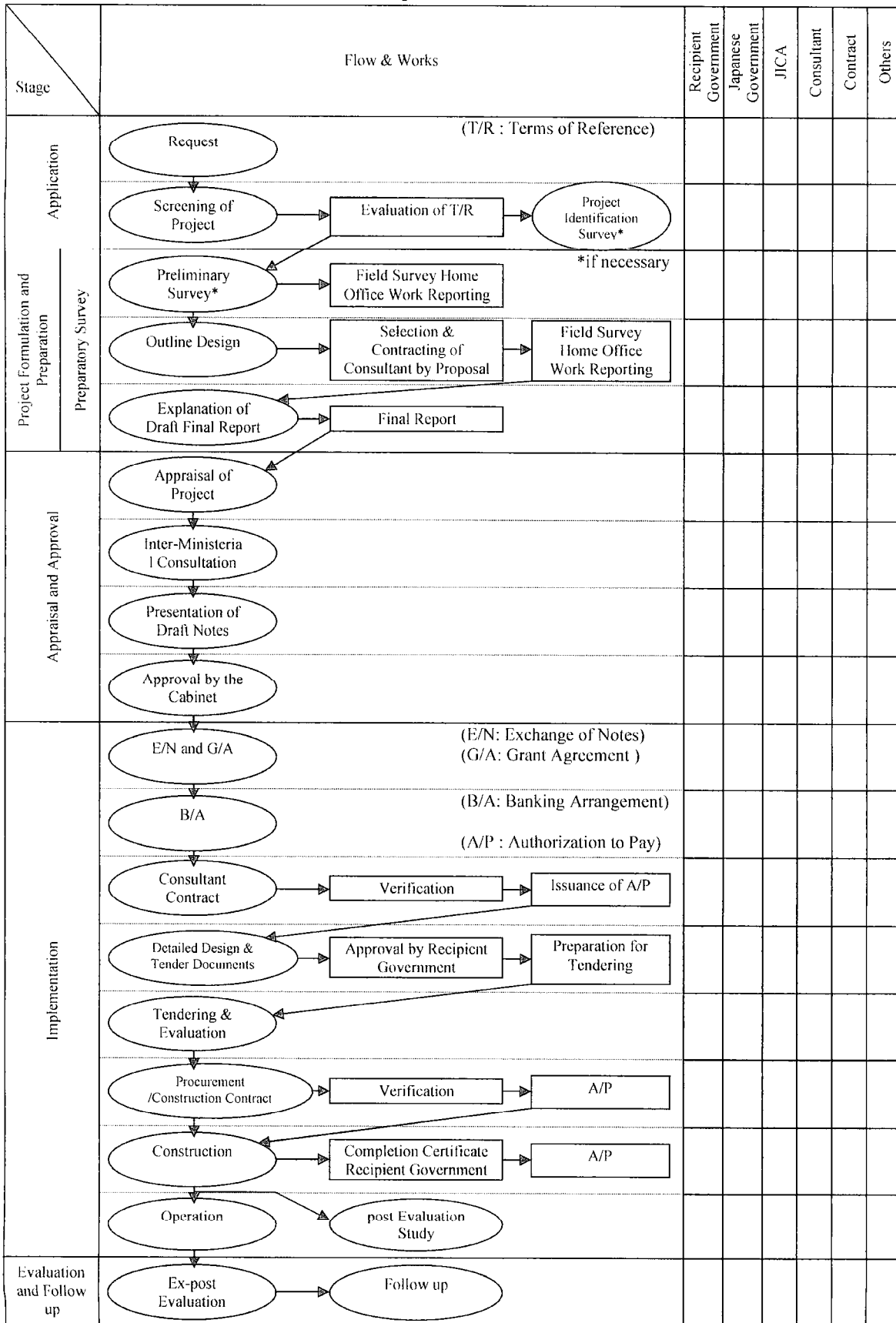
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(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.



Flow Chart of Japan's Grant Aid Procedures



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**Major Undertakings to be taken by Each Government
as a condition for the Japan Grant Aid to be implemented**

No.	Items	To be covered by		Remarks
		Grant Aid	Recipient Side	
1	To secure land registration and its property, and permission for the implementation of the Project and to clear the site		⊙	
2	To bear the following commissions paid to the Japanese bank for banking services based upon the Banking Arrangement (B/A)		⊙	
	1) Advising commission of Authorization to pay (A/P)		⊙	
	2) Payment commission		⊙	
3	To ensure prompt customs clearance of the products and to assist internal transportation of the products in the recipient country			
	1) Marine or Air transportation of the products from Japan and/or third countries to the recipient country	⊙		
	2) Tax exemption and customs clearance of the products in the recipient country		⊙	
	3) Internal transportation of the equipment and components from the port(s) of disembarkation to the project site in the recipient country	⊙		
4	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services be borne by the Authority without using the Grant		⊙	
5	To accord Japanese physical persons and / or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		⊙	
6	To maintain and use properly and effectively the facilities constructed and the equipment provided under the Grant Aid		⊙	
7	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		⊙	
8	To give due environmental and social consideration in the implementation of the Project		⊙	


⊙: denote the side responsible for the work

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**Major Undertakings to be taken by Each Government
after an approval of Project implementation**

No.	Items	To be covered by		Remarks
		Grant Aid	Recipient Side	
1	To secure lots of land necessary for the implementation of the Project and to clear the sites		⊙	
2	To secure sites for material storing yard, temporary construction yard and waste disposal		⊙	
3	To relocate existing utilities within the Project site to designated area or Project affected area		⊙	
4	To arrange issuance of license, permission and other necessary procedures for the Project		⊙	
5	To secure enough budget and personnel necessary for the operation and maintenance of the facilities implemented under the Grant Aid, including the periodical maintenance work after the completion of the Project		⊙	

⊙: denote the side responsible for the work



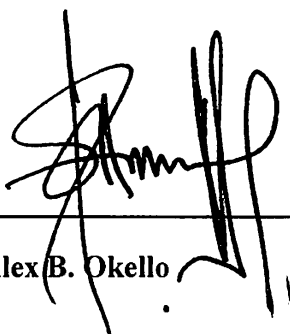
**TECHNICAL DISCUSSIONS
ON
THE PREPATORY SURVEY
ON
THE PROJECT FOR IMPROVEMENT OF GULU MUNICIPAL ROADS
IN REPUBLIC OF UGANDA**

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) decided to conduct a Preparatory Survey (hereinafter referred to as “the Survey”) on the Project for improvement of Gulu municipal roads in Republic of Uganda (hereinafter referred to as “the Project”) in consultation with the Government of Japan.

JICA sent to Uganda the Preparatory Survey Team (hereinafter referred to as “the Team”), headed by Mr. Tomoki KANENAWA from March 2nd to March 11th, 2015 and held discussion with officials concerned of the Government of Uganda, and confirmed the main items as described in the Minutes of Discussion signed in 10th March, 2015.

Continuously, JICA sent the Preparatory Survey Team consisted of experts of the Chief Consultant from March 30th to 12th May, 2015. The Team conducted further surveys in Kampala and Gulu, and in the study area, and held various discussions with officials concerned of Uganda. In the course of the discussion, both parties have confirmed the necessity of the items shown in the Attached Document. The Team shall convey these items to the Japanese side for the preparation of the Preparatory Survey Report.

Kampala, 8th May, 2015



Alex B. Okello


Permanent Secretary
Ministry of Works and Transport
Kampala, Uganda



Motoki OGAWA

Chief Consultant
Eight-Japan Engineering Consultant Inc.
Tokyo, Japan

(Witness)



08/05/2015

Terence ODONGA

Municipal Engineer
Gulu Municipal Council
Gulu, Uganda



Attachment

1. Hydrological Analysis

1.1. Rainfall Analysis

(1) Probable Rainfall

Probable rainfalls are estimated based on the daily rainfall data collected from Gulu Station (1991-2014). In this estimation, Gumbel's Distribution is applied. And results are, as follows:

Table-1.1 Return Period and Probable Rainfall

Return Period (year)	2	5	10	25	50
Probable Rainfall (mm/d)	70	85	95	110	120

(2) Rainfall Intensity

Rainfall intensities at Gulu are studied referring to the "Road Design Manual Volume 2, MoWT (The Manual)."

Results of this study are, as follows:

(i) For 2, 5 and 10 year return period

$$i = a/(0.33+td)^c: i \text{ (mm/h), } td \text{ (h)}$$

Table-1.2 Return Period and Parameters

Return Period (year)	2		5		10	
Parameters	a	c	a	c	a	c
Values	60.84	0.97	84.12	1.00	97.75	1.01

(ii) For 25 and 50 year return period

$$R^{25} = (T/24) \cdot (24.33/(0.33+T)^{1.01}) \cdot 110$$

$$R^{50} = (T/24) \cdot (24.33/(0.33+T)^{1.01}) \cdot 120$$

$$: R^{25}, R^{50} \text{ (mm/h), } T \text{ (h)}$$

1.2. Flow Capacity and Flood Damages

(1) Gulu Avenue

Flow capacity of the existing pipe culverts is almost zero, because they are almost full of sediments. Overflow depths on the road during floods have been 0.3-0.8m.

(2) Awere Road

Flow capacity of the existing pipe culverts is estimated to be 2.4 m³/s. Overflow depth on the road during floods was less than 0.8m.

1.3. Estimation of Design Flow

(1) General

- In-situ box-culverts are to be constructed at the crossings of PECE River and Gule Avenue and Awere Road.

- Considering the utilization of natural detention ponds and the discharge of sediment, river improvement of PECE River is not to be considered.
- Design flows for the box-culverts are to be 25 year as much as possible.

(2) Flood Hydrograph

Flood hydrograph is estimated based on “TRRL East African Flood Model” mentioned in the Manual. The salient features of the estimation under 25 year conditions are, as follows:

Table-1.3 Parameters to Calculate Water Discharged Volume

Items	Upper Gulu A. Basin	Basin between Gulu A. and Awere R.
Catchment Area (km ²)	0.89	0.27
Catchment Lag Time (h)	0.5	0.5
Base Time (h)	2.0	2.0
Peak Flow (m ³ /s)	13.4	4.8

(3) Design Flow

Reduction of peak flow is estimated based on the following storage equation:

$$I-O = \Delta S/\Delta t: I=\text{input}, O=\text{output}, \Delta S=\text{storage change}, \Delta t=\text{routing time interval}$$

The results of computation and the estimation of design flow are, as follows:

Table-1.4 Results of the Analysis

Items	Gulu A.	Awere R.
Input Peak (m ³ /s)	13.40	5.59
Output Peak = Design Flow (m ³ /s)	2.65	2.76
Peak Reduction (m ³ /s)	10.75	2.83
Maximum Depth of Detention Pond (m)	0.95	0.98

(4) Size of Box-culverts

Referring to the Manual, 25cm freeboard (Fb) is adopted in this design. And this Fb is applied to the maximum depth of the detention pond. This is because of considering the change of detention capacity in the future and the discharge of debris, etc during floods. As a result, sizes of the box-culverts are estimated, as follows:

- Gulu Avenue: W2000 x H1200 (mm)
- Awere Road: W2000 x H1230 (mm)

1.4 Conclusion

The Survey Team conducted hydrological analysis of PECE River using the actual rainfall data that was observed at Gulu Meteorological Station. The Survey Team explained the outline of the result as follows.

- According to the analysis, the existing 2 pipe culverts have a slightly less than enough capacity (diameter) to discharge water.
- However, due to inadequate maintenance, most of the area of the pipe is clogged by soil and this giving

significant damage to the capacity (especially, Gulu Avenue).

- Therefore, it would be recommended to place a Box Culvert instead of pipe culvert to support the municipal council to operate maintenance tasks.
- The size of the box culver is also recommended to be less than 2 m (max 2m) width since the return period would shift to 50 years from 25 years when exceeds 2m width according to the design standard. From economic reasons less than 2m shall be recommended.
- Under the interview, it was found the water level frequently would rise higher than the existing surface between 0.3m to 0.8m (Gulu Avenue) and less than 0.8m (Aware Road), and this approx. match with the calculation.
- It was observed that the upper of Gulu Avenue and the section between two roads of PECE River also have a function to reduce water velocity and pond water. It is recommended to keep the river as it is to limit the influence might occur by constructing new culverts.
- The size of the box culverts would be recommended W2000 x H1200 for Gulu Avenue and W2000 x H1230 for Awere Road.

2. Soil & Topo Investigation

The Survey Team conducted soil and topographic survey at location shown bellow. The result of the survey is under analysis and expected to be report by end of May, 2015.

Table-2.1 Area of the Topo-Graphic Survey

		Length	Width	Area
1	Kampala Road	240	30	7,200
2	Acholi Rd.	1,209	30	36,270
3	Lagara Rd.	220	20	4,400
4	Coronation Rd.	215	20	4,300
5	Andrea Olal Rd.	224	20	4,480
6	Nehru Rd.	219	20	4,380
7	Gulu Ave.	643	30	19,290
8	Awich Rd.	221	20	4,420
9	Queens Ave.	218	20	4,360
10	Keyo Rd.	214	20	4,280
11	Aliker Rd.	219	20	4,380
12	Labwor Rd.	217	20	4,340
13	Awere Rd.	518	30	15,540
14	Oliya Rd.	215	20	4,300
15	Labolo Rd.	0	20	0
16	Lumumba Ave.	211	20	4,220
17	Jomo Kenyatta Rd	1,209	20	24,180
18	Bank Lane	399	20	7,980

19	Market St.	163	20	3,260
20	Marley Rd.	100	20	2,000
21	Prince Rd.	160	20	3,200
22	Taxi Park			1,500
23	Dr. Mathew Lukwiya Road	265	20	5,300
24	Sir Samuel Road	1,300	30	39,000
	TOTAL	8,599		212,580

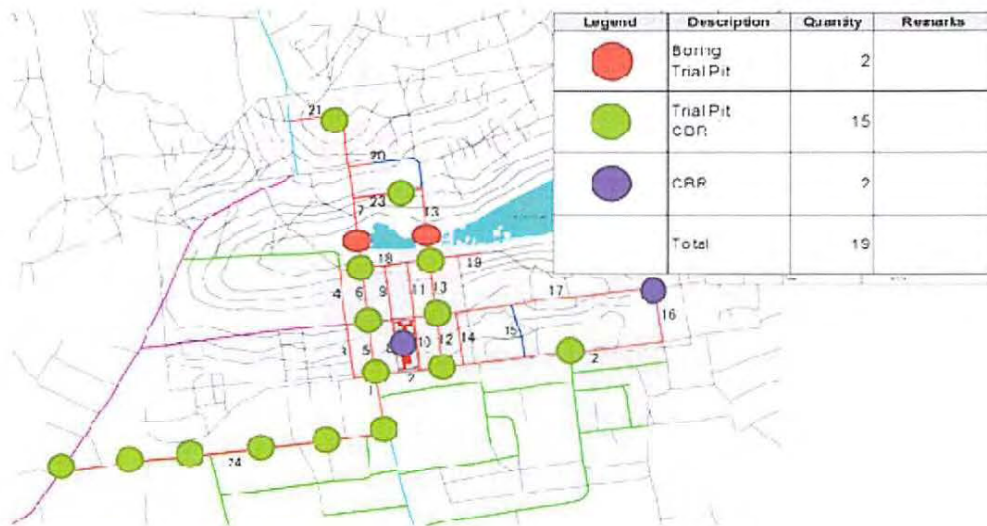


Fig-2.1 Location of the Soil Investigation

3. Road Design

3.1. Targeted Roads and its Priority

Both parties confirmed that there is no reduction on the targeted roads and its priority as indicated in Chapter 6-3 of the Minutes of Discussion signed on 10th March, 2015 between MOWT and JICA.

3.2. Design Standard

For design standards, the Road Design Manual series (Volumes 1-4, 2010) of MoWT (hereinafter, the Manual) shall be applied in principle. However, these manuals are not targeting the design for inter-urban roads, traffic characteristics and physical constraints, necessary adjustments will be done. Therefore, flexible application of the above-mentioned standards or application of alternative standards shall be considered as necessary. As alternative standards, AASHTO, DMRB (UK), Road Association (JRA) or any other appropriate standards shown in Table 3.1 shall be considered.

Table 3.1 List of Alternative Standards

No.	Category	Name of Standard
1	Geometry	Road Design Manual Volume I: Geometric Design, MoWT, 2010
2		A Policy on Geometric Design of Highways and Streets, AASHTO, 6th Edition, 2011
3		Geometric Design of Roundabouts: TD16/07

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4		Japan Road Structure Ordinance, JRA, 2004
5	Drainage	Road Design Manual Volume 2: Drainage Design, MoWT, 2010
6	Pavement	Road Design Manual Volume 3: Pavement Design, Part I: Flexible Pavements, MoWT, 2010
7		AASHTO Guide for Design of Pavement Structures 1993
8		Guideline for Design and Construction of Pavement, JRA, 2006

3.3. Design Classification

Since most of the design items such as road width or alignment rely on the design classification, determination of the design class is the most sufficient and essence on road design. Considering traffic movement after construction and the existing width of ROW, "II Paved" in the Manual as shown in table below shall be applied to the targeted roads.

Table 3.2 Road Design Classes in Road Design Manual

Design class	Right of Way width [m]	Road way width [m]	Carriage way			Shoulder width [m]	Median width [m]
			Width [m]	Lane width [m]	No. of lane		
Ia Paved	60	20.80-24.60	14.6	3.65	4	2 x 2.5	1.2 – 5.0
Ib Paved	60	11.0	7.0	3.5	2	2 x 2.0	-
II Paved	50	10.0	6.0	3.0	2	2 x 2.0	-
III Paved	50	8.6	5.6	2.8	2	2 x 1.5	-
A Gravel	40	10.0	6.0	3.0	2	2 x 2.0	-
B Gravel	30	8.6	5.6	2.8	2	2 x 1.5	-
C Gravel	30	6.4	4.0	4.0	1	2 x 1.2	-

Source: Road Design Manual Volume I: Geometric Design

3.4. Design Speed and Geometric Design Parameters

The design parameters for the design class "II Paved" are shown in the Table below. Since the target roads are categorized as "the Urban Road", 50km/h shall be applied as the design speed.

Table 3.3 Design Speed and Geometric Design Parameters for "II Paved"

Design Element	Unit	Flat	Rolling	Mountainous	Urban/Peri-Urban
Design Speed	km/h	90	70	60	50
Min. Stopping Sight Distance	m	135	95	75	58
Min. Passing Sight Distance	m	605	485	410	345
Min. Horizontal Curve Radius	m	320	185	130	100
Max. Gradient (desirable)	%	3.5	5.5	6	6
Max. Gradient (absolute)	%	5.5	7.5	8	8
Minimum Gradient in cut	%	0.5	0.5	0.5	0.5
Maximum Superelevation	%	7	7	7	4
Crest Vertical Curve stopping	K _{min}	43	22	14	9
Crest Vertical Curve passing	K _{min}	307	246	176	126
Sag Vertical Curve stopping	K _{min}	30	20	15	11
Normal Cross fall	%	2.5	2.5	2.5	2.5
Shoulder Cross fall	%	4	4	4	4
Right of Way	m	50	50	50	30

Source: Road Design Manual Volume I: Geometric Design

3.5. Design Vehicles

From observation of actual traffic movement and the existing ROW, "Single unit bus (DV-3)" shall be adopted as the Design Vehicle defined in the Manuals as shown in the following table.

Table 3.4 Dimensions of Design Vehicle

Design Vehicle type	Symbol	Overall (m)			Overhang (m)		Wheel base (m)	Minimum design turning radius (m)	Minimum inside radius (m)
		Height	width	Length	Front	Rear			
4 x 4 passenger car	DV-1	1.3	2.1	5.8	0.9	1.5	3.4	7.3	4.2
Single unit truck	DV-2	4.1	2.6	9.1	1.2	1.8	6.1	12.8	8.5
Single unit bus	DV-3	4.1	2.6	12.1	2.1	2.4	7.6	12.8	7.4
Semitrailer combination large	DV-4	4.1	2.6	16.7	0.9	0.6	6.1 & 9.1	13.7	5.8
Interstate Semitrailer	DV-5	4.1	2.6	21.0	1.2	0.9	6.1 & 12.8	13.7	2.9

Source: Road Design Manual Volume 1: Geometric Design

3.6. Typical Cross Section

The elements of the Cross Section shall be determined by considering the function of the road as well as the required design standard. Existing site condition shall be included in the consideration also. Examined cross section elements of the targeted roads are summarized in Table 3.5.

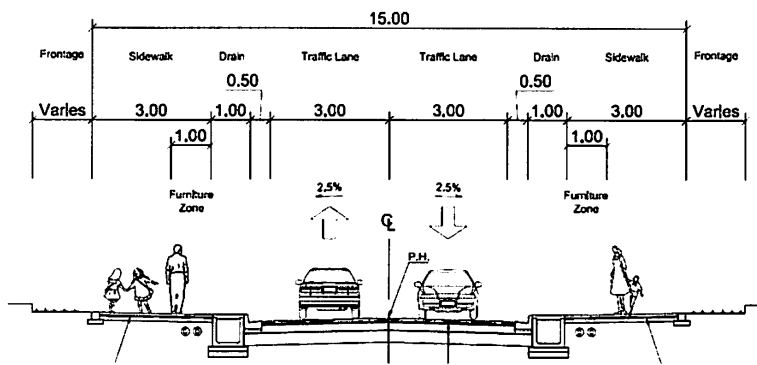
Typical cross sections of the targeted roads are classified into four (4) types as shown in Figure 3.1. Each type is further categorized based on the pavement type and the side of parking lane (L/R). Typical cross sections are tentatively allocated to each route as shown in Figure 3.2 depending on the standard roadway width. The allocation plan shall be reviewed after obtaining topographic survey results.

Table 3.5 Cross Section Elements of the Targeted Roads

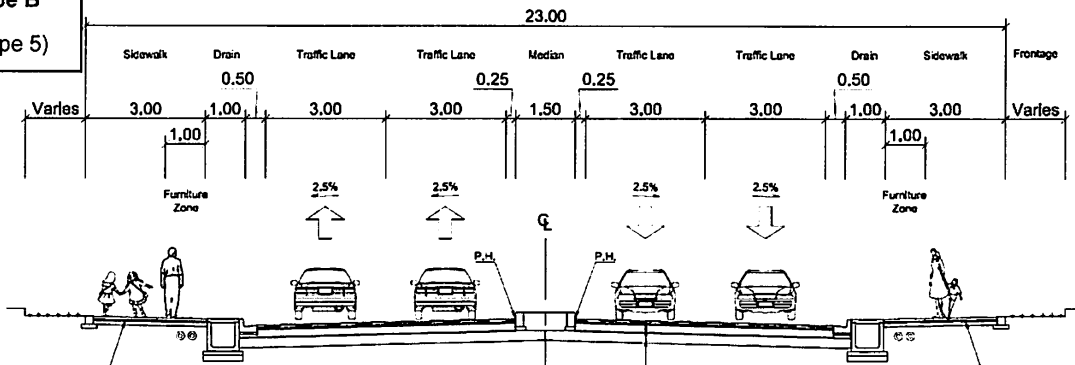
Sr.No.	Road Name	Length (m)	Existing ROW Width (m)		Remarks	Cross Section Plan					
			General	Narrowest		Roadway Width (m)	Traffic Lane Width (m) & No.	Parking Lane (m)	Shoulder/Road Side Drain	Walkway*	Remarks
			a	b							
1	Kampala Rd.	240	19.5	19.5	(National Road)	18.0	3.0 x 2	2.0 x 2	1.0 x 2	3.0 x 2	
2	Achohi Rd.	1,209	17.0-21.0 21.5-24.0 19.0	17.0 21.5 19.0	Awach Rd Andrea Olal Rd to Achohi Lane Along Cemetery (L=55m) Achohi Lane to Lumumba Ave.	15.0 23.0 15.0	3.0 x 2 3.0 x 4 3.0 x 2	- - -	1.5 x 2 1.5 x 2 1.5 x 2	3.0 x 2 3.0 x 2 3.0 x 2	Median 2.0m
3	Lagara Rd.	220	18.0	15.5	At Uganda Breweries Depot	15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
4	Coronation Rd.	215	15.5-17.0	15.5		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
5	Andrea Olal Rd.	224	14.5-15.0	14.5		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
6	Nehru Rd.	219	14.5-18.5	14.5		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
7	Gulu Ave.	643	20.0	20.0		16.5	3.0 x 2	2.0 x 1 (L)	1.0 x 1 (L) 1.5 x 1 (R)	3.0 x 2	
8	Awich Rd.	221	17.5-19.0	17.5	Along Taxi Park	16.5	3.0 x 2	2.0 x 1 (R)	1.0 x 1 (R) 1.5 x 1 (L)	3.0 x 2	
9	Queens Ave.	218	14.5-15.0	14.5		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
10	Keyo Rd.	214	17.0	17.0	Along Taxi Park	16.5	3.0 x 2	2.0 x 1 (L)	1.0 x 1 (L) 1.5 x 1 (R)	3.0 x 2	
11	Aliker Rd.	219	16.5-17.5	16.5		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
12	Labwor Rd.	217	16.0-18.5	16.0		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
13	Awere Rd.	518	15.5-21.0	15.5	Along New Market	15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
14	Oliya Rd.	215	15.0	15.0		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
15	Cancelled	-									
16	Lumumba Ave.	211	16.0	16.0		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
17	Jomo Kenyatta Rd.	1,209	18.5 14.0-15.5	18.5 14.0	Atwal Rd. New Town Center	15.0 15.0	3.0 x 2 3.0 x 2	- -	1.5 x 2 1.5 x 2	3.0 x 2 3.0 x 2	
18	Bank Lane	399	24.0 18.5-23	24.0 18.5	Near Gulu Ave.	16.5	3.0 x 2	2.0 x 1 (R)	1.0 x 1 (R) 1.5 x 1 (L)	3.0 x 2	
19	Market St.	163	23.0	23.0		18.0	3.0 x 2	2.0 x 2	1.0 x 2	3.0 x 2	
20	Marley Rd.	100	18.0	18.0	(Hospital Access)	15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
21	Prince Rd.	160	21.0-22.0	21.0	Municipal Council Access	Overlay					
22	Taxi Park	-									
23	Dr. Mathew L. Rd.	265	17.5	17.5		15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
24	Sir Samyuel Rd.	1,280	17.5-21.0	17.5 13.5	Near A-105 at Rice Mill	15.0	3.0 x 2	-	1.5 x 2	3.0 x 2	
Total		8,579									

Note *: Including furniture zone with width of 1.0m

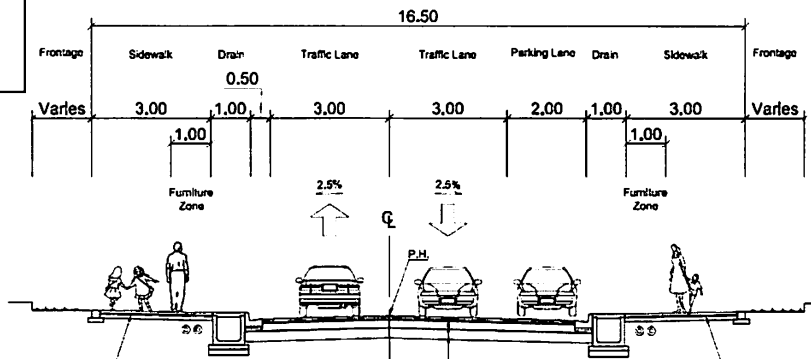
Type A
(Type 1-Type4)



Type B
(Type 5)



Type C
(Type 6-Type7)



Type D
(Type 8)

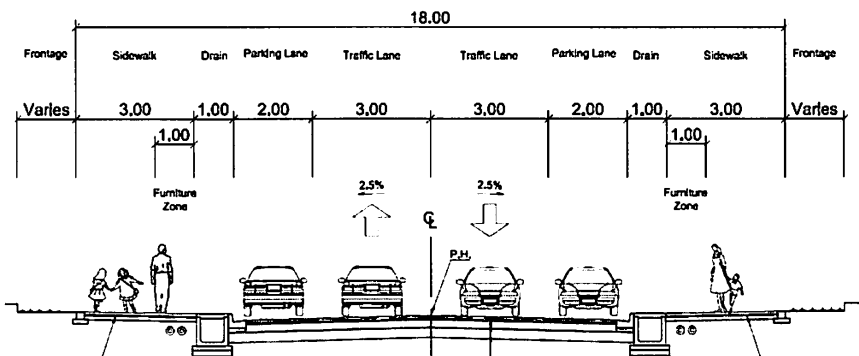


Fig-3.1 Proposed Typical Cross Section

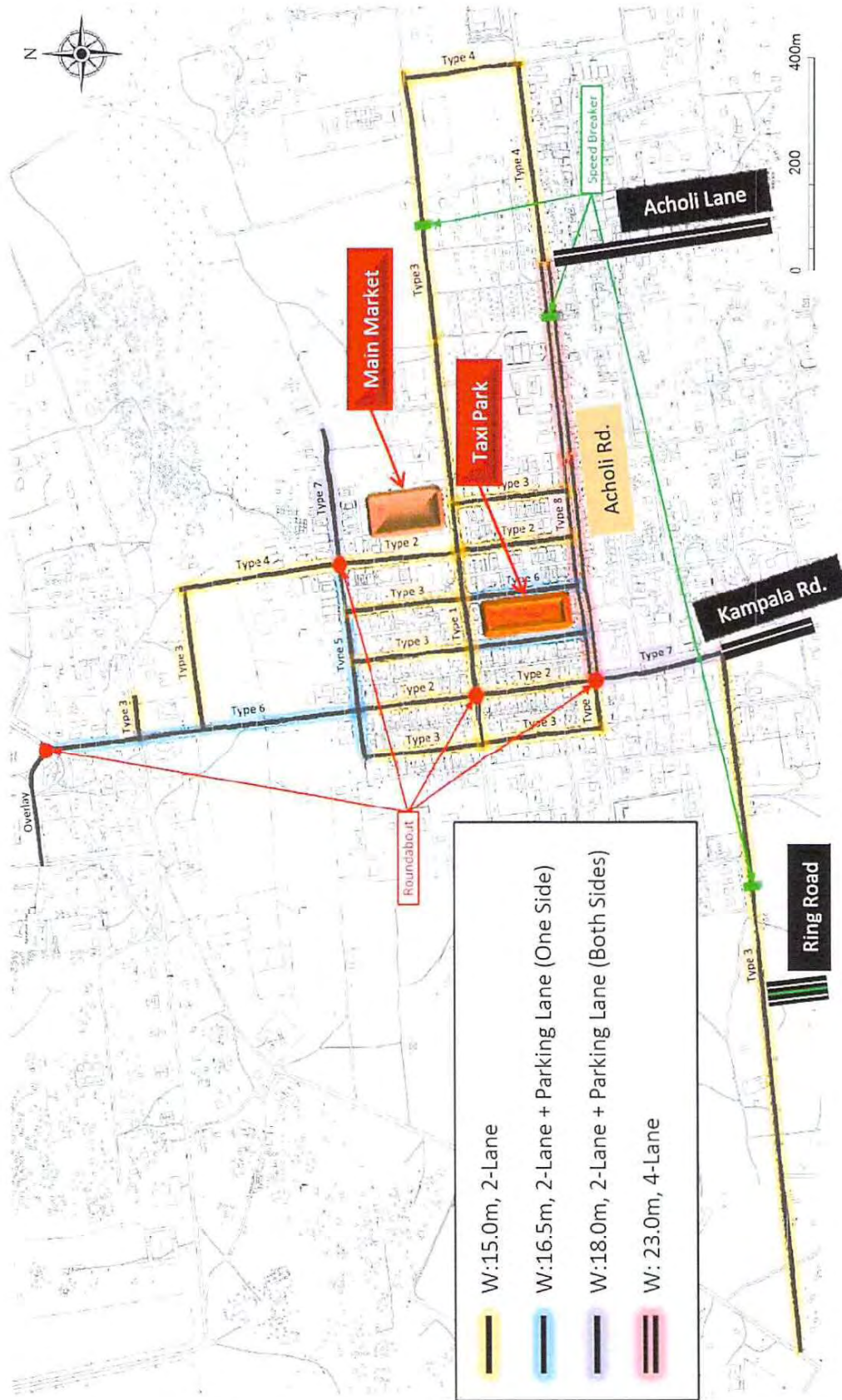


Figure 3.2 Typical Sections of Target Roads

Both parties agreed on the typical cross section which the Survey Team has proposed as shown in the figures above under discussion made as follows.

- The existing veranda along the road shall remain as it is and would not be demolished for the Project due to long connivance from before independence. Hence, front veranda's location and height shall be the control point of the road design.
- Drainage shall be placed at both sides, on the side walk of the road.
- Parking lane shall be provided only at the sections where can secure roadway width of 16.5m and 18.0m. In particular, near the New Market and the Taxi Park has high demand to provide parking lane.
- It was discussed that sections where width to place parking lane are not enough, the proposed cross section shall be adopted to the design. According to the law, parking for the shops along the road shall be established in their land by the owner's expense in principal. Since costumer who comes with their vehicles for shopping at these shops is expected very few, it is considered that the Municipal Council could enforce the parking restriction along the road.
- Both parties agreed not introducing bus parking lane since it requires 3 meter width and it would make the sidewalk only 1m remain.
- The Study Team confirmed that the Municipal Council would manage and enforce the Bodaboda running over and parking on sidewalk after opening to the traffic.

3.7. Road design

(1) Alignment

Both parties agreed to follow the existing alignments basically on both horizontal and vertical. In particular, the control point of the vertical alignment shall be the height of existing veranda.

(2) Pavement

Pavement structures shall be determined based on the cumulative traffic volume (Equivalent Standard Axle Load, ESAL) and stiffness of subgrade (California Bearing Ratio, CBR). Although pavement structures are to be examined after obtaining geotechnical investigation results, the following three (3) types shown in the following Figure shall be expected as standard.

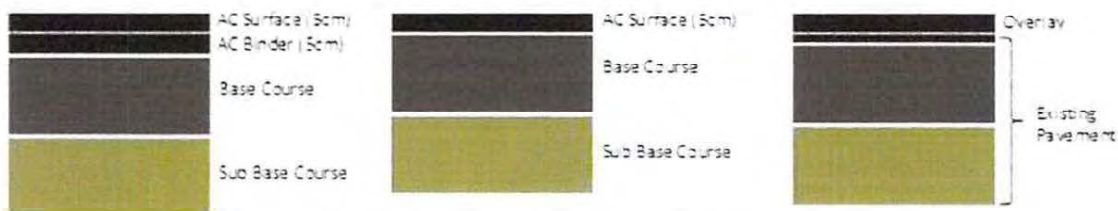


Figure 3.3 Standard Types of Pavement Structures (Tentative)

Both parties agreed to apply the MOWT standard for the pavement design, with confirmation by both USA and Japanese Standards. The pavement for the carriageway shall be hot mixed asphalt concrete. Interlocking pavement for the pedestrian walkway shall be adopted for easy maintenance of underground cables. Sections where heavy

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load vehicles are expected, reinforced pavement such as Polymer Modified Asphalt (PMA) or Concrete Pavement shall be considered to prevent from the early deterioration. Type of layers and thickness depends on the traffic volume forecast and existing subgrade CBR.

(3) Taxi Park

The Municipal Council committed to demolish the northern part of the taxi park to open a new exit. Details are noted in the Social Environment Consideration of this Technical Note. The Survey Team held a discussion with the Municipal Council of Traffic Management of the Taxi Park and both parties agreed as shown in the Figure below.

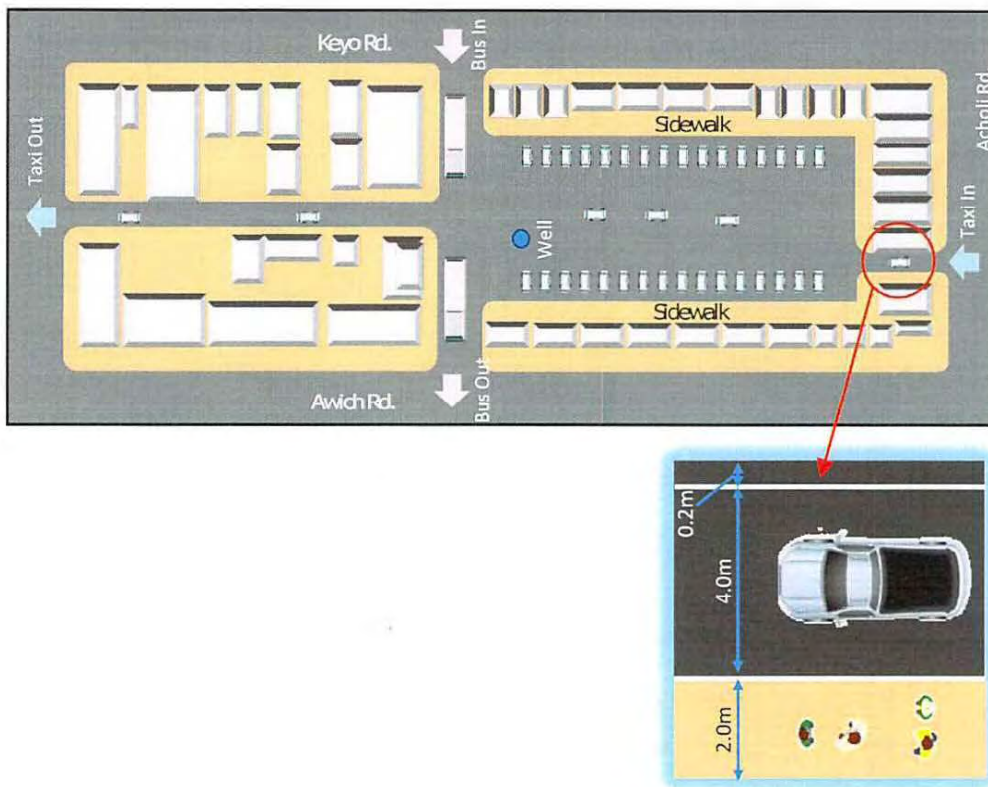


Figure 3.4 Proposed Traffic Management of the Taxi Park

(4) Utility Duct

Both parties agreed to place PVC Pipe (D300) under the road crossing section of the utility to prevent re-excavation after the construction. Ducts by PVC pipe and handholds along the sidewalks shall also be considered subject to budget within the ceiling price.

3.8. Roundabout and Intersections

Both parties agreed to introduce roundabout at intersections indicated below.

- a. Kampala Rd. – Acholi Rd. Junction (New Construction)

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- b. Andrea Olal Rd. – Jomo Kenyatta Rd. Junction (Partial Reconstruction)
- c. Bank Lane – Awere Rd. Junction (Full Reconstruction)
- d. Gulu Avenue (Overlay)

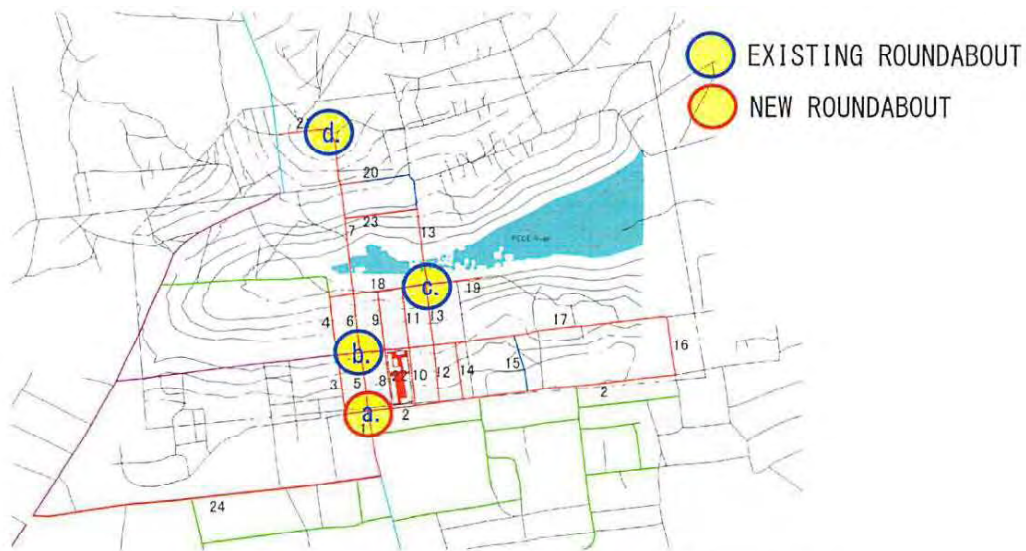


Figure-3.5 Intersections where to Introduce Roundabout

Both parties also confirmed as follows.

- The Study Team proposed to acquire land part of Stanbic Bank at intersection of Kampala Road and Acholi Road to establish roundabout. However, since the Municipal Council found the difficulty to acquire the land, both parties agreed to design roundabout within the existing road reserve.
- The Study Team proposed to make the traffic management at Acholi Road on both traffic management and safety aspects as shown in the next Figure and MOWT agreed.

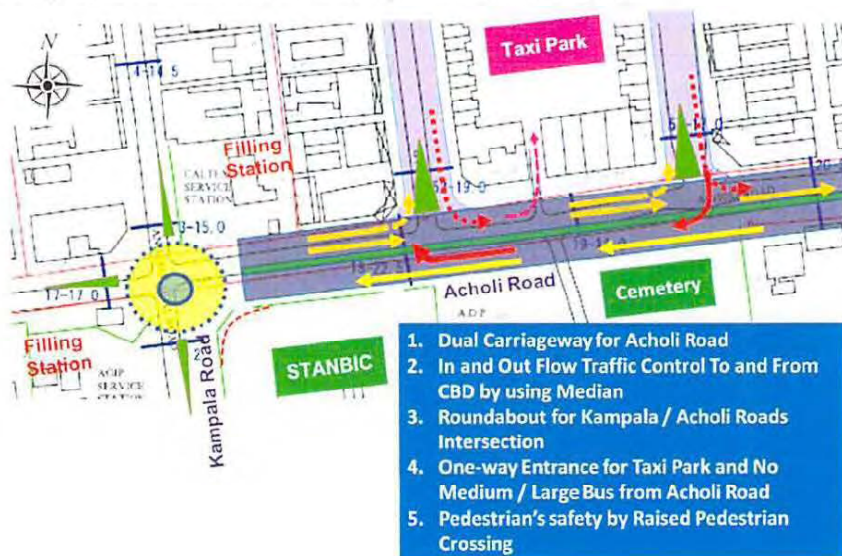


Figure-3.6 Proposed Traffic Management at Acholi Road

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3.9. Drainage

Overall drainage system for the project area including neighboring USMID project is proposed as shown in the next page. There are six (6) drainage outlets and these locations shall be confirmed and reviewed as necessary in August 2015 when the highest precipitation is expected. MOWT basically agreed of the location of the end of flow as shown in the Figure next page.

Both parties agreed to place U-shape drainage with cover on both sides of the road to secure width where pedestrians could walk over. The U-shape drainage shall be made by concrete and have enough width to do maintenance works such as de-silting.

3.10. Structures

Both parties agreed to place box culvert where crosses the PECE River. The road shall be considered to raise the vertical alignment maximum 0.8 meter from the existing surface in accordance with the interview of the overflow. The design of the box culvert shall be considered, to avoid affecting the downstream land use, not to change the existing condition of the water flow. The MOWT standard shall be applied as the design standard.

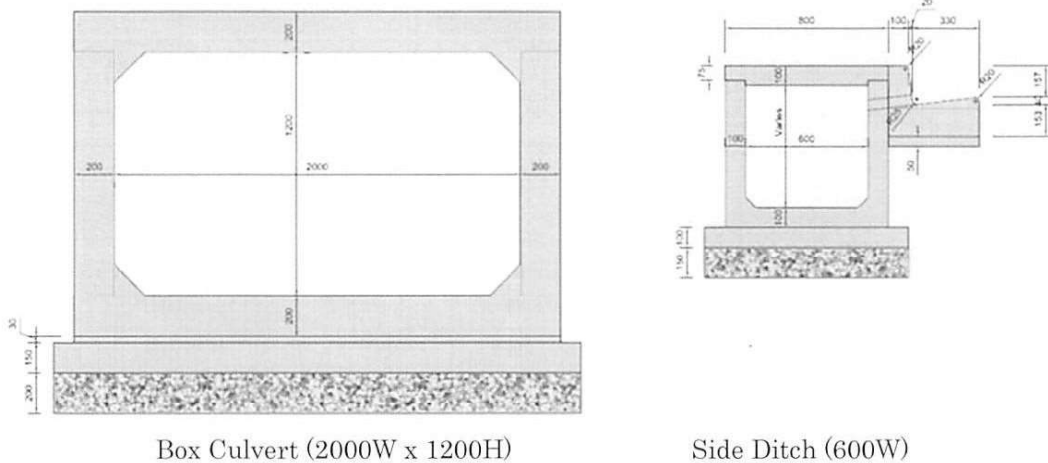


Figure 3.8 Proposed Figures of the Structures

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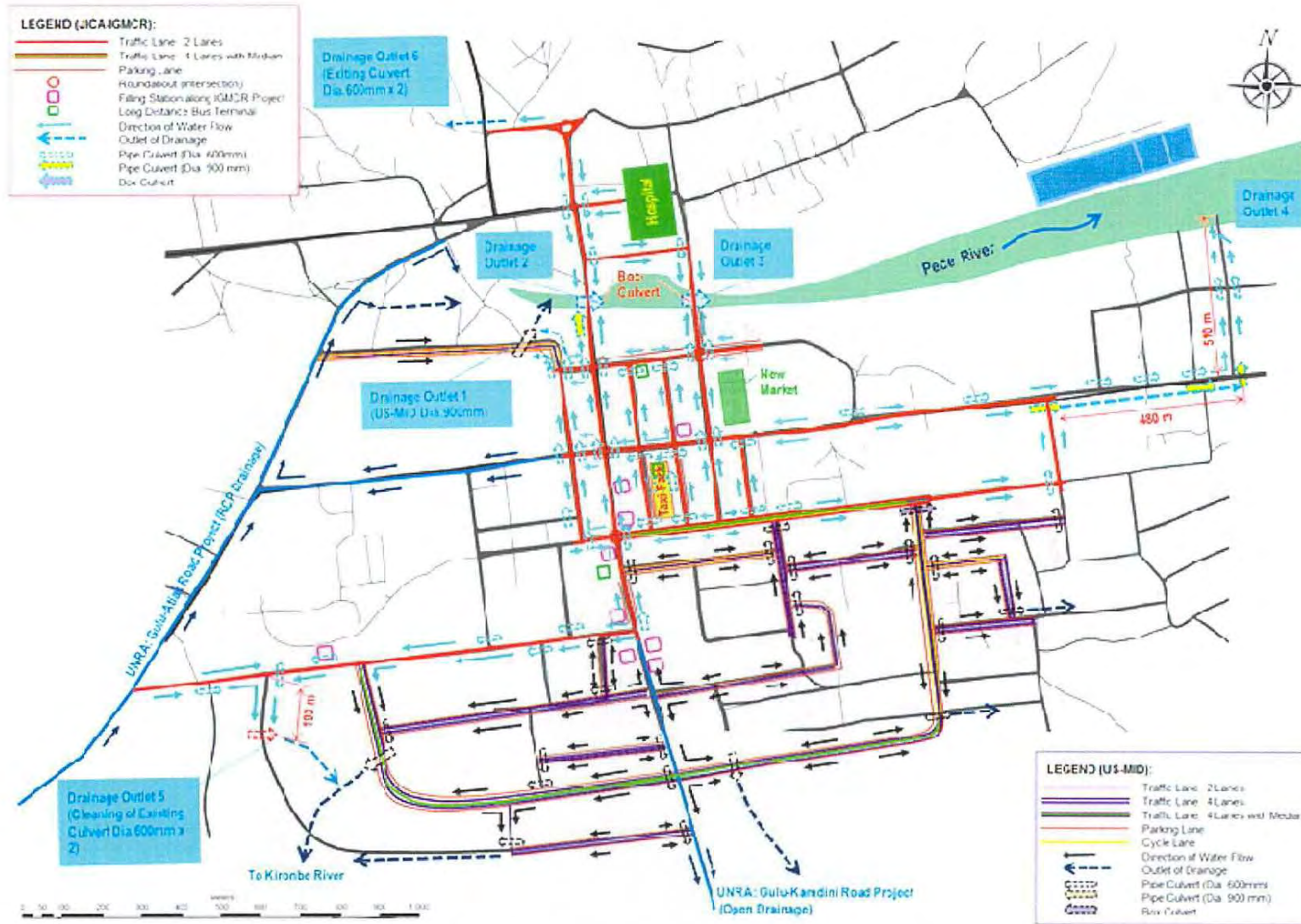


Figure-3.8 Water Discharge Channel and Location of the End of Flow

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3.11. Miscellaneous

(1) Traffic Safety

Both parties agreed to place traffic safety facilities as shown in the figure below. "Raised Crosswalk" shown in the figure shall be placed at where pedestrians cross the road such as roundabout. Photo is given as a sample how this facility shall be provided. "Hump and Rumble Strips" is also a facility to reduce speed. The detail of the location where to provide this facility is shown in Figure 3.2 of this Note.

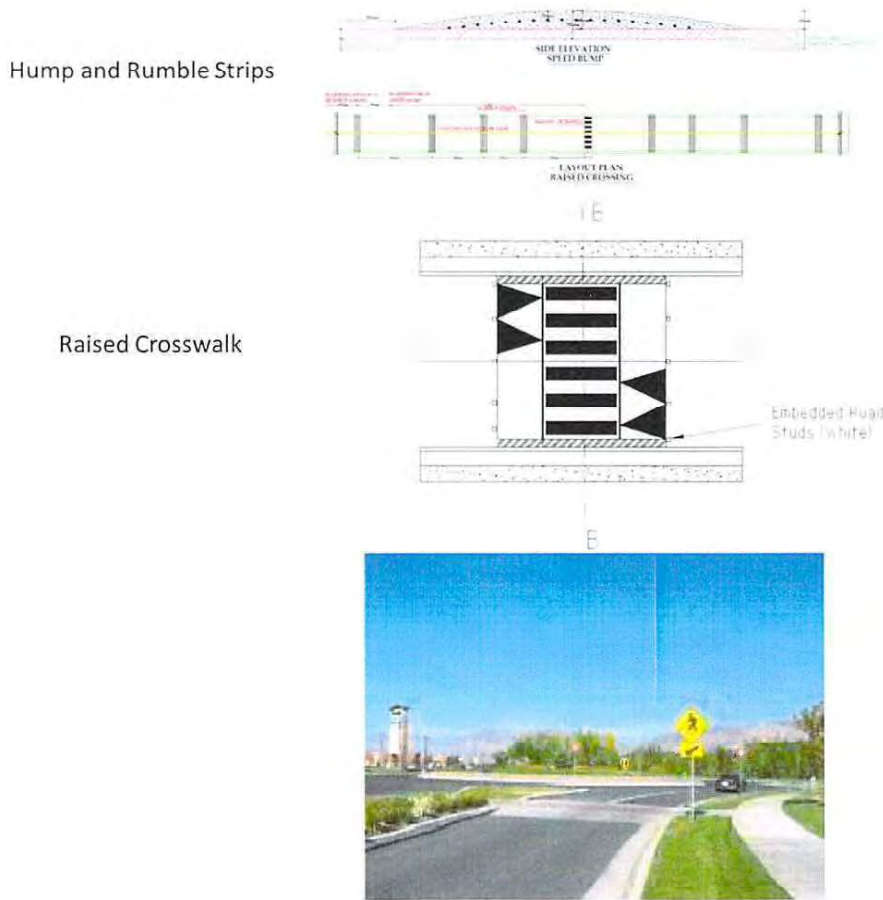


Figure-3.9 Proposed Type of Traffic Safety Facilities.

4. Construction Plan /Procurement

(1) Construction Yard

The Gulu Municipality proposed the following location as the construction camp yard for buildings, stock yard and asphalt plant. The survey team agreed to apply the land subject to all existing vender shifts to the New Market constructed by the ADB finance. The facilities should be demolished before commencement of the construction as

well as structures.



Figure-4.1 Location of Construction Yard

(2) Construction Materials

Both parties agreed to apply following materials in the construction. Necessary public consultation shall be made by MOWT and Gulu Municipal Council according to NEMA's regulation.

- Borrow Pit: Laroo (Approx. 5 km from city center)
- Aggregate: Kidere (Approx. 10 km from city center)
- Sand: Pogo (Approx. 74km from city center)

Also, both parties agreed to use Pabwo Disposal Site.

- Disposal Site Pabwo (Approx. 11km from city center)

(3) Tax Exemption Procedure

The MOWT explained that all taxes arising from the Project shall be met by the Government of Uganda.

5. Soft Components

The Study Team proposed the contents of the Soft Component as follows and MOWT agreed.

- Stage-1 : Develop road inventory map by using VIMS
- Stage-2 : Implement lecture of basic of asphalt pavement
- Stage-3 : Site Visit (Asphalt Plant and pavement construction)
- Stage-4 : Implement lecture of deterioration/evaluation of asphalt pavement and counter measures
- Stage-5 : Development of Municipality Maintenance Guideline

6. Social Environment Consideration

6.1 Stakeholder meeting

Series of meetings with Gulu Municipal Council and stakeholders were carried out on April 29, and 30, 2015 respectively at Town Clerk's office in Gulu Municipal Council. The summary of the meetings is shown in the following table.

Table-6.1 Summary of Stakeholder Meetings

Implementation Organization	MOWT Gulu Municipal Council	
Objectives	By involving local stakeholders from early stage of the Project, the Project proponent can receive their inputs and plan appropriate measures to address their concerns, avoid conflicts, and achieve higher results with their support.	
Venue	Town Clerk's Office, Gulu Municipal Council	
Date and Time	April 29, 2015 09:00AM to 10:20AM	April 30, 2015 09:00 to 11:00AM
Major Participants	JICA Gulu Field Office, MOWT, Gulu Municipal Council, and the Study Team (15 persons)	Uganda National Water and Sewerage Corporation (NWSC), UMEME, MTN, JICA Gulu Field Office, MOWT, Gulu Municipal Council, and the Study Team (18 persons)
Agenda	<ol style="list-style-type: none"> 1) Design policy 2) Water discharge system 3) Typical cross section 4) Roundabout/intersections 5) Traffic safety facilities 6) Construction materials 7) Topographic/soil investigation 8) Environmental and social considerations 9) Discussions 	<ol style="list-style-type: none"> 1) Project overview (target road, drainage system, typical cross section) 2) Major adverse impacts by the project expected includes obstructions 3) Mitigations proposed 4) Environmental monitoring plan proposed 5) Discussions

The meeting was led Town clerk of GMC as a chair person delegated by MOWT, and 15 and 18 persons attend each meeting. The attendants understood the importance of the Project and agreed to implement. Following table shows summary of discussion in the stakeholder meeting.

Table-6.2 Summary of Discussion in Pre-Stakeholder Meeting on April 29, 2015

Category	Comments/Questions from Participants	Comments/Reply from JST	Remarks
Project in General	Question: Is IGMCRC going to cover unpaved 70m roads? (GMC) Answer: UNRA is most likely to take up that section of the road and work on it. (GMC)		
Road	Comment: Due to limitation of spaces, car and motorcycle parking shall be restricted to only specific points of the roads. (GMC and Town clerk) Comment: Gulu is soon becoming a city, roadside parking should be limited in abid to decongest the city. (MOWT)		
	Answer: No, it will be difficult. Small roundabout be maintained. (GMC)	Question: Is land acquisition from Stanbic Bank to accommodate bigger roundabout feasible? (JST)	
Drainage	Comment: Jomo Keyatta road is very long and needs to be drained to Pece River. (GMC)	Comment: The urban road project is strictly for roads and shall not comprehensively cover	(After the open discussion,

		drainage issues. It shall mainly cover drainage at road crossings and simply opening and straightening drainage lines. Drainage problem needs to be fixed by a big drainage project of its own. (JST)	participants visited two candidate sites for drainage outlet, and confirmed that one proposed by JST doesn't require demolition and resettlement of dwellers, while the other proposed by Eng. Terrence requires.)
Hydrology	Question: What kind of structural design for the Pece River is planned? (GMC)	Answer: The project shall only handle the culverts at road river crossing. I.e. widening of the river is not necessary (JST)	
Environmental and Social Considerations	Comment: Compensation payment to Muslim community for the demolition of cemetery needs to be done sooner. (GMC) Answer: Will engage the Ministry about the issue in about two weeks. (Town Clerk) Answer: Pe Yero Rice millers situation on Sir Samuel Baker Rd will also be handled soon. Structure which is blocking drainage in the Taxi Park is illegal and shall be removed without financial compensations. For the toilets and restaurant, they belongs to the Municipal Council and therefore GMC can handle. (GMC)	Question: How are you going to handle the obstructions for road development? (JST)	
	Answer: No problem with cutting the trees on roadside as they shall easily be replanted. (GMC)	Question: Isn't cutting trees on the roadsides problem?	

Table-6.3 Summary of Discussion in Stakeholder Meeting on April 30, 2015

Category	Comments/Questions from Participants	Comments/Reply from MOWT/GMC/JST	Remarks
Project in General	Question: When the construction starts? (Town Clerk)	Answer: Around Sep., 2016 (JST)	
Relocation of utilities	Question: Who meets relocation cost?	Answer: Government of Uganda (MOWT)	
	Question: How deep the road excavations for the project shall be? (MTN)	Answer: Generally about 1.2 meters in which case utility facilities may not be affected, but some may be deeper than that. (JST)	
	Question: Will the utility relocation take place before or after the contractor signed? Because, ample time is necessary for relocation. (MTN)	Answer: Final technical design is still being made. But utility relocation situation should be completed before the contractor comes on the ground. (JST)	
	Question: When project design be complete and to be given a copy? (MTN)	Answer: Technical design to be completed by end of this year and shall provide it to all stakeholders. However it is depend on the approval from the Government of Japan. Also, the tentative technical designs will be provided to stakeholders (JST)	
Environmental and Social Considerations	Comment: For the traffic safety, all drivers will have to be given safety instructions by traffic police before dismissed. (Traffic police)		
	Request: Engineer of GMC should find a solution for harmonization of stone crushing machine and local economy which is indispensable component for this project (Town Clerk)	Answer: The best way to handle this is through the office of the Local Council 5 (LC5) chairman by mobilizations, advocacy, and sensitization. (GMC)	
		Request: JICA to also observe the interface between the contractor and the local workers because some contractors tend to cheats and violates the rights of the local workers and community there by tarnishing the entire image of the project. (GMC)	
Others	Comment: Maximum support and cooperation for the implementation of this opportune project is required so that it becomes a role model project locally and regionally. (JICA Gulu office)		



Photo-1 Stakeholder Meeting

6.2 Implementation Framework of the Environmental Activities

(1) Project Brief

The first step to acquire an environmental certificate for project implementation is to submit a Project Brief to Uganda National Environmental Management Authority (NEMA) from Developer (MOWT). Project Brief (Draft) was prepared by the Study Team and both soft and hard copy of the brief were shared with MOWT on April 30, 2015. MOWT will revise the document in order to fulfill qualification of related guidelines with supports of GMC. Finally, both MOWT and the Study Team certainly agreed that MOWT submit the Project Brief to NEMA by end of the May 2015, and share result of screening with the Study Team as soon as MOWT receive the information from NEMA. It is also agreed by both parties that MOWT will surely secure the necessary budget for implementation of EI Study/EI Review and abbreviated RAP if those are requested by either NEMA or JICA.

(2) Successive Meetings with Local Community

MOWT and GMC will carry out following activities and share the result and progress with the Study Team on time.

- ✓ Kidere Quarry: Meeting with local community and local government about harmonization of stone crushing machine with their local economy.
- ✓ Drainage Outlet: Meeting with residents about resettlement of hats (1: using, 1: not using), and agree with way of compensation.
- ✓ Taxi Park: Meeting with owner of restaurant illegally extends her verandah on the corridor.
- ✓ Rice Mill: Meeting with owner of Rice Mill Company illegally extends her storage from the wall.
- ✓ Muslim Cemetery: Compensation payment to the community.

(3) Time Schedule

Following figure gives the time schedule and demarcation of works to obtain the environment license until bid tendering. MOWT certainly understood that the project will not be started on time without securing necessary budget for implementation of EIA if the project is categorized as Category III or IV. The Study Team shall assist MOWT in various stages mentioned in the figure.



7. Other Issues

(1) Relocation of Utilities

The MOWT explained the Ministry of Finance has secured 1 Billion UGX for relocation of Utilities in FY2015/2016. Continuously, MOWT would request the utility companies to prepare for tendering (BQ, TOR and others), and if it was found the budget prepared was not enough, MOWT would take necessary measures

(2) Further Schedule

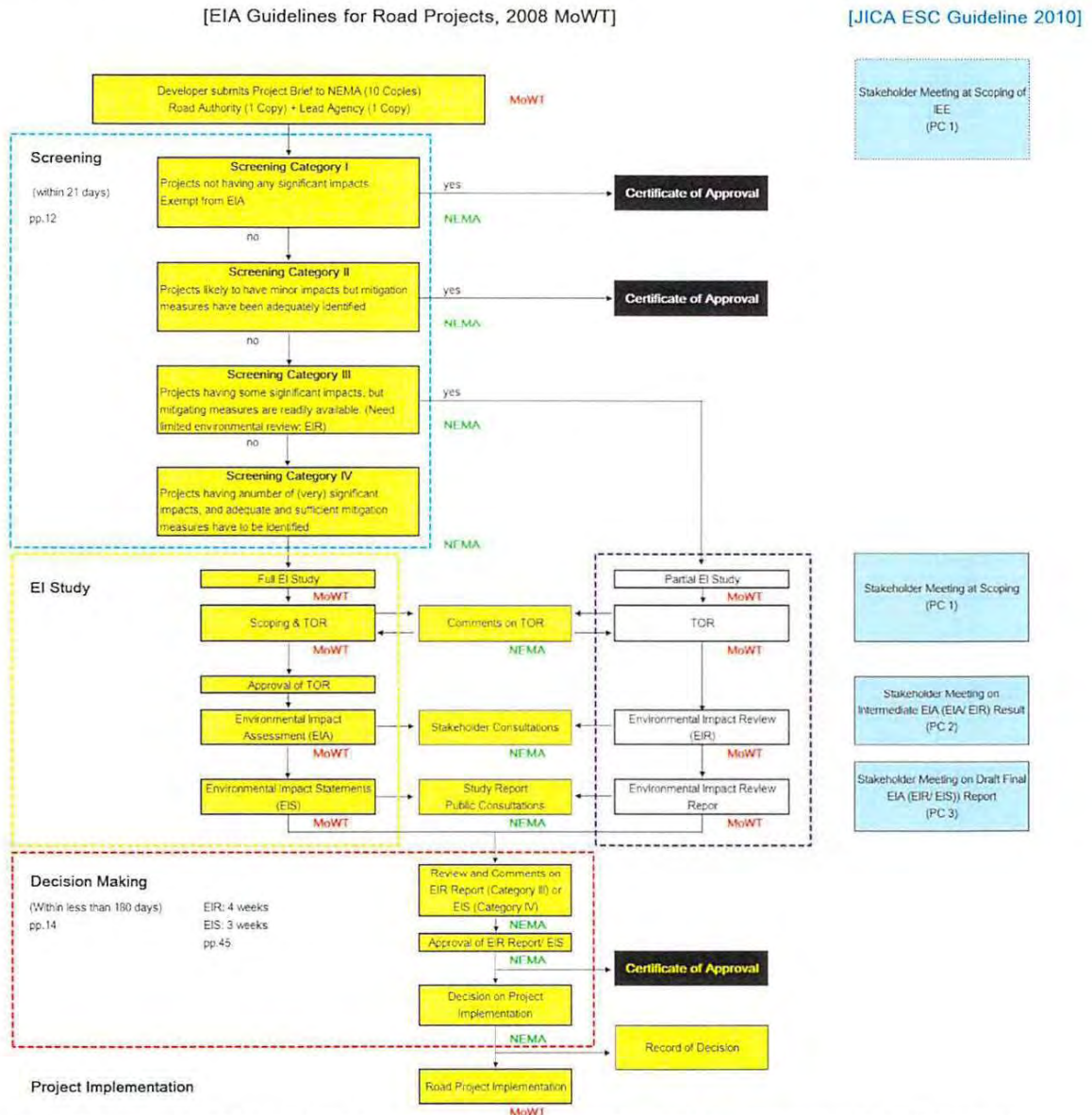
The Study Team, just for confirmation, re-explained the policy, objective and procedure of the Japanese Grant Aid as it was discussed in the first dispatch assignment on March, 2015. Also, the Study Team explained the general schedule of the Project as follows.

Early August/2015	: The third assignment to confirm the situation and condition during the heaviest raining season.
Med September/2015	: Explanation and discussion of the Draft Final Report
November/2015	: Approval of disbursement by the Cabinet of Japanese Government
January/2016	: Agreement with the Japanese Consultant, and Development of Detail Design and Tendering Documents
May/2016	: Approval of the Detail Design and Tendering Documents.
September/2016	: Tendering and Contract with the Japanese Contractor
September/2016	: Commencement of the Construction



Appendix -A EIA process (Category IV Project)

The category shall officially be informed to MOWT from NEMA after submission of the project brief. The JICA Study Team interviewed MOWT environment specialist and confirmed that the project is likely categorized as “3. Transportation including (a) all major roads” in the National Environment Statute, 1995, Schedule 3 which an EIA (full scaled EIA) shall be considered.



Note: The National Environment Act has three levels of EIA, namely a) Environmental Impact Review, b) Environmental Impact Evaluation, and c) Environmental Impact Study. These Guidelines for Road Projects have two levels only, namely i) Environmental Impact Review (EIR) and Environmental Impact Assessment (EIA), where the latter has the meaning of full detailed EI Study. (pp.27)

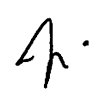
- Flows and activities this project supposed to be required, based on the discussion with MOWT on May, 2015
- Though SHM is not mandatorily required on the project categorized as B by JICA ESC Guidelines, 1st SHM was held on IEE leveled scoping, on April, 2015

Source: JICA Study Team, based on the EIA Guidelines for Road Projects, MoWT, 2008, and JICA Guidelines for Environmental and Social Considerations, JICA, 2010

Figure-1 EIA process for Category IV Project

Appendix-B Minutes of Stakeholder Consultation

See next pages.



Minutes of Meeting

1. **Meeting Title:** Pre- Stakeholder Meeting for the IGMCR project
2. **Date:** Apr. 29, 2015 (Wed)
3. **Time:** 9:00-11:00AM
4. **Venue:** Town Clerk's Office in GMC
5. **Attendance:** Ministry of Works and Transport (MOWT), Gulu Municipal Council (GMC),
JICA Study Team (JST), and JICA Gulu Office (See attached attendance list).
6. **Structure of meeting:**
 - (1) Introductions and Prayers
 - (2) Opening remarks and welcome address by the Chairman
 - (3) Presentations from JICA Study Team
 - 1) Design policy
 - 2) Water discharge system
 - 3) Typical cross section
 - 4) Roundabout/intersections
 - 5) Traffic safety facilities
 - 6) Construction materials
 - 7) Topographic/soil investigation
 - 8) Environmental and social considerations
 - (4) Open Discussion

7. Meeting Minutes

The meeting was chaired by the Town Clerk (municipal administrative leader) of Gulu Municipal Council and began with a brief opening prayer and introduction of members present.

The Town Clerk warmly welcomed participants to the meeting. He lamented the state of the roads in Gulu Municipal Council and said, during the President's visit in the District, the minister for local governments voiced concerns about the poor state of the roads. The Town Clerk was however glad that JICA was going to do something about the municipal road and requested JICA to begin the road improvement project as early as possible. He then invited the JICA study Team.

The JICA Study Team made a comprehensive presentation based on the above mentioned eight agenda. The team pointed out the projects challenges/conflict to be discussed and resolved. They are:

- Due to heavy traffic expected to be occurred in Acholi Rd. in near future, the proposed four-lanes on Acholi Rd. lacks land to accommodate
- There is a need to engage Stanbic Bank to surrender a small strip of land to accommodate a roundabout



- What relocation and compensation strategies are in place for the Muslim cemetery and the kiosks on Acholi Rd.?
- There are some few obstructions (private properties) on the proposed water carriage way from upland to the main water channel (Pece River) on Jomo Kenyatta rd. down wards.
- Traffic polices identified black spots in the municipality. Improved of traffic safety should be considered in the final I technical designs of the road.
- Pe Yero Rice millers on Sir Samuel Baker road needs to be engaged to allow right of way of the road, because a part of their buildings extend toward the road.
- Toilet facilities in the Taxi Park will have to be relocated to accommodate the land for construction of northern exit.
- There is a verandah illegally constructed private structure behind the Taxi Park which is obstructing the proposed improvement plan.

8. Open Discussion

(1) Hydrology and Drainage

Eng. Terrence Odonga asked about the structural design for the Pece River channel and the JST informed him that, this project shall only handle the culverts at road river crossing.

Eng. Terrence Odonga also said, Jomo Keyatta road is very long and needs to be drained to Pece River. (After the open discussion, participants visited both candidate sites for drainage outlet, and confirmed that one proposed by JST doesn't require demolition and resettlement of dwellers, while the other proposed by Eng. Terrence Odonga requires.)

JST explained that, the urban road project is strictly for roads and shall not comprehensively cover drainage issues. It shall mainly cover drainage at road crossings and simply opening and straightening drainage lines. Drainage problem needs to be fixed by a big drainage project of its own.

JST inquired whether the Jomo Kenyatta road drainage should be made to fit a four lane road status. GMC answered that, given the limited space for expansion; JST should adopt a two lane especially for Acholi road. I.e. maintaining the current carriage way with minimal expansions at few specific relevant points.

(2) Road design

It was discussed and agreed that, due to limitation of space, car and motorcycle parking shall be restricted to only specific points because in the Gulu town plans, private businesses are expected to plan for their own private parking.

MOWT also agreed that, since Gulu is soon becoming a city, roadside parking should be limited in abid to decongest the city.

(3) Land Acquisition and Compensation

Eng. Terrence Odonga said the compensation payment to Muslim community for the demolition of cemetery needs to be done sooner and the Town Clerk said he will engage the Ministry about the issue in about two weeks time. He also promised to handle Pe Yero Rice millers situation on Sir Samuel Baker Rd.

According to Eng Terrence, Request for land from stanbic Bank to accommodate a roundabout may be difficult and suggested that, the small roundabout be maintained.

The engineer also said the structure (bar) which is blocking drainage in the Taxi Park is illegal and shall be removed without financial compensations.

For the toilets and the restaurant, the Engineer said they belongs to the Municipal Council and therefore GMC can handle.

GMC also said the lock up shops in the bus park are private, making acquisition of rooms for expansion difficult, the park should therefore be renovated without any room for expansions.

GMC also said there is no problem with cutting the trees on Jomo Kenyatta road as they shall easily be replanted.

(4) Prioritization

The meeting agreed to town clerks position that the meeting had no powers to adjust the project initiatives but could identify priorities in case of budget shortfalls.

The JST reiterated the need to move quickly on project decisions as to conform to budgeting and planning schedule of Government of Japan (GOJ).

There was also concern the WB has not considered about seventy meters of the road joining the end point of coronation road. Eng. Terrence Odonga said that UNRA is most likely to take up that section of the road and work on it.

(5) Quarry

The field trip to Kidere stone quarry site exposed some opposition by the local community to the mechanization of stone crushing by any private contractor. The project is expecting to source a private contractor to mechanize stone crushing that will match the project speed.

(See next meetings minutes on local community's concern about mechanized stone crushing.)



Annex-1 Time Table of Pre-Stakeholder Meeting & Stakeholder Meeting

Date	Time	Activity
28 th (Tue)	15:00 to 21:00	MOWT : Move to Gulu
29 th (Wed)	8:30 to 9:00	MOWT: Courtesy call to Town Clerk
	9:00 to 11:00	Meeting with MOWT, GMC & JST (1) Design Policy (2) Water discharge system (3) Typical cross section (4) Roundabout /Intersection (5) Traffic Safety Facilities (6) Topo /Soil Investigation (7) Construction Materials (8) Environmental & Social Considerations
	11:00 to 13:00	Field Observation (regarding design) Obstacles/ PECE River /Taxi Park /
	13:00 to 14:00	Lunch Break
	14:00 to 15:00	Meeting with NWSC
	15:00 to 17:00	Field Observation (regarding construction) Asphalt Plant /Construction Camp Borrow Pit /Aggregates /Sand
	30 th (Thu)	8:30 to 10:00
10:00 to 12:00		Meeting with MOWT, GMC & JST (1) Soft Component (2) Confirmation of Client's Responsibility (Utility Relocation, Tax Exemption, etc.) (3) Confirmation of further schedule
		Lunch Break, and Dismiss

Annex-2 List of Participants



Republic of Uganda
The Preparatory Survey
on



The Project for Improvement of Gulu Municipal Council Roads in Northern Uganda

List of Participants

Date : Apr 24 2015
Venue : Team Clerk's Office Gulu
Agenda : Meeting ~~with~~ Meeting with G.M.C. and TST
Participants :

S/N	Name	Designation & Organization	Cell and/or Email	Signature
1	Omona John Oola	UCRD coordinator - G.M.C.	0782-142400 jomonag87@gmail.com	
	Tatsuo Tomidokoro	JICA Study Team	0756-524-502 tomidokoro@jica.go.jp	
2	KENTI YAKAMUKA	---	075-222-4000 k.yakamuka@jica.go.jp	
4	MOTOEI OSHITA	---	075-654-2957 oshita-motoei@jica.go.jp	
5	BAMBANDA FU	Team Clerk	0772642636 fubanda6380@jica.go.jp	
6	Lukwya Christopher	Asst. Eng. Electronics	0772547603 christopherlukwya@gmail.com	
7	Ocala James	Environment Officer	0774151502 ocalajames@yahoo.com	
8	Olumu Lenny	Surveyor	0772605071 lennyolumu@gmail.com	
9	Odonga Perence	Engineer	odongaperence@gmail.com	
10	Akera Denis	Admin	akera2@yahoo.com	
11	BUSUKWA Lambert	Senior Engineer (MORT)	lambertb@gmail.com	
12	G. MAGALA	SENIOR ENGINEER (URBAN ROAD) MORT	0752-642839 magalagad@yahoo.com	
13	Opic Christopher	Engineer G.M.C	Christopheropic@yahoo.com	
14	Emmanuel Paolo	JICA - F.C.	0772926690 emmpaol36@gmail.com	

Thank you very much for your cooperation!

Minutes of Meeting

1. **Meeting Title:** 1st Stakeholders Meeting of IGMCR project
2. **Date:** Apr. 30, 2015 (Thu)
3. **Time:** 8:30-11:00AM
4. **Venue:** Town Clerk's Office in GMC
5. **Attendance:** UMEME (Power Distribution Company), Mobile Telecommunication Network Company (MTN), National Water and Sewerage Corporations (NWSC), Uganda Police Force, JICA Gulu Office, Ministry of Works and Transport (MOWT), Gulu Municipal Council(GMC), and JICA Study Team (JST) (See attached attendance list).
6. **Structure of meeting:**
 - (5) Introductions and Prayers
 - (6) Opening remarks and Welcome address by Chairman
 - (7) Presentation from JICA Study Team
 - (8) Open Discussions.
7. **Minutes of Meeting:**

7.1. Opening to Presentation by JST

After prayer and self-introduction, the Town Clerk as a chairman warmly welcomed every stakeholders and officially opened stakeholders meeting. The JICA Study team (JST) explained that overview of the project including project target road, overall drainage system, typical cross section designs, and traffic safety facilities. Then, in the presentation of the environmental and social considerations (ESC), the JST emphasized that implementation of this project shall have impact on the facilities of Utility Companies through reallocations and protection of those facilities before/during the road construction. Most if not all the roads has provision for sidewalks for pedestrians and this is where the facilities of the utility companies exists. The JST explained that the mitigation of social and environmental impact of the project shall be handled in three stages as follow:

- Pre-Construction Stage: by Gulu Municipal Council (GMC) and Ministry of Works and Transport (MOWT),
- Construction Stage: by the Contractor with supports of GMC, MOWT, and Stakeholders as necessary, and



- Post Construction (Operation) Stage: by GMC and MOWT

In addition, the JST highlighted some challenges as bellow:

Road	Facility	Requirement
Jomo Kenyatta Road	Muslim cemetery	Land acquisition, Partial demolition
	Kiosks	Relocation
Taxi Park (Northern side)	Verandah of private restaurant	Demolition
	Kiosks	Relocation
	Toilets	Partial or Total Demolition and Relocation, Rebuild, or Construct Temp. Toilet
	Bench	Relocation
	Restaurant (Govt.)	Partial/Total Demolition and Renovation
Sir Samuel Road	Pe Yoro Rice Miller's Storage	Partial demolition
Drainage outlet from Jomo Kenyatta Road	Huts	Demolition, and Resettlement
Kidera Quarry	Quarry	Discussion with Community in advance
All	Trees	Logging and replanting

At the end of the presentation, the JST reminded Town clerk, GMC, and MOWT importance of conducting more meetings with other stakeholders, grass root people in order to share project information, and receive feedbacks from them.

7.2. Open Discussion

The Town clerk wanted to be sure of when the project starts; JICA Study team said the project is aiming to start around September 2016.

(1) Water Pipes

JICA Study team requested to be briefed about water pipes under pedestrian path in the project. NWSC said it needs more time to establish that. It's important to first have a detailed technical design for the urban road projects before so that they can pinpoint areas which needs interventions. NWSC also urged JST to consider mitigating the environmental impacts of blasting at the quarry site should they opt for mechanized means of stone production.

(2) Traffic Safety

The traffic police officer said there was need to coordinate and administer the driver who will be working in the project. He lamented the system of simply dismissing the offending driver and rendering a police case dead as done by the Chinese firms doing construction. So, all drivers will have to be given safety instructions by traffic police before dismissed.

(3) Quarry

The expected quarry source for the project is faced with some challenges. Although the quarry deposit in an individual persons land, it's communally used on payments of some little tokens to the individual owner. The community depends on it as their source of income. Thus making the community to have some kind of ownership to the point that, they have established a user committee to safeguard their interests and manage their peaceful operations. This community resists the use of contracted machines in stone crushing as stipulated by the project on three grounds viz:

- Machines could deplete the stone deposit thereby destroying their income source which could support them for many years,
- The use of machines shall displace them from their workstations because of its dangerous nature, and
- If contractor is to pay for the boulders then the benefits only goes to individuals or few people but not the community. They proposed that the contractor should instead buy their Hand crushed stones and refine it. But their speed does not match the project needs.

The meeting also got to know that some Chinese company was also denied the use of the quarry because of wrong approach. The Town clerk urged Eng. Terrence Odonga to work out some solutions for this but taking into consideration that the community should also benefit. Eng. Terrence Odonga said the best way to handle this is through the office of the Local Council 5 (LC5) chairman by mobilizations, advocacy, and sensitization. The Engineer also said the rock reserves is very vast (covers about half a kilometer landscape) and therefore can accommodate both the contractor and the local community. The GMC engineer also said that the Environment and Natural resources act allows the Government to own of some strategic facilities like rocks, wetlands, forests etc. Meaning Government could simply displace the local community and use the rocks for National development programs. Town clerk reiterated that, *inspite* of all the above, the community still has a say. There is need for harmonious solution. GMC also requested JST to also observe the interface between the contractor and the local workers (community) some contractors are cheats and violates the rights of the local workers and community there by tarnishing the entire image of the project.

(4) Relocation of Utilities

MTN asked how deep the road excavations for the project shall be. The JST said about 1.2 meters in which case utility facilities may not be affected. But should the need arise, then in some specific places for specific reasons, there may be excavations deeper than 1.2 meters.

NWSC asked about who meets the relocation cost. The JST informed that is Government of Uganda (GOU), and MOWT shall do it.

MTN wanted clarifications as to whether utility relocation takes place before or after the contracts for the projects has been signed. Because, there is need for ample time to plan for the relocations. The JST said the final technical design is still being made. But utility relocation situation should be completed before the contractor comes on the ground.



MTN asked when project design be complete and to be given a copy. The JST expects the technical design to be completed by end of this year and shall provide it to all stakeholders. However every depend on the approval from the Government of Japan (GOJ). It's therefore important to streamline schedules down here with that of the GOJ.

The JICA team also promised to provide to stakeholders the tentative technical designs.

NWSC said, the implication of the situation is that, the relocation of the utility shall only be done subject to the availability of the projects preliminary technical design and the availability of funds from GOU to meet compensations and other relocation costs.

(5) Closing

The JST reminded importance of continuous and regular stakeholders meeting even in the absence of consultants. JICA Gulu office called for maximum support and cooperation for the implementation of this opportune project so that it becomes a role model project locally and regionally. Finally, the Town clerk officially closed stakeholders meeting.



Annex-1 List of Participants



Republic of Uganda
The Preparatory Survey
on



The Project for Improvement of Gulu Municipal Council Roads in Northern Uganda

List of Participants

Date : Apr. 30, 2015 (Thu)
Venue : GMC Town Clerk's Office
Agenda : First Stakeholder Meeting, FIGMCR Project
Participants :

1/2

S/N	Name	Designation & Organization	Cell and/or Email	Signature
01	Emmanuel Pacoto	JICA - Field Coord.	emmpacoto@gmail.com 0772923696	
02	CHRISTO LAUTERBACH	Project Manager Plessey Mt. - For MTN Project	chris.lauterbach@plessey.co.za 0752310240	
03	Richard Turinawe	MTN UG	0772121213 0772652284	
04	M. B. A. A. A. A. A.	TRAFFIC	0700121612	
05	BARABAWAN F	Town Clerk	0772692456	
06	Lukwya Christopher	GMC/Electrical	0772547635	
07	OGAKA JAMES	GMC/Environment	0774151502	
08	Oluna Conny	GMC (Surveyor)	0772605073	
09	Ochonge Lawrence	M/E Engineer	0772590845	
10	G. M. K. GALA	SE/HR (MOWT)	0752-642839	
11	Busukisa Lameera	SE/HR (MOWT)	082274246	
12	Aduziy BR TOM	Manager Urceme	0776180168	
13	K. KONDO	JST/Hydrologist		
14	M. OGAWA	JST/Team Leader	075-6147997	

Thank you very much for your cooperation!

Minutes of Discussions
on the Preparatory Survey for the Project for
Improvement of Gulu Municipal Council Roads in Northern Uganda
(Explanation on Draft Preparatory Survey Report)

On the basis of the discussions and field survey in the Republic of Uganda (hereinafter referred to as "Uganda") in September 2015, and the subsequent technical examination of the results in Japan, the Japan International Cooperation Agency (hereinafter referred to as "JICA") prepared a draft Preparatory Survey Report on the Project for Improvement of Gulu Municipal Council Roads in Northern Uganda (hereinafter referred to as "the Draft Report").

In order to explain the Draft Report and to consult with the concerned officials of the Government of Uganda on its contents, JICA sent to Uganda the Preparatory Survey Team (hereinafter referred to as "the Team") to provide some explanation on the Draft Report, headed by Tomoki Kanenawa, Advisor, Infrastructure and Peacebuilding Department, JICA. The Team was scheduled to stay in the country from September 16th to September 23rd, 2015.

As a result of the discussions, both sides confirmed the main items described in the attached sheets.

Kampala, September 22nd, 2015

金縄知樹

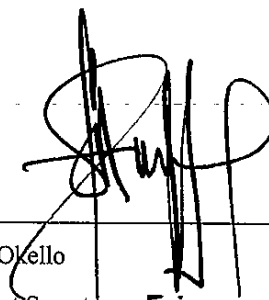
Tomoki Kanenawa

Leader

Preparatory Survey Team

Japan International Cooperation Agency

Japan



Alex B. Okello

Permanent Secretary

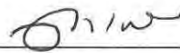
Ministry of Works and Transport

Uganda

Witness



Maris Wanyera
Commissioner, Development Assistance and
Regional Cooperation Department
Ministry of Finance, Planning and Economic
Development
Uganda



Barabanawe Francis
Town Clerk
Gulu Municipality
Uganda



ATTACHEMENT

1. Objective of the Project

The objective of the Project is to secure smooth and safe traffic flow and improve the living environment for the residents through the improvement and rehabilitation of the main roads, drainage and traffic safety facilities in Gulu Municipality, Northern Uganda, thereby contributing to the stimulation of economic activity, peace and stability in Northern Uganda.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Improvement of Gulu Municipal Council Roads in Northern Uganda”.

3. Project Site

Both sides confirmed that the site of the Project is in Gulu Municipality, Northern Uganda. Its location and names of the roads which will be improved in the project are shown in Annex 1.

Both sides confirmed that the southern edge of the project site is the T-junction where Sir Samuel Baker Road meets Kampala Road and the improvement of T-junction itself will be conducted by JICA.

4. Executing Agency

Both sides confirmed that the executing agency is Ministry of Works and Transport (hereinafter referred to as “MoWT”). The executing agency shall coordinate with all the relevant agencies to ensure smooth implementation of the Project and ensure that the Undertakings are carried out by relevant agencies properly and on time.

5. Contents of the Draft Report

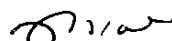
After the explanation of the contents of the Draft Report by the Team, the Ugandan side agreed in principle to its contents.

6. Cost Estimation

Both sides confirmed that the Project cost estimation described in the Draft Report



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and Annex 2 were provisional and would be examined further by the Government of Japan for its final approval.

7. Confidentiality of the Cost Estimation and Specifications

Both sides confirmed that the Project cost estimation and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts of the Project are concluded.

8. Japanese Grant Scheme

The Ugandan side understands the Japanese Grant Scheme and its procedures as described in Annex 3, Annex 4 and Annex 5, and necessary measures to be taken by the Government of Uganda.

9. Project Implementation Schedule

The Team explained to the Ugandan side that the expected implementation schedule is as attached in Annex 6.

10. Expected Outcomes and Indicators

Both sides agreed that key indicators for expected outcomes are as described below. The Ugandan side has the responsibility to monitor the progress of the indicators and achieve the target in year 2021.

[Quantitative Effect]

Index	Baseline Value (2015 Actual Data)	Target Value (2021) 【3 years after completion】
International Roughness Index (IRI) (mm/m)	6.23	Below 3
Traffic Accidents (No./Year)	26	Below 13
Impassible days (Day/Year)	7	0

[Qualitative Effect]

- The expected transformation of Gulu municipality to city status and economic center of the northern region of Uganda by the implementation of this project;
- The smoothness of the carriageway will be improved and pedestrian pavement will be introduced on the sidewalk;
- Since closure of the road in the rainy season will be solved, road users and

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citizens will be able to access to the social infrastructures and markets throughout the year;

- Traffic safety of the pedestrian would be enhanced through the improvement of the intersection and traffic safety facilities for pedestrians; and
- The improvement of Gulu municipality roads shall contribute to strengthening and improvement of the connection between Northern Uganda and Kampala Capital City, the major consumption area in the country, as well as the connection between Uganda and neighboring countries.

11. Technical Assistance (“Soft Component” of the Project)

Considering the sustainable operation and maintenance of the provided facility, some technical assistance is planned to be provided under the Project. The Ugandan side confirmed that it will assign necessary number of competent and appropriate counterparts as described in the Draft Report as follows:

- Implement technical training for the development and update of road inventory map in Gulu Municipality;
- Implement technical training for the development of appropriate road maintenance plan; and
- Implement technical training for appropriate asphalt pavement repair works.


12. Undertakings Made by Each Government

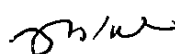
Both sides confirmed to undertakings described in Annex 7. The Ugandan side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are indicative, i.e. as at Outline Design level. More accurate costs will be calculated at the Detailed Design stage. Contents of Annex 7 will be updated as the Detailed Design progresses, and will finally be the Attachment to the Grant Agreement.

The Ugandan side shall take the following necessary measures:

- 1) relocate affected utilities including buildings, utility poles, street lights, water pipes, sewerage pipes and communication lines before tendering procedure scheduled from June 2016 starts;
- 2) submit Environmental Impact Assessment report (referred in 17-2-1) to National Environment Management Authority (hereinafter referred to as “NEMA”) by December 2015 and to obtain NEMA’s approval of it by April



5 



2016 and to obtain the environment license for both the road construction and the quarry development in Kidere by April 2016;

- 3) submit Resettlement Action Plan (hereinafter referred to as RAP) report (referred in 17-2-1) to NEMA by December 2015 and obtain NEMA's approval of it by April 2016;
- 4) complete necessary land acquisition, resettlement and compensation for them before tendering procedure scheduled from June 2016 starts (referred in 17-3-1); and
- 5) ensure that customs duties, internal taxes and other fiscal levies which may be imposed in Uganda with respect to the purchase of the Products and Services be borne by MoWT without using the Grant.

13. Monitoring during the Implementation

The Project will be monitored four times (once before commencement of construction, twice during the construction and at completion of the construction) during the project period by the executing agency using the Project Monitoring Report (PMR) described in Annex 8.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation three (3) years after the project completion with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability) of the Project. Result of the evaluation will be publicized. The Ugandan side is required to provide necessary support for them.

15. Issues to be Considered for the Smooth Implementation of the Project

Both sides confirmed the issues considered and will take necessary measures for the smooth implementation of the Project described in Annex 6.

Both sides confirmed that MoWT should be responsible for coordinating co-operation with Gulu Municipal Council, Gulu police and local resident, for the smooth implementation of project in the center of Gulu municipality.

16. Schedule of the Study

JICA will complete the Final Report of the Preparatory Survey in accordance with the confirmed items and send it to the Ugandan side around January, 2016.

17. Environmental and Social Considerations

17-1 General Issues

17-1-1 Environmental Guidelines and Environmental Category

The Team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as 'the Guidelines') is applicable for the Project. The Project is categorized as B because the Project is not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the environment are not likely to be significant.

17-1-2 Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Check List attached as Annex 9. Both sides confirmed that in case of major modification of the content of the Environmental Check List, The Ugandan side shall submit the modified version to JICA in a timely manner.

17-2 Environmental Issues

17-2-1 Environmental Impact Assessment (EIA)

Both sides confirmed that EIA report will be approved by NEMA by April 2016.

17-2-2 Environmental Management Plan and Environmental Monitoring Plan

Both sides confirmed that Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) of the Project are as in Annex 10, respectively. Both side agreed that environmental mitigation measures and monitoring shall be conducted based on the EMP and EMoP, which may be updated during the detailed design stage.

17-3 Social Environment

17-3-1 Land Acquisition and Resettlement

Both sides confirmed that the 631 m² of land would be acquired and two houses (1 household), Muslim cemetery, two temporary containers (one is owned by Gulu city and the other is owned by Uganda telecom) and kiosk would be relocated/affected due to the implementation of the Project as indicated in the Draft Report.

Such land acquisition and resettlement shall be implemented based on the (Abbreviated) Resettlement Action Plan (RAP) prepared in line with JICA Guidelines and authorized by the Ugandan side in April, 2016.

17-4 Environmental and Social Monitoring

17-4-1 Environmental Monitoring

Both sides agreed that the Ugandan side will submit results of environmental monitoring to JICA by using the monitoring form attached as Annex 11.

17-4-2 Social Monitoring

Both sides confirmed that the Ugandan side will implement social monitoring about land acquisition and resettlement plan proposed in the RAP. Both sides agreed that MoWT will submit results of social monitoring to JICA using the monitoring form attached as Annex 11.

17-4-3 Information Disclosure of Monitoring Results

Both sides confirmed that the Ugandan side will disclose results of environmental and social monitoring to local stakeholders through their website.

The Ugandan side agreed that JICA will disclose results of environmental and social monitoring submitted by the Ugandan side as the monitoring forms attached as Annex 11 on its website.

18. Other Relevant Issues

18-1. Operation and Maintenance of the Facilities

The Team explained the importance of operation and maintenance of the facilities constructed by the Project considering that proper asset management impacts greatly on life-span of the facilities and its maintenance cost. The Team also explained the necessary cost for proper maintenance of the facilities as shown in the Draft Report. The Ugandan side confirmed that the cost will be secured in the annual budget and shall provide sufficient staff necessary for appropriate operation and maintenance of the facilities. The annual operation and maintenance costs are estimated as described in Annex 2.

18-2. Safety Measures

To avoid accidents on site during the implementation of the Project, the Uganda side agreed to cause the consultant and the contractor to enforce safety measures such as setting safety assurance to the site, providing information for security

control to the public and deploying adequate security personnel, based on “The Guidance for the Management of Safety for Construction Works in Japanese ODA Projects” which has been published on JICA’s URL below.

http://www.jica.go.jp/activities/schemes/oda_safety/ku57pq00001nz4eu-att/guidance_en.pdf

Likewise, the Team recommended to the Uganda side to explain to the residents about the Project (necessity and significance, construction period, sites, impact etc.), so that consensus support can be obtained from them for the smooth implementation of the Project.

18-3. Misconduct

If JICA receives information related to suspected corrupt or fraudulent practices in the implementation of the Project, MoWT and relevant organizations shall provide JICA with additional such information as JICA may reasonably request, including information related to any concerned official of the government and/or public organizations in Uganda.

MoWT and relevant organizations shall not, unfairly or unfavourably treat the person(s) and/or company which provided the information related to suspected corrupt or fraudulent practices in the implementation of the Project.

18-4. Disclosure of Information

Both sides confirmed that the study results excluding the project cost will be disclosed to the public after completion of the Preparatory Survey. All the study results including the project cost will be disclosed to the public after all the contracts for the Project are concluded.

18-5. Water Project in Project Area

Both sides confirmed that there is a possibility of delay in a water project which is implemented by National Water and Sewerage Corporation (hereafter referred to as NWSC) in the project area. It should be noted that the delay would cause damage to constructed road in the project if the water project by NWSC would be carried out after the project has started. Both sides confirmed that the Ugandan side will conduct the relocation of the existing pipelines and placement of ducts for future utilization by NWSC in case of late start of the water project by NWSC.

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18-6. Quality Management Meeting

Both sides confirmed that JICA, MoWT, consultant and contractor shall have quality management meetings approximately once in a half year during the implementation stage. The meetings should be convened by MoWT before the commencement of construction works and during the construction to solve serious problems such as delay of utility relocation, resettlement exercise, construction works, etc.

Annex 1 Project Site

Annex 2 Project Cost Estimation

Annex 3 Japanese Grant

Annex 4 Flow Chart of Japanese Grant Procedures

Annex 5 Financial Flow of Japanese Grant

Annex 6 Project Implementation Schedule

Annex 7 Major Undertakings to be Made by Each Government

Annex 8 Project Monitoring Report (PMR)

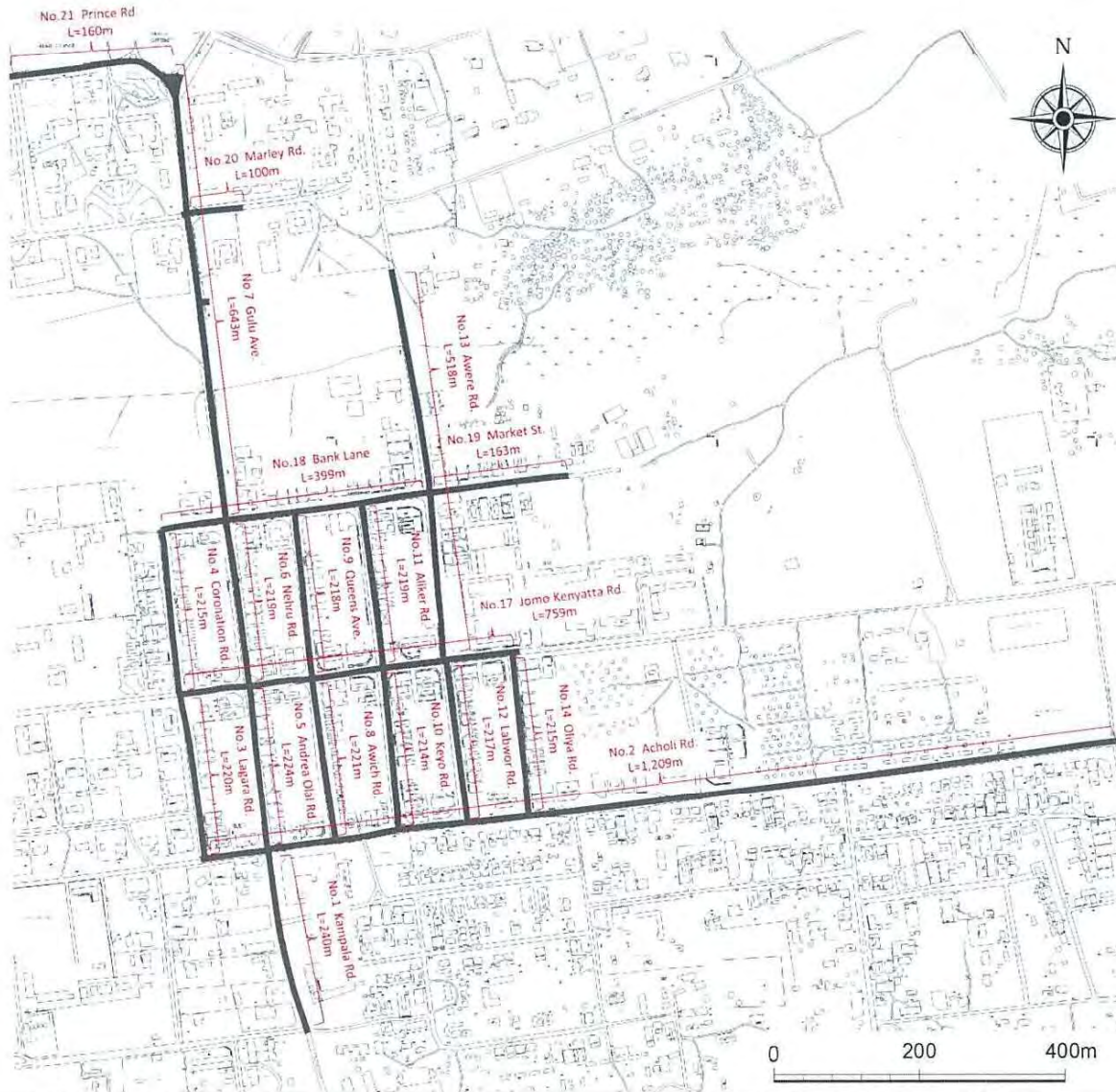
Annex 9 Environmental Check List

Annex 10 Environmental Management Plan/Environmental Monitoring Plan

Annex 11 Environmental and Social Monitoring Form

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Annex 1 Project Site



No.	Road Name	Improvement length	No.	Road Name	Improvement length
1	Kampala Road	240 m	11	Alikor Road	219 m
2	Acholi Road	1,209 m	12	Labwor Road	217 m
3	Lagara Road	220 m	13	Awere Road / Dr. Corti Lucile Road	518 m
4	Coronatio n Road	215 m	14	Oliya Road	215 m
5	Andrea Olal Road	224 m	17	Jomo Kenyatta Road	759 m
6	Nehru Road	219 m	18	Bank lane	399 m
7	Gulu Avenue	643 m	19	Market Street	163 m
8	Awich Road	221 m	20	Harley Road	100 m
9	Queens Avenue	218 m	21	Prince Road	160 m
10	Keyo Road	214 m		Total	6,373m

It should be noted that the southern edge of the project site is the T-junction where Sir Samuel Baker Road meets Kampala Road and the improvement of T-junction itself will be conducted by JICA.

Annex 2 Project Cost Estimation

(1) Conditions of Cost Estimation

Estimated timing	May 2015
Exchange rates	USD1.00 = 120.55 JPY , UGX1.00=0.0404 JPY
Others	The project is implemented in accordance with the system of Japan's Grant Aid. The above cost estimation is not final, and GOJ is responsible for finalizing the ceiling amount of the Grant Aid assistance of the Project.

(2) Cost to be borne by the GoJ

Items	Cost (million JPY)
1) Construction cost	1,883
2) Design cost and supervising cost	133
3) Soft component cost	17
4) Contingency (5%)	94
Reserve fund Total	2,127

(3) Cost to be borne by the GoU during the Project

Items	Quantity	Estimated Cost (UGX)	Equivalent JPY(Thousand)
Cost to obtain environment license for the permanent works	Lm	49,504,950	2,000
Cost to obtain environment license for opening of the new quarry.	Lm	2,000,000	81
Cost of compensation for re-settlement of 2 houses	2 Houses	1,299,960	52
Relocation of overhead electric wires	5,511m	633,765,000	25,604
Removal of existing street light poles	11 poles	2,200,000	89
Removal of board	100 numbers	20,000,000	810
Adjustment of existing manhole heights	98 numbers	294,000,000	11,878
Compensation for muslim cemetery	Lm	28,525,900	1,152
Banking arrangement, advising/payment commission for A/P	Lm	49,756,950	2,010
Temporary construction yard	Lm	25,000,000	1,010
Consultant fee for EIA	Lm	200,000,000	8,080
Custom duties, internal taxes and other fiscal levies which may be imposed in Uganda with respect to the purchase of the products and services	Lm	1,015,446,000	46,640
(in case of late start of the NWSC project)			
Relocation of existing pipelines and placement of ducts	Lm	(2,500,000,000)	(101,000)
Total		2,321,498,760 (4,821,498,760)	99,406 (200,406)

(4) Cost to be borne by the GoU after the project

Items	Contents	Costs (UGX)	Equivalent JPY (Thousand)	Remarks
Road maintenance needed every year (Routine Maintenance)	Cleaning & Desilting the drainage	7,600,000	307	Twice in a year
	Re-painting road the marking	15,750,000	636	Once in a year
	Repairing the road facilities	53,154,475	2,147	Once in a year
Road maintenance in roughly each 5 years (Periodic Maintenance)	Repairing potholes	17,960,950	726	Once in 5 years
Road maintenance in roughly each 10 years (Road Rehabilitation)	Overlay	359,219,000	14,512	Once in 10 years
Total		116,018,565	4,686	Converted annualized cost

JAPANESE GRANT

The Japanese Grant (hereinafter referred to as the “Grant”) is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant is not supplied through the donation of materials as such.

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

1. Grant Procedures

The Grant is supplied through following procedures:

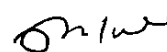
- Preparatory Survey
 - The Survey conducted by JICA
- Appraisal & Approval
 - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
 - The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as “the G/A”)
 - Agreement concluded between JICA and a recipient country
- Implementation
 - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.



- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve 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 of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

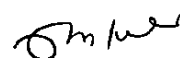
For smooth implementation of the Survey, JICA employs (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.



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3. Japanese Grant Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as “the E/N”) will be signed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project’s implementation after the E/N and G/A.

(3) Eligible source country

Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

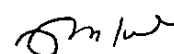
The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Project, the recipient country is required to undertake such necessary measures as Annex 7. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the



facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant should not be exported or 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 under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant 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 JICA 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 paid to the Bank.

(10) Environmental and Social Considerations

The Government of the recipient country must carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the recipient country and JICA Guidelines for Environmental and Social Consideration (April, 2010) .

(11) Monitoring

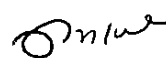
The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.



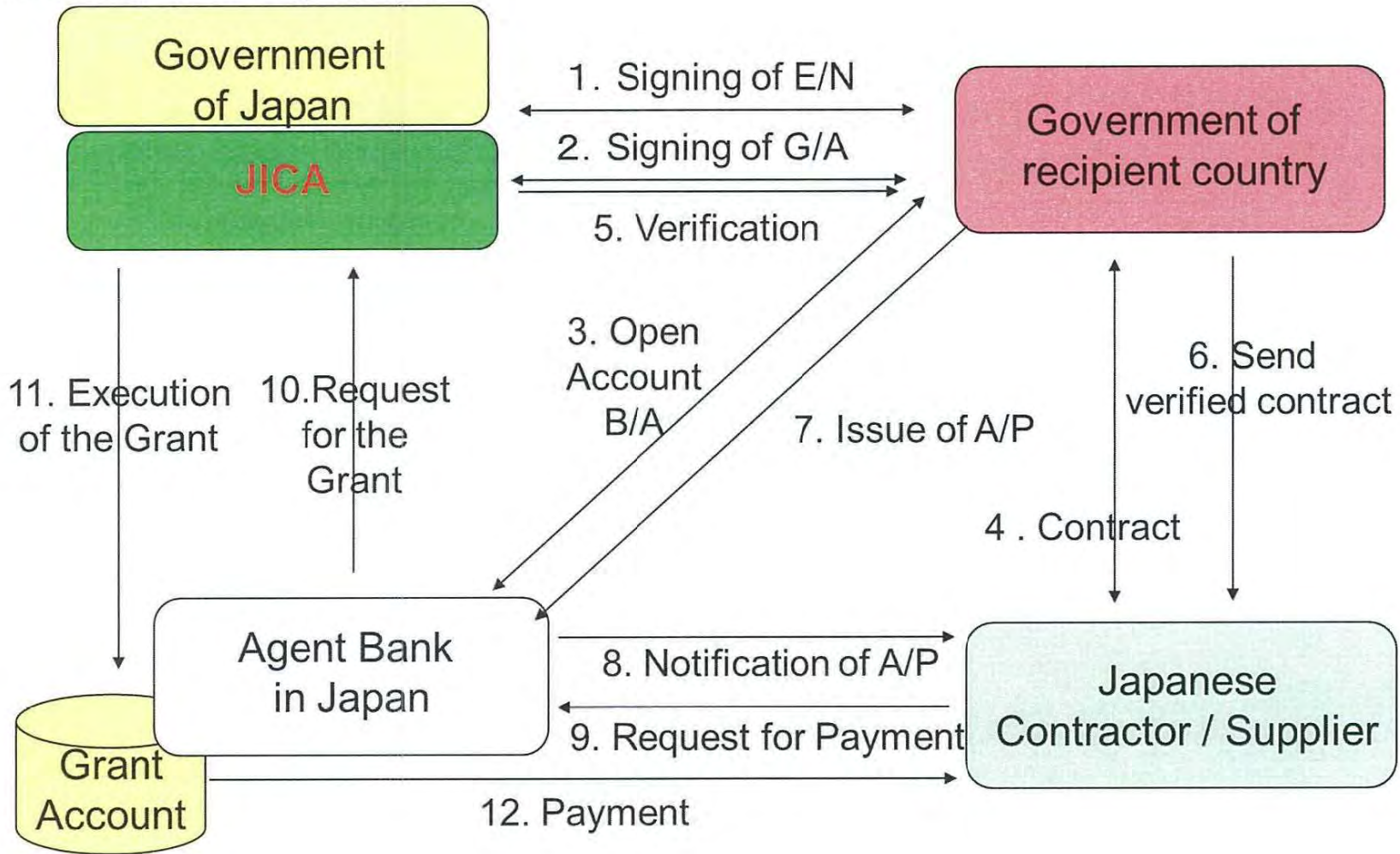
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Annex 4 Flow Chart of Japanese Grant Procedures

stage	Flow & Works	Recipient Government	Japanese Government	JICA	Consultant	Contract	Others
Application							
Project Formulation & Preparation							
Appraisal & Approval							
Implementation	<p>(E/N: Exchange of Notes) (G/A: Grant Agreement) (A/P: Authorization to Pay)</p>						
Evaluation & Follow up							

Annex 5 Financial Flow of Japanese Grant



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Annex 6 Project Implementation Schedule

	2016												2017												2018										
	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					
E/N, G/A	▼																																		
Consultant Agreement	▼																																		
Detailed Desing/Tendering Documents	■																																		
Tendering Procedure							■																												
Contractor Contract									▼																										
Construction										■																									
Soft Component											■					■						■						■							

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Annex 7 Major Undertakings to be Made by Each Government

Major Undertakings to be Made by Recipient Government

1. Before the Tender

NO	Items	Deadline	In charge	Cost (million UGX)	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	MoFPED	0.01	
2	To approve IEE/EIA and RAP	April 2016	NEMA	51.5	
3	To implement EIA and RAP	December 2015	MoWT	200.2	
4	To secure the following lands 1) A household located near the Drainage Outlet No. 4 candidate site on the northeast part of Jomo Kenyatta Rd. 2) Muslim Cemetery 3) temporary construction yard and stock yard near the Project area	before notice of the tender document	MoWT	29.7	
5	To clear, level, relocate and reclaim the following sites 1) overhead electric wires (5,511m) 2) existing manhole heights (98 numbers) 3) existing board (100 numbers) 4) existing street light poles (11 poles) 5) internet cables 6) telephone poles	before notice of the tender document	MoWT	950.0	
6	(in case of late start of the NWSC project) Relocation of existing pipelines and placement of ducts	before notice of the tender document	MoWT	2,500	

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2. During the Project Implementation

NO	Items	Deadline	In charge	Cost (million UGX)	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract	MoWT	0.01	
	2) Payment commission for A/P	every payment	MoFPED	49.5	0.1% of payment amount
2	To ensure prompt unloading and customs clearance in recipient country			-	
	1) Tax exemption and customs clearance of the products	during the Project	MoWT	-	
	2) Internal transportation to the project	during the Project	MoWT	-	
	To accord Japanese nationals and/or physical persons of third countries 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 the recipient country and stay therein for the performance of their work	during the Project	MoWT	-	
4	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the Products and/or the Services be borne by its designated authority without using the Grant.	during the Project	MoWT	1,015.5	
5	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	during the Project	MoWT	-	
6	To demolish and clear the existing facility on the temporary construction yard	3 months before commencement of the construction	MoWT	25.0	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities				
	1) Electricity The distributing line to the temporary construction yard	before start of the construction	MoWT	-	
	2) Water Supply The city water distribution main to the temporary construction yard	before start of the construction	MoWT	-	
	3) Drainage The city drainage main (for storm, sewer and others) to the temporary construction yard	before start of the construction	MoWT	-	

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8	To implement EMP and EMoP	during the construction	MoWT	-	
9	To submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the construction	MoWT	-	
10	To implement RAP (livelihood restoration program, if needed)	for a period based on livelihood restoration program	MoWT	-	
11	To implement social monitoring, and to submit the monitoring results to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report - Period of the monitoring may be extended if affected persons' livelihoods are not sufficiently restored. Extension of the monitoring will be decided based on agreement between MoWT and JICA.	- until the end of livelihood restoration program (In case that livelihood restoration program is provided) - for two years after land acquisition and resettlement complete (In case that livelihood restoration program is not provided)	MoWT	-	

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3. After the Project

NO	Items	Deadline	In charge	Cost (million UGX)	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	Gulu Municipality	116.0	
2	To implement EMP and EMoP	for a period based on EMP and EMoP	Gulu Municipality	-	
	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between MoWT and JICA.	for three years after the Project	Gulu Municipality	-	

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

Major Undertakings to be Covered by the Japanese Grant

NO	Items	Deadline	Cost Estimated (Million Japanese Yen)*	
1	To construct roads, drainage and traffic safety facilities .	Before end of the contract	1,883	
	1) To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country	during the construction		
	a) Marine(Air) transportation of the products from Japan to the recipient country			
	b) Internal transportation from the port of disembarkation to the project site			
	2) To construct the temporary site office with electricity, water supply, drainage, furniture and equipment			
2	To implement detailed design, tender support and construction supervision (Consultant)	Before end of contract	133	
3	Soft components		17	
4	Contingencies	During the project	94	
	Total		2,127	

*: The cost estimates are provisional. This is subject to the approval of the Government of Japan.

Annex 8 Project Monitoring Report (PMR)

<p><u>Project Monitoring Report</u></p> <p style="margin-left: 100px;"><i>on</i></p> <p style="margin-left: 100px;"><u>Project Name</u></p> <p>Grant Agreement No. <u>XXXXXXXX</u></p> <p style="margin-left: 100px;">20XX, Month</p>

Organization Information

<p>Authority (Signer of the G/A)</p>	<p>_____ Person in Charge _____</p> <p>_____ (Division) _____</p> <p>_____ Contacts _____ Address: _____</p> <p>_____ Phone/FAX: _____</p> <p>_____ Email: _____</p>
<p>Executing Agency</p>	<p>_____ Person in Charge _____</p> <p>_____ (Division) _____</p> <p>_____ Contacts _____ Address: _____</p> <p>_____ Phone/FAX: _____</p> <p>_____ Email: _____</p>
<p>Line Agency</p>	<p>_____ Person in Charge _____</p> <p>_____ (Division) _____</p> <p>_____ Contacts _____ Address: _____</p> <p>_____ Phone/FAX: _____</p> <p>_____ Email: _____</p>

Outline of Grant Agreement:

Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:



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1: Project Description

1-1 Project Objective

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

1-3 Effectiveness and the indicators

- Effectiveness by the project

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr)	Target (Yr)
Qualitative Effect		

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D) Attachment(s): Map	Actual: (PMR) Attachment(s): Map
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Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D) 'Soft component' shall be included in 'Items'.	(M/D)	(PMR) Please state not only the most updated schedule but also other past revisions chronologically. All change of design shall be recorded regardless of its degree.

(Sample)Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
1. Upgrading of the Kukum Highway	length 20km, single lane (3.47m*2), path(1.25m*2) Concrete Pavement 200mm (motor lane only)	length 20km, single lane (3.47m*2), path(1.00m*2) Concrete Pavement 200mm (motor lane only)
2. Replacement of Old Mataniko Bridge	Bridge length 40m, Width 9.5m, path(1.00m*2), compound steel box-girder bridge, Inverted T type-abutment spread foundation	Ditto

2-1-2 Reason(s) for the modification if there have been any.

(PMR)

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2-2 Implementation Schedule
 2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
<p><i>[M/D]</i></p> <p>'Soft component' shall be stated in the column of 'Items'.</p> <p>Project Completion Date*</p>	<i>(M/D)</i>		<p><i>(PMR)</i></p> <p>As of (Date of Revision)</p> <p>Please state not only the most updated schedule but also other past revisions chronologically.</p>

*Project Completion was defined as _____ at the time of G/A.

(Sample)Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
Cabinet Approval	11/2015	-	-
E/N	12/2015	1/2016	24/1/2016
G/A	12/2015	1/2016	24/1/2016
Detailed Design	12/2015-4/2016	1/2016-5/2016	Amended 13/3/2017 1/2016-5/2016
Tender Notice	5/2016	5/2016	1/6/2016
Tender	6/2016	6/2016	15/7/2016
(Lot1) Construction Period	7/2016-11/2018	7/2016-11/2018	8/8/2016-30/11/2018
(Lot2) Installarion of Equipment	7/2016-6/2018	7/2016-6/2018	6/8/2016-30/60/2017
Project Completion Date	11/2018	11/2018	30/11/2018
Defect Liability Period	11/2019	11/2019	30/11/2019

*Project Completion was defined as Check-out of Construction work at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

2-3 Undertakings by each Government

2-3-1 Major Undertakings

See Attachment 2.

2-3-2 Activities

See Attachment 3.

2-3-3 Report on RD

See Attachment 4.

2-4 Project Cost

2-4-1 Project Cost

Table 2-4-1a Comparison of Original and Actual Cost by the Government of Japan
(Confidential until the Tender)

Items			Cost (Million Yen)	
	Original	Actual	Original	Actual
Construction Facilities (or Equipment)	'Soft component' shall be included in 'Items'.			Please state not only the most updated schedule but also other past revisions chronologically.
Consulting Services	- Detailed design - Procurement Management - Construction Supervision			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

Table 2-4-1b Comparison of Original and Actual Cost by the Government of XX

Items			Cost (Million USD)	
	Original	Actual	Original	Actual
				Please state not only the most updated schedule but also other past revisions chronologically.
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = (local currency)

(Sample)Table 2-4-1a Comparison of Original and Actual Cost by the Government of Japan
(Confidential until the Tender)

Items			Cost (Million Yen)	
	Original	Actual	Original ^{1),2)}	Actual
Construction Facilities	1. Outpatient Department 2. Operation Theatre, Casualty Unit, Maternity Ward	Ditto Ditto	1,169.5	1,035.0
Equipment	1) Primary and Secondary Surveillance Radars at Chittagong Int'l Airport 2) Access Control System for Dhaka Int'l Airport 3) Doppler VOR/DME at Saidpur Airport 4) Aerodrome Simulator for Civil Aviation Training Center 5) Baggage Inspection System for Dhaka Int'l Airport 6) Airport Fire Fighting Vehicles for Dhaka Int'l Airport	Ditto	2,374.6	2,110.0
Consulting Services	- Detailed design - Procurement Management - Construction Supervision - Soft Component	Ditto	0.87	0.87
Total			3544.97	3145.87

Note: 1) Date of estimation: October, 2014
2) Exchange rate: 1 US Dollar = 99.93 Yen

(Sample) Table 2-4-1b Comparison of Original and Actual Cost by the Government of Bangladesh

Items		Cost (1,000 Taka)		
		Original ^{1),2)}	Actual	Actual
Dhaka International Airport	Modification of software of existing Rader Data Processing System	Ditto	8,000	9,240
	Provision of a partition, lighting, air conditioning and electric power supply at transfer hold baggage check point	Ditto	5,000	2,453
	Replacement of five doors in the international passenger terminal building	Ditto	4,000	5,340
Chittagong Int'l Airport	Preparation of the radar site including felling of trees, clearing and grabbing	Ditto	5,000	3,400
Total			22,000	20,433

Note: 1) Date of estimation: October, 2014
 2) Exchange rate: 1 US Dollar = 0.887 Bangladesh Taka (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR)

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc.,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: (M/D)

Actual, if changed: (PMR)

2-6 Environmental and Social Impacts

- The results of environmental monitoring as attached in Attachment 5 in accordance with Schedule 4 of the Grant Agreement.
- The results of social monitoring as attached in Attachment 5 in accordance with Schedule 4 of the Grant Agreement.
- Information on the disclosed results of environmental and social monitoring to local stakeholders, whenever applicable.

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc.)

Original: (M/D)

Actual: (PMR)

3-2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): (M/D)	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR)	

02/10/20

5: Evaluation at Project Completion and Monitoring Plan

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

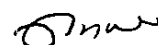
Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan for the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Report on RD
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Final Report Only)



Annex 9 Environmental Check List

Environment Items	Main Check Items	YES:Y NO:N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1. Permits and explanations			
(1) EIA and Environmental Permits	<p>a. Have EIA reports been already prepared in official process?</p> <p>b. Have EIA reports been approved by authorities of the host countries?</p> <p>c. Have EIA reports been unconditionally approved? If conditions are imposed on the approvals, have the conditions satisfied?</p> <p>d. In addition to the above approvals, have other required environmental permits been obtained from the appropriate regularity authorities of the hos country's government?</p>	<p>a. No</p> <p>b. No</p> <p>c. N/A</p> <p>d. No</p>	<p>a. Currently, EIA procedure is ongoing. The EIA report is scheduled to be submitted by December, 2015 to NEMA, however, since it took more time for screening, it is warried to be delayed.</p> <p>b. It was expected to be approved by April, 2016, however, for the reason mentioned-above, it might be delayed.</p> <p>c. Since the approval of the EIA report has not yet finished, the imposed conditions are not clear. However, conditions imposed at the screening and TOR at the survey stage is satisfied.</p> <p>d. Approval regarding opening a new quarry is necessary. Procedure to obtain the EIA is now on going as the permanent construction; however, it is concerned to be delayed as well.</p>
(2) Explanation to the local stakeholders	<p>a. Have contents of the project and the potential impacts been adequately explained to the local stakeholders based on appropriate procedures, including information disclosure?</p> <p>b. Have the comment from the stakeholders (such as local residents) been reflected to the project design?</p>	<p>a. Yes</p> <p>b. Yes</p>	<p>a. Under sponsorship by MoWT, the stakeholder meeting was implemented, and understanding among the stakeholders is obtained.</p> <p>b. Comments from the local residents are reflected also. Major points are traffic control during the construction, dust prevention by watering, and speed regulation.</p>
(3) Examination of Alternatives	<p>a. Have alternative plans of the project been examinated with social and environmental considerations?</p>	<p>a. Yes</p>	<p>a. Alternative plans were considered including environmental and social considerations. The chosen plan was the one which the number of resettlements was smallest.</p>
2. Pollution Control			
(1) Air Quality	<p>a. Is there a possibility that air pollutants emitted from the project related sources, such as vehicles traffic will affect ambient air quality? Does ambient air quality air quality comply with country's air quality standard? Are mitigation measures taken?</p> <p>b. Where industrial areas already exist near the route, is there a possibility that the project will make air pollution worse.</p>	<p>a. Yes</p> <p>b. Yes</p>	<p>a. Although environment standard relates to air pollution does not exists in Uganda, and it is anticipated that there will be stress to air quality due to increase traffic demand, dust raise from the road will be reduced by the construction.</p> <p>b. Same as above.</p>
(2) Water Quality	<p>a. Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas?</p> <p>b. Is there a possibility that surface runoff from roads will contaminate water resources, such as groundwater?</p> <p>c. Do effluents from various facilities, such as parking areas/service areas comply with the country's effluent standards and ambient water quality standards?</p>	<p>a. No</p> <p>b. N/A</p> <p>c. No</p>	<p>a. Since this project is targeted to improve the existing roads, surface explosion by land runoff is not assumed.</p> <p>b. Contamination of the groundwater is not assumed since rain water shall be discharged at the existing end of flow and PECE River by installing drainage. Contamination of PECE River is also not assumed, however, monitoring shall be conducted during the construction stage.</p> <p>c. There is no plan to construct either parking or service areas.</p>
(3) Wastes	<p>a. Are wastes generated from the project facilities, such as parking areas/service</p>	<p>a. N/A</p>	<p>a. There is no plan to construct either parking or service areas.</p>

	areas properly treated and disposed of in accordance with the country's regulations?		
(4) Noise and Vibration	a. Do noise and vibrations from the vehicle and train traffic comply with country's standards?	a. Yes	a. It is expected the loudness and vibration is less than both Uganda and Japanese regulation standards.
3. Natural Environment			
(1) Protected Areas	a. Is the project site located in protected areas designated by the country's laws or international treaties and congestions? Is there a possibility that the project will affect the protected areas?	a. No	a. There is no protected area at and around the site.
(2) Ecosystem	a. Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g. coral reefs, mangroves, or tidal flats)? b. Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? c. If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impact on the ecosystem? d. Are adequate protection measures taken to prevent impacts on the ecosystem? e. Is there a possibility that installation of roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystem due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered? f. In cases the project site is located at undeveloped areas, is there a possibility that the new development will result in extensive loss of natural environments?	a. No b. No c. N/A d. N/A e. N/A f. N/A	a. It was confirmed with the environment officer of Gulu Municipality that the project site does not include the area mentioned in the questionnaire. b. Same as above. c. Since the target of the project is the existing road, blocking the movement of wild animals and cattle, accident by animals and significant influence to ecosystem is not concerned. d. Same as above e. Same as above f. Same as above
(3) Hydrology	a. Is there a possibility that alternation of topographic features and installation of structures such as tunnels will adversely affect surface water and groundwater flows?	a. No	a. The was discharge capacity of Road No.13 (Awere Road) and Road No.7 (Gulu Avenue) will be improved due to improvement of the existing flooded area by introduction of box culvert and drainage. And under the hydrological analysis, it was understood that there will be no such difference in before and after the construction.
(4) Topography and Geology	a. Is there any soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed? b. Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? c. Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to	a. Yes b. N/A c. Yes	a. Partially soft ground was found at the PECE River crossing point; however, the weak part will be replaced with good material. b. There is no civil works which might cause land slide and land failure in this project. c. For the borrow pit, regaining the vegetation by returning the topsoil shall be conducted. For the disposal area, soil runoff shall be prevented by slope protection such as stone pitching or vegetation.

	prevent soil runoff?		
4. Social Environment			
(1) Resettlement	<p>a. Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>b. Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?</p> <p>c. Is the resettlement plan, including compensation with full replacement costs, restoration of living standards developed based on socioeconomic studies on resettlement?</p> <p>d. Are the compensations going to be paid to the resettlement?</p> <p>e. Are the compensation policies prepared in documents?</p> <p>f. Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children the elderly, and people below the poverty line, ethnic minorities, and indigenous peoples?</p> <p>g. Are agreements with the affected people obtained prior to resettlement?</p> <p>h. Is the organizational framework established to properly implement the plan?</p> <p>i. Are any plans developed to monitor the impacts or resettlement?</p> <p>j. Is the grievance redress mechanism established?</p>	<p>a. Yes</p> <p>b. Yes</p> <p>c. Yes</p>	<p>a. Several alternative plans were considered, and plan with smallest number of resettlement was chosen.</p> <p>b. Explanation of compensation and resettlement assistance is expected to be made by the Gulu municipality.</p> <p>c. Livelihood survey shall be conducted for the resettlement, and compensation with full replacement, restoration of living standards is planned to be made.</p> <p>d. Compensation is planned to be paid in advance, before the resettlement.</p> <p>e. Compensation policies are planned to be prepared in documents.</p> <p>f. Considering the social vulnerable, notice shall be made 6 month in prior to commencement.</p> <p>g. Agreements are made before the resettlement.</p> <p>h. From the experience of the proponent on resettlement and land acquisition in the past, it is understood that the proponent has adequate capacity to implement small scale resettlement as this project.</p> <p>i. Impact of the resettlement shall be monitored by the Gulu Municipality.</p> <p>j. Grievance redress mechanism is established by referring to the similar case in the past.</p>
(2) Living and Livelihood	<p>a. Where roads are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alternation of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts?</p> <p>b. Is there any possibility that the project will adversely affect the living conditions of the inhabitants other than the target population? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>c. Is there any possibility that diseases, including infection, such as HIV will be brought due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?</p> <p>d. Is there any possibility that roads will give negative influence in road traffic to surrounded areas? (such as</p>	<p>a. No</p> <p>b. No</p> <p>c. No</p> <p>d. No</p> <p>e. No</p> <p>f. No</p>	<p>a. Since this project is targeting to improve the existing road, existing traffic means and the people's life who is working on it shall not be affected.</p> <p>b. Same as above</p> <p>c. Same as above</p> <p>d. Widening of Acholi Road at section where are 市街化, and that connects with the road improved by the World Bank, will contribute to reduce the traffic congestion and improve the traffic safety.</p> <p>e. There is no structure planned to impede the movement of the inhabitants. Rather, it is considered that introduction of pedestrian crossway and speed limitation will contribute to improve the movement.</p> <p>f. There are no structure causes sun shading and road influences such as Flyover Bridge in this Project.</p>

	<p>increase of traffic congestion and accidents)</p> <p>e. Is there any possibility that roads will impede the movement of inhabitants?</p> <p>f. Is there any possibility that structures associated with roads (such as bridges) will cause a sun shading and road influence?</p>		
(3) Heritage	<p>a. Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?</p>	<p>a. No</p>	<p>a. No local archeological, historical, cultural, and religious heritage was confirmed around the site.</p>
(4) Landscape	<p>a. Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?</p>	<p>a. Yes</p>	<p>a. Although no special area to prevent landscape was confirmed around the site, the Project would re-plant the trees which were cut off by the Project to try keeping the city landscape.</p>
(5) Ethnic Minorities and Indigenous Peoples	<p>a. Are consideration given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?</p> <p>b. Are all of the rights of ethnic minorities and indigenous people in relation to land and resources to be replaced?</p>	<p>a. N/A</p> <p>b. N/A</p>	<p>a. No ethnic minorities were confirmed around the site.</p> <p>b. Same as above</p>
(6) Working Environment	<p>a. Is the project proponent not violating and laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?</p> <p>b. Are tangible safety considerations in place for individuals involved in the project, such as the installation of safely equipment which prevents industrial accidents, and management of hazardous materials?</p> <p>c. Are intangible measures being planned and implemented for individuals involved in the project, such as the estimation of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?</p> <p>d. Are appropriate measures being taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?</p>	<p>a. Yes</p> <p>b. Yes</p> <p>c. Yes</p> <p>d. Yes</p>	<p>a. The Project Plan was made by cost estimation following the Uganda's labour law.</p> <p>b. Safety measures are taken by placing barricades, watchman and frequent maintenance of the equipment</p> <p>c. Traffic Safety briefing by the Gulu police to the drives of the construction, and infection briefing by the person in charge of HIV/AIDS of Gulu Municipality and others measures are planned.</p> <p>d. Since most of the workers including guards would be employed from the inhabitants, it is difficult to consider the project would violate the safety of the inhabitants of the area. However, system to cope with claim arise from the people shall be prepared.</p>
5. Others			
(1) Impacts during constructions	<p>a. Are adequate measures considered to reduce impacts during constructions (e.g. noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>b. If construction activities adversely affected the natural environment (ecosystem) are adequate measures considered to reduce impacts?</p> <p>c. If construction activities adversely affect the social environment, are adequate measured considered to reduce impacts?</p>	<p>a. Yes</p> <p>b. Yes</p> <p>c. Yes</p>	<p>a. Mitigation measures shall be made by giving notice of the construction such as location and contents to the people and carrying out site monitoring. And also, placing barricade and noise shutting down sheet, prevent dusting by watering shall be considered as hard measures.</p> <p>b. Since this project is targeted at the central area of the municipality, it is considered there would be no affection to the natural environment. However, monitoring during the construction shall be made to grasp the influence to the natural environment.</p> <p>c. Although several impacts are considered such as infection, sanitation and accidents, countermeasures</p>

			are established against each of them.
(2) Monitoring	<p>a. Does the proponent develop and implement monitoring program for the environment items that are considered to have potential impacts?</p> <p>b. What are the items, methods and frequencies of the monitoring program?</p> <p>c. Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>d. Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	<p>a. Yes</p> <p>b. Yes</p> <p>c. Yes</p> <p>d. Yes</p>	<p>a. Since MoWT, the organization in charge, is located in Kampala far from the site, Gulu Municipality will do the monitoring for MoWT.</p> <p>b. Items which were evaluated as A-, B- or C- were selected to be monitored. Items which were evaluated A+, B+, C+ were selected also to monitor the positive impact.</p> <p>c. Through the stake holders meeting, it was confirmed that Gulu Municipality will do the monitoring after the handover.</p> <p>d. The method and frequency reporting the results of the monitoring are fixed. Details are shown in the Monitoring Plan.</p>

Annex 10 Environmental Management Plan/Environmental Monitoring Plan

<Environment Management Plan (EMP)>

Adverse Impacts	Proposed Mitigation Measures	Implementing Organizations	Responsible Organizations	Budget	
<Pre-Construction Phase>					
3	Solid Wastes	• To dispose solid wastes at licensed disposal site in Pabwo.	Gulu MC	MoWT	Administrative expenditure (Gulu MC)
5	Noise and Vibrations	• To demolish the buildings at off-peak time when the number of pedestrians, customers of restaurants is not so much.	Gulu MC	MoWT	Administrative expenditure (Gulu MC)
13	Involuntary Resettlement	• To establish a complain and grievance management committee of the project during the designing stage. • To held meetings with affected persons and reflect their opinion as much as possible to the RAP (Resettlement Action Plan).	Gulu MC	MoWT	MoWT: (Procurement of consultant) Gulu MC: Implementation of RAP
15	Local economy, employment	• To conduct a sensitization meeting with local community, and make a consensus. • To reflect the information into the document which will be referred by the Contractor, so that conflicts between the Contractor and local community will be prevented.	Gulu MC, Sub-county, District	MoWT	Administrative expenditure
18	Public infrastructures and services	• To held meeting with following organizations and draw up relocation plan of utility lines, cables, pipes: - Electric pole and overhead wires: UMEME - Power line: UMEME - Fiber cable: UTL/MTN - Water supply: MWSC - Sewerage: MWSC • To give inhabitants advance notice of temporary cutoff schedule of the utility lines.	Gulu MC with support of respective companies	MoWT	Administrative expenditure (Gulu MC)
28	Sanitation	• To reconstruct alternative toilets or establish temporarily toilets if the toilet on the northern exit of taxi park were totally demolished due to road construction.	Gulu MC	MoWT	Administrative expenditure (Gulu MC)
<Construction Phase>					
1	Air Pollution	• To pay attention to the dust control during the construction nearby housing area for example: - Sprinkling the working surfaces with water at least twice a day until the roads is paved. - Instructing drivers and workers not leave their vehicle or equipment idling.	Contractor	Contractor	Construction cost

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Adverse Impacts		Proposed Mitigation Measures	Implementing Organizations	Responsible Organizations	Budget
2	Water Pollution	<ul style="list-style-type: none"> To prepare a series of materials safety use procedures for oil, lubricants and chemicals should be obtained from the suppliers and storage and handling requirements stipulated in the Material Safety Data Sheet (MSDS). To use drip trays when draining oil from plant and equipment. To dispose wastewater and sewerage from the contractor's camp properly. 	Contractor	Contractor	Construction cost
3	Solid Wastes and Soil Contamination	<ul style="list-style-type: none"> To reuse excavated materials as fillings in the earth fillings and back-fillings. To dispose solid wastes and industrial waste at the licensed disposal site. 	Contractor	Contractor	Construction cost
5	Noise and Vibrations	<ul style="list-style-type: none"> To limit construction hours only day time if construction site is close to the residential area. To select low noise machinery if available. To do regular maintenance of the machinery and prevent an abnormal blating noise and vibration. To provide noise protectors such as ear muffs and plugs to the workers and employers who closely work with noisy machines. 	Contractor	Contractor	Construction cost
10	Ecosystem	<ul style="list-style-type: none"> To replant trees on the roadside if logged out / cut down for the road construction. To monitor change of ecosystem which may caused due to road construction near Pece River. 	Contractor	Contractor	Construction cost
17	Water Use	<ul style="list-style-type: none"> To give inhabitants advance notice of construction schedule of water pipeline, through the LC1 chairperson. To closely communicate with Uganda National Water and Sewerage Corporation (NWSC), and avoid miscommunication of water supply and construction schedule. 	Contractor with support of LC1 chairperson and NWSC	Contractor	Construction cost
18	Public infrastructures and services	<ul style="list-style-type: none"> To confirm progress of the relocation plan of utility lines, cables, pipes which supposed to be done by the GOU before commencement of the construction. As necessary, following organizations shall be contacted through the Gulu-MC: <ul style="list-style-type: none"> - Electric pole and overhead wires: UMEME - Power line: UMEME - Fiber cable: UTL/MTN - Water supply: MWSC - Sewerage: MWSC To give inhabitants advance notice of temporary cutoff schedule of the utility lines. 	Contractor with support of Gulu MC, UMEME, UTL, and MTN	Contractor	Construction cost
24	Gender	<ul style="list-style-type: none"> To take necessary curative measures if any gender/ children's right issues handled by Complain and Grievance Management Committee (CGMC) are confirmed. To make sure not obstructing children's walkway to and from their schools. To prohibit child labors from working at construction site. 	Contractor with support of Gulu MC, and CGMC	Contractor	Construction cost
25	Children's Right				

Adverse Impacts		Proposed Mitigation Measures	Implementing Organizations	Responsible Organizations	Budget
26	Hazards(Risk) Infectious diseases such as HIV/AIDS and Malaria	<ul style="list-style-type: none"> To request HIV/AIDS focal person of Gulu MC to give workers a sensitization workshop regarding risk of infectious diseases such as HIV/AIDS. To provide condoms to the workers directly or indirectly i.e. putting it in the washroom night clubs, hotels, or bars. 	Contractor with support of Gulu MC	Contractor	Construction cost
27	Working conditions, Occupational safety	<ul style="list-style-type: none"> To provide adequate safety training and education to the employees. To equip workers with necessary accessories such as helmets, earmuffs, gloves, goggles, etc. To maintain heavy equipment properly. To make sure enough number of first-aid kits (FAK) are available on site. To prepare an Emergency Response Plan (ERP) that can be included in the Safety Manual. 	Contractor	Contractor	Construction cost
28	Sanitation	<ul style="list-style-type: none"> To establish enough number of temporary toilets in the camp yards and construction sites. 	Contractor	Contractor	Construction cost
29	Accident	<ul style="list-style-type: none"> To announce construction schedule of specific roads to the community well in advance. To set traffic signposts and flagmen/women in particular recognized black spots, well-trafficked site, and blind curve, etc. To set cat's eye and/or rumble strips on the pedestrian crossing especially on the Road #2 Acholi Rd., #17 Jomo Kenyatta Rd., and #24 Sir Samuel Rd. where close to the school, church, mosque, orphan's house, etc. To construct roundabouts if enough area of land is available. 	Contractor	Contractor	Construction cost
<Post-Construction (Operation) Phase>					
2	Water Pollution	<ul style="list-style-type: none"> To stop usage of boreholes if water quality tested by the periodical environmental monitoring exceed the environmental limit of the country. To provide alternative water source to the affected persons. 	Gulu MC	MoWT	Administrative expenditure
10	Ecosystem	<ul style="list-style-type: none"> To regularly monitor change on ecosystem, and take necessary action if significant changes are found. 	Gulu MC	MoWT	Administrative expenditure
11	Hydrological Situation	<ul style="list-style-type: none"> To conduct flood countermeasures if a risk of flood due to change of hydrological situation of Pece River is confirmed. 	Gulu MC	MoWT	Administrative expenditure
23	Landscape	<ul style="list-style-type: none"> To transplant trees along the streets as necessary. 	Gulu MC	MoWT	Administrative expenditure
28	Sanitation	<ul style="list-style-type: none"> To reconstruct alternative toilets or establish temporarily toilets if the toilet on the northern exit of taxi park were totally demolished due to road construction. 	Gulu MC	MoWT	Administrative expenditure

Adverse Impacts		Proposed Mitigation Measures	Implementing Organizations	Responsible Organizations	Budget
29	Accident	<ul style="list-style-type: none"> To do periodical maintenance work of speed brake facilities such as cat's eye, rumble stripes, etc. To review a record of annual traffic accidents registered by traffic police, and reflect the findings to the safety transportation plan of following years. 	Gulu MC	MoWT	Administrative expenditure
Total Budget (USD)					To be Estimated

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Omwe

<Environment Monitoring Plan (EMoP)>

Environmental Items	Monitoring Items	Monitoring Methodology and Frequency	Monitoring Place	Implementing Organization	Responsible Organization
<Pre Construction Phase>					
Solid Wastes	Record of dumping	<ul style="list-style-type: none"> ➤ 1/demolition time: Daily records of disposal at licensed site 	<ul style="list-style-type: none"> ➤ Each demolition site 	Gulu MC	MoWT
Noise and Vibration	Noise and Vibration level	<ul style="list-style-type: none"> ➤ 1/demolition time: Noise and Vibration meter 	<ul style="list-style-type: none"> ➤ Each demolition site 	Gulu MC	MoWT
Local economy and employment	Records of meetings held, Records of CGMC meeting	<ul style="list-style-type: none"> ➤ 1/meeting time: Records of meeting with local community ➤ 1/month; Records of CGMC meeting 	<ul style="list-style-type: none"> ➤ Quarry site 	Gulu MC	MoWT
Involuntary Resettlement	RAP	<ul style="list-style-type: none"> ➤ 1/month: Progress of resettlement and demolition supposed to be done based on the RAP 	<ul style="list-style-type: none"> ➤ All PAPs and PAHs 	Gulu MC	MoWT
Public infrastructures and services	Relocation Plan of Utilities	<ul style="list-style-type: none"> ➤ 1/month: Progress of relocation of utilities 	<ul style="list-style-type: none"> ➤ Road construction sites 	Contractor with supports of UMEME, UTL/MTN, MWSC	MoWT
Sanitation	Existence of toilet or not	<ul style="list-style-type: none"> ➤ 1/installation time: Record of installation of alternative/new toilets (Photo, condition, and location should be registered) 	<ul style="list-style-type: none"> ➤ Taxi Park 	Gulu MC	MoWT
<Construction Phase>					
Air pollution	Dust	<ul style="list-style-type: none"> ➤ 1/month: Visual observation ➤ 1/month: Interviews to roadside inhabitants and LCI ➤ 1/month: Review a record of CGMC 	<ul style="list-style-type: none"> ➤ The most exposed inhabited sites like local market or shops, along the roads 	Contractor	Contractor
Water pollution	Suspended Solids, Oil, BOD	<ul style="list-style-type: none"> ➤ 1/month: Water quality test ➤ 1/month: Interview to the users of Pece River water 	<ul style="list-style-type: none"> ➤ Pece River concerned by construction yard or box culvert construction 	Contractor	Contractor
Solid wastes and soil contamination	Volume of surplus soil and solid wastes dumped	<ul style="list-style-type: none"> ➤ 1/month: Daily records of disposal at licensed site 	<ul style="list-style-type: none"> ➤ Construction yard ➤ Road and drainage construction site 	Contractor	Contractor
Noise and Vibration	Noise and vibration level	<ul style="list-style-type: none"> ➤ 1/month: Noise and Vibration test ➤ 1/month: Interview to roadside inhabitants ➤ 1/month: Daily records of use of noise protectors by workers 	<ul style="list-style-type: none"> ➤ The most exposed inhabited sites like local market, shops, or residents near the camp or construction sites ➤ Construction site 	Contractor	Contractor
Ecosystem	-Number of trees cut down/ replanted -Changes on ecosystem	<ul style="list-style-type: none"> ➤ 1/months: Daily records of tree logged out/ replanted ➤ 1/month: Interview to Environmental officer of Gulu MC and inhabitants living near the riverside. 	<ul style="list-style-type: none"> ➤ Roadside ➤ Pece Riverside 	Contractor	Contractor

Environmental Items	Monitoring Items	Monitoring Methodology and Frequency	Monitoring Place	Implementing Organization	Responsible Organization
Water Use	Record of complain and grievance management	<ul style="list-style-type: none"> ➢ 1/month: Interview to users ➢ 1/month: Visual observation ➢ 1/month: Records of monthly meeting of CGMC 	<ul style="list-style-type: none"> ➢ Construction sites near the boreholes, Pece River, and tap water. 	Contractor	Contractor
Local economy and employment	Records of CGMC meeting	<ul style="list-style-type: none"> ➢ 1/month; Records of CGMC meeting 	<ul style="list-style-type: none"> ➢ Quarry site ➢ Construction site 	Contractor	Contractor
Public infrastructures and services	-Daily records of cutoff -Record of CGMC	<ul style="list-style-type: none"> ➢ 1/month: Daily records of both scheduled and unscheduled cut off of utility lines ➢ 1/month: Records of CGMC meeting 	<ul style="list-style-type: none"> ➢ All project sites 	Contractor with supports of UMEME, UTL/MTN, MWSC	Contractor
	-Number of traffic accident -Record of training to workers	<ul style="list-style-type: none"> ➢ 1/month: Records of car accidents including presence or absence of traffic controller, car signs, barricade, etc. ➢ 1/month: Records of safety instruction to workers such as risk of overloading, high speed drive, etc. 	<ul style="list-style-type: none"> ➢ All project sites 	Contractor with support of traffic police as necessary	Contractor
Gender and Children's Right	Record of CGMC meeting	<ul style="list-style-type: none"> ➢ 1/month: Minutes of CGMC's monthly meeting 	<ul style="list-style-type: none"> ➢ All project sites 	Contractor	Contractor
Hazards(Risk) Infectious diseases such as HIV/AIDS and Malaria	Record of a sensitization workshop to workers Distribution record of condom	<ul style="list-style-type: none"> ➢ 1/month: Records of sensitization workshop to the employees by HIV/AIDS focal person of Gulu MC ➢ 1/month: Records of distribution of condom and use or not 	<ul style="list-style-type: none"> ➢ Camp yard 	Contractor	Contractor
Working Conditions, Occupation Safety, and Accident	Number and degree of accident	<ul style="list-style-type: none"> ➢ 1/month: Record of accidents at working sites ➢ 1/month: Presence of safety tools on workers' hands ➢ 1/month: Presence of FAK ➢ 1/month: Presence of ERP and Safety manual ➢ 1/month: Log of safety instruction to the workers ➢ 1/month: Records of maintenance of heavy equipment. 	<ul style="list-style-type: none"> ➢ All project sites 	Contractor	Contractor
Sanitation	Number of temp. toilets	<ul style="list-style-type: none"> ➢ 1/month: Record of establishing enough number of temporarily toilets in the camp yards and construction sites. 	<ul style="list-style-type: none"> ➢ Camp yard and Construction sites 	Contractor	Contractor
Accident	Record of announcement , traffic operator, signposts	<ul style="list-style-type: none"> ➢ 1/month: Interview to inhabitants whether construction schedule was announced in advance or not ➢ 1/month: Record of safety instruction to the employees ➢ 1/month: Record of traffic operators, signposts, and barricades 	<ul style="list-style-type: none"> ➢ All project sites 	Contractor	Contractor
<Post-Construction (Operation) Phase>					
Air pollution	Dust	<ul style="list-style-type: none"> ➢ 1/3months: Interview to inhabitants (3 years) 	<ul style="list-style-type: none"> ➢ At random from project targeted roads 	Gulu MC	MoWT

Environmental Items	Monitoring Items	Monitoring Methodology and Frequency	Monitoring Place	Implementing Organization	Responsible Organization
Water pollution	EC, pH, Fe, BOD, NH4 ⁺ , COD, Oil	<ul style="list-style-type: none"> ➤ 1/3 months: Simplified water quality test (3 years) ➤ 1/3months: Interview to water users (3 years) ➤ 1/3months: Record of CGMC's monthly meeting (3 years) 	<ul style="list-style-type: none"> ➤ Boreholes and Pece River where people using water 	Gulu MC	MoWT
Ecosystem	Visual change of ecosystem	<ul style="list-style-type: none"> ➤ 1/3months: Visual observation (3 years) ➤ 1/3months: Interview to inhabitants (3 years) 	<ul style="list-style-type: none"> ➤ Pece River and its basin 	Gulu MC (Environment)	MoWT
Hydrological situation	Number of days roads sunk in the flood water	<ul style="list-style-type: none"> ➤ 1/3months: Interview to inhabitants (3 years) 	<ul style="list-style-type: none"> ➤ Box Culvert in Gulu Ave. (#7) and Awere Rd. (#13) ➤ Residents near the Pece River 	Gulu MC (Engineering)	MoWT
Public infrastructures and services	Accessibility, Comfortability	<ul style="list-style-type: none"> ➤ 1/year: Interview to inhabitants (3 years) 	<ul style="list-style-type: none"> ➤ At random from project targeted roads 	Gulu MC (Engineering)	MoWT
Landscape	Number of replanted tree seedlings growing	<ul style="list-style-type: none"> ➤ 1/year: Survey number and growth condition of replanted tree seedlings (3 years) ➤ 1/year: Interview to inhabitants (3 years) 	<ul style="list-style-type: none"> ➤ Jomo Kenyatta Rd. (#17) ➤ At random from project targeted roads 	Gulu MC (Environment)	MoWT
Sanitation	Condition of toilets	<ul style="list-style-type: none"> ➤ 1/year: Cleaning and maintenance condition of the toilet (3 years) ➤ 1/year: Interview to users (3 years) 	<ul style="list-style-type: none"> ➤ Taxi Park (#22) 	Gulu MC (Health)	MoWT
Accident	Number of accidents New traffic safety system	<ul style="list-style-type: none"> ➤ 1/year: Traffic accident data from traffic police (3 years) ➤ 1/year: Photos and records of newly established traffic safety system such as cat's eye, ramble strips, roundabout, etc. 	<ul style="list-style-type: none"> ➤ All project roads 	Gulu MC (Engineering)	MoWT
Maintenance	Maintenance records	<ul style="list-style-type: none"> ➤ 1/year: Records of maintenance work (3 years) 	<ul style="list-style-type: none"> ➤ All project roads 	Gulu MC (Engineering)	MoWT

Annex 11 Environmental and Social Monitoring Form
Draft Monitoring Form (Pre-Construction Phase)

Reporting Period (Year and Month): _____

Reporter (MOWT and GMC): _____

Frequency of Reporting: Monthly

I. Pollution

3. Waste

Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
Solid waste management at environmentally licensed site			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B
Reuse of the excavated soils as filling materials			Monthly	<input type="checkbox"/> C
Training to the employee regarding the waste management			Monthly	

5. Noise and Vibrations

Item	Unit	Measured value (Mean)	Measured value (Max.)	Standards in Uganda	Referred intl./3 rd country standards (Japan)	Location	Frequency	Evaluation
Noise Level	dB			70dB(A)	65dB(A)	Construction sites where relocating pipes and utility lines	Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
Vibration Level	dB			N/A	70dB(A)			

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II. Social Environment (except for the Involuntary Resettlement)

Item	Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
18. Social infrastructure and services	Establishment of the relocation plan of the utility line and pipe			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
	Advance notice to the inhabitants about the relocation schedule			Monthly	
	Record of the complain and grievance management			Monthly	
29. Accident	Establishment of the barricade, flagmen around the construction sites			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
	Record of the accident and countermeasures			Monthly	

Evaluation: "A" = Confirmed as no problem; "B" = To be re-examined; "C" = To be solved

III. Social Environment (Involuntary Resettlement)

1. Public Consultations

No	Date	Place	Comments of the consultation/ main comments and answers
1			
2			

2. Resettlement Activities

Resettlement Activities	Planned Total	Unit	Progress in Quantity		Progress in %		Expected date of completion	Responsible organization
			Till the last month	Up to the this month	Till the last month	Up to the this month		
1.Preparation of ARAP								MOWT
1-1.Employment of Consultant	3	M/M						MOWT
1-2 Establishment of Complain and Grievance Management Committee								GMC
1-3.Implementation of Census Survey including socio-economic survey								Consultant employed by MOWT
1-4.Approval of ARAP			Date of Approval:					Ministry of Land
2.Finalization of PAPs List								Consultant employed by MOWT
3.Progress of completion of payment								
3-1. Muslim cemetery	1	Set						GMC
3-2. Drainage outlet No.4	1	PAH						GMC
3-3. Kidere quarry (if selected)	TBD	PAP						Contractor
4.Progress of land acquisition								

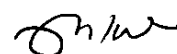
4-1. Muslim cemetery	606	m ²						GMC
4-2. Drainage outlet No.4	50	m ²						GMC
5. Progress of Relocation of PAPs								
5-1. Drainage outlet No.4	1	PAH						GMC

3. Record of Complain and Grievance Management

No	Date	Complain and Grievance from PAPs	Result of management
1			
2			
3			
4			



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Draft Monitoring Form (Construction Phase)

Reporting Period (Year and Month): _____

Reporter (Contractor): _____

Frequency of Reporting: Monthly

I. Pollution

1. Air Pollution

(1) Measurement

Item	Unit	Measured value (Mean)	Measured value (Max.)	Standards in Uganda	Referred intl./3 rd country standards (Kenya)*1	Location	Frequency	Evaluation
SO ₂	µg/m ³ (24h)			N/A	SOx: 125 µg/m ³ (24h)	3 locations on the roadside	Quarterly	<input type="checkbox"/> A
CO	mg/m ³ (24h)			N/A	CO: 5.0 mg/m ³ (8h)			<input type="checkbox"/> B
NO ₂	µg/m ³ (24h)			N/A	NOx: 150 µg/m ³ (24h)			<input type="checkbox"/> C
TSP	µg/m ³ (24h)			N/A	SPM: 500 µg/m ³ (24h)			
Pb	µg/m ³ (24h)			N/A	1.5 µg/m ³ (24h)			

*1: The Environmental Management and Co-operation Act (1999)

(2) Observation & Hearing

Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
Sprinkling of water on the road in the construction site			Monthly	<input type="checkbox"/> A
No idling of equipment and machinery in the construction site			Monthly	<input type="checkbox"/> B
Physical observation of the dust around the construction sites			Monthly	<input type="checkbox"/> C

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Driving speed of the construction machinery and vehicle in the construction sites			Monthly
Usage of dust cover sheet on the trucks			Monthly
Usage of dust control equipment at quarry plant			Monthly

2. Water Pollution

Item	Unit	Measured value (Mean)	Measured value (Max.)	Standards in Uganda	Referred intl. standards (WHO) *3	Location	Frequency	Evaluation
pH	---			6.0-8.0*1 6.5-8.5*2	N/A	Pece River and 3 boreholes near the construction sites	Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
EC	μS/cm			2500μS/cm*2	N/A			
BOD	mg/l			50mg/l *1	N/A			
COD	mg/l			100mg/l *1	N/A			
Oil	mg/l			10mg/l *1	N/A			
Iron	mg/l			10mg/l *1 1mg/l *2	N/A			
Ammonia	mg/l			10mg/l *1 1mg/l *2	N/A			
Temp	°C			20-35°C *1 25°C for *2	N/A			
Turbidity	mg/l			Compare the data between upstream and downstream MoFPE D the construction point	N/A	Up/down stream MoFPE D the construction sites in the Pece River		

*1: The National Environmental (Standards for Discharge of effluent into water or on land regulations (1999), *2: Ugandan Standard for drinking water (2008), *3: Guidelines for drinking water quality, 4th Edition (WHO, 2011)

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3. Waste

Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
Solid waste management at environmentally licensed site			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B
Reuse of the excavated soils as filling materials			Monthly	<input type="checkbox"/> C
Training to the employee regarding the waste management			Monthly	

4. Soil contamination

Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
Usage of oil tray at the construction site			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

5. Noise and Vibrations

Item	Unit	Measured value (Mean)	Measured value (Max.)	Standards in Uganda	Referred intl./3 rd country standards (Japan)	Location	Frequency	Evaluation
Noise Level	dB			70dB(A): Road const., 114dB(C):Blasting	65dB(A):Road Const. 85dB: Const. *1	Road construction site, asphalt plant, and quarry plant	Quarterly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
Vibration Level	dB			N/A	70dB(A)			

*1: less than 65dB of noise limitation is applied for the daytime noise by traffic in the area categorized as "C" where having commercial, industrial, and living facilities in Japan. Specific standards for the blasting noise are not established, but general construction noise limit is not more than 85dB, while limitation value recommended by the Japan Explosives Industry Association is not more than 100dB.

II. Natural Environment

10. Ecosystem

Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
Interview to the inhabitants living along the Pece River about significant changes on the ecosystem identified by them.			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

III. Social Environment

Item	Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
16. Land use and local resource	Minutes of the sensitization workshop with community regarding the condition of the payment, duration of the operation of the aggregate plant etc.			Month when conducted the sensitization workshop	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
17. Water use	Advance notice to the inhabitants and citizens about temporary cutoff of the water pipe			Month when conducted announcement	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
23. Landscape	Number of trees cut and replanted on the roadsides			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
24. Gender & 25. Children's right	Accessible pass way for the students around the schools			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B
	No child labor who are under 18 years old			Monthly	<input type="checkbox"/> C
26. Infectious disease like HIV/AIDS	Record of the Sensitization workshop to the workers by HIV/AIDS focal persons of GMC			Month when conducted the sensitization workshop	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
	Distribution of condom to the workers			Monthly	
27. Working conditions, and occupation	Record of the safety training to the workers and distribution of the emergency			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B

safety	action plan				<input type="checkbox"/> C
	Distribution of the safety tools to the employees such as goggle, groves, etc.			Monthly	
	Periodical maintenance records of the equipment and machinery			Monthly	
	Allocation of the First Aid Kit (FAK) at construction sites and camp yard			Monthly	
28.Sanitation	Condition of the temporary toilets established in the construction sites and camp yard			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
29.Accident	Records of the accident and countermeasures			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
	Establishment of the barricade, flagmen around the construction sites			Monthly	
	Construction of the traffic safety facilities such as roundabout, cat's eye, rumble strips, bump, etc.			Monthly	
	Safety driving instruction to the drivers by traffic police			Month taken the instruction	
	Overloading of construction materials on the trucks			Monthly	
	Safety measures at quarry sites such as advance notice of blasting by siren, use of blasting mat or sheet.			Monthly when operating crushing plant	
Common	Records of complains and grievance management if any			Monthly	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

Evaluation: "A" = Confirmed as no problem; "B" = To be re-examined; "C" = To be solved

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Draft Monitoring Form (Operation Phase)

Reporting Period (Year and Month): _____

Reporter (Gulu Municipal Council): _____

Frequency of Reporting: Biannual

I. Pollution

1. Air Pollution

(1) Observation & Hearing

Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
Hearing to the inhabitants and citizens about their impression on degree of dust storm used to occur before road improvement			Biannual	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
Policing records on unnecessary idling of the car parked/stopped on the roadside			Biannual	

II. Social Environment

Item	Monitoring Item	Monitoring Result	Measures to be taken	Frequency	Evaluation
29. Accident	Record of traffic accident			Biannual	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
	Number of traffics after construction			Biannual	
30. Maintenance	Records of the road maintenance including road safety facilities			Biannual	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

Evaluation: "A" = Confirmed as no problem; "B" = To be re-examined; "C" = To be solved

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