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1. Member List of the Survey Team

First Field Survey (20th October 2017-10th December 2017)

Name	Position	Organization
1 Mr. Kenshiro TANAKA	Team Leader	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
2 Mr. Masahiko TSUNODA	Planning Coordinator	JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
3 Mr. Tomohiko NAKAMURA	Project Manager/Road Planner	KATAHIRA & ENGINEERS INTERNATIONAL (KEI)
4 Mr. Masato WATANABE	Deputy Project Manager/Road Planner	DITTO
5 Mr. Tsuyoshi YAMAJUKU	Road & Pavement Designer	DITTO
6 Mr. Shingo NAGASHIMA	Intersection Designer	DITTO
7 Mr. Satoshi ITOH	Bridge Designer	DITTO
8 Mr. Yoshiro KUNIMASA	Traffic Demand Forecast Specialist	DITTO
9 Mr. Satoshi KUSAKA	Safety Facility Designer	DITTO
10 Mr. Takuji KONO	Hydrological Engineer	DITTO
11 Mr. Takakazu TAMAKI	Construction Planner/Cost Estimator	DITTO
12 Mr. Taiji TANOGUCHI	Environmental and Social Considerations Specialist	DITTO

Second Field Survey (21th January 2018-14th February 2018)

Name	Position	Organization
1 Mr. Kenshiro TANAKA	Team Leader	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
2 Mr. Tomohiko NAKAMURA	Project Manager/Road Planner	KATAHIRA & ENGINEERS INTERNATIONAL (KEI)
3 Mr. Masato WATANABE	Deputy Project Manager/Road Planner	DITTO
4 Mr. Tsuyoshi YAMAJUKU	Road & Pavement Designer	DITTO
5 Mr. Satoshi ITOH	Bridge Designer	DITTO
6 Mr. Takuji KONO	Hydrological Engineer	DITTO
7 Mr. Taiji TANOGUCHI	Environmental and Social Considerations Specialist	DITTO

Third Field Survey (10th November 2018-17th November 2018)

Name	Position	Organization
1 Mr. Kenshiro TANAKA	Team Leader	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
2 Mr. Takashi WACHI	Planning Coordinator	JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
3 Mr. Tomohiko NAKAMURA	Project Manager/Road Planner	KATAHIRA & ENGINEERS INTERNATIONAL (KEI)
4 Mr. Masato WATANABE	Deputy Project Manager/Road Planner	DITTO
5 Mr. Tsuyoshi YAMAJUKU	Road & Pavement Designer	DITTO
6 Mr. Taiji TANOGUCHI	Environmental and Social Considerations Specialist	DITTO

Fourth Field Survey (6th May 2019-18th May 2019)

Name	Position	Organization
1 Mr. Kenshiro TANAKA	Team Leader	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
2 Mr. Takashi WACHI	Planning Coordinator	JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
3 Mr. Tomohiko NAKAMURA	Project Manager/Road Planner	KATAHIRA & ENGINEERS INTERNATIONAL (KEI)
4 Mr. Masato WATANABE	Deputy Project Manager/Road Planner	DITTO
5 Mr. Taiji TANOGUCHI	Environmental and Social Considerations Specialist	DITTO

Second Field Survey (21st January 2018-14th February 2018)

#	Date	Day	JICA				Consultant				Environmental and Social Considerations Specialist
			Team Leader	Project Manager/Road Planner	Deputy Project Manager/Road Planner	Road & Pavement Designer	Bridge Designer	Hydrological Engineer			
1	21-Jan-18	Sun	Mr. Kenjiro TANAKA Tokyo(18:35)SA7139⇒ Hong kong(23:55)SA287⇒	Mr. Tomohiko WAKAMURA Tokyo(18:35)SA7139⇒ Hong kong(23:55)SA287⇒	Mr. Masato WATANABE Tokyo(18:35)SA7139⇒ Hong kong(23:55)SA287⇒	Mr. Tetsuya YAMAJUKU Tokyo(18:35)SA7139⇒ Hong kong(23:55)SA287⇒	Mr. Satoshi ITOH Tokyo(18:35)SA7139⇒ Hong kong(23:55)SA287⇒	Mr. Takaji KOJIO	Mr. Tai TANIGUCHI		
2	22-Jan-18	Mon	Johannesburg(10:00)SA170⇒ Liongwei(12:20)	Johannesburg(10:00)SA170⇒ Liongwei(12:20)	Johannesburg(10:00)SA170⇒ Liongwei(12:20)	Johannesburg(10:00)SA170⇒ Liongwei(12:20)	Johannesburg(10:00)SA170⇒ Liongwei(12:20)				
3	23-Jan-18	Tue		AM: Stakeholder meeting for explanation of interim report for the project by the consultant.	Tokyo(18:35)SA7139⇒ Hong kong(23:55)	AM: Stakeholder meeting for explanation of interim report for the project by the consultant.					AM: Stakeholder meeting for explanation of interim report for the project by the consultant.
4	24-Jan-18	Wed		Site Survey	Hong kong(23:55)SA287⇒Johannesburg	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
5	25-Jan-18	Thu		Site Survey	Johannesburg(10:00)SA170⇒ Liongwei(12:20)	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
6	26-Jan-18	Fri		Site Survey	Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
7	27-Jan-18	Sat		Site Survey	Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
8	28-Jan-18	Sun	Tokyo(18:35)SA7139⇒ Hong kong(23:55)SA287⇒	Report Preparation	Liongwei(13:25)KQ762⇒ Nairobi(18:35)	Report Preparation	Liongwei(02:45)KQ734⇒ Nairobi(05:55)	Report Preparation	Addis Ababa(09:50)ET1877⇒ Liongwei(12:20)		Report Preparation
9	29-Jan-18	Mon	Johannesburg(10:00)SA170⇒ Liongwei(12:20)	Site Survey		Site Survey		Site Survey	Site Survey		Site Survey
10	30-Jan-18	Tue	AM: Courtesy call to PS of MoTPW Meeting with DoR, RA, RFA, LCC PM: Meeting with Department of Debt and Aids		AM: Courtesy call to PS of MoTPW Meeting with DoR, RA, RFA, LCC PM: Meeting with Department of Debt and Aids			Site Survey	AM: Courtesy call to PS of MoTPW Meeting with DoR, RA, RFA, LCC PM: Meeting with Dept. of Debt and Aids		Site Survey
11	31-Jan-18	Wed			AM: MD Discussion with DoR, RA, RFA, LCC			Site Survey	AM: MD Discussion with DoR, RA, RFA, LCC		Site Survey
12	1-Feb-18	Thu			AM: Final discussion with DoR, RA, RFA, LCC and Signing of MD	Nairobi(22:15)KQ734⇒ Liongwei(01:15)	Nairobi(11:05)KQ754⇒ Liongwei(14:40)	Site Survey	AM: Final discussion with DoR, RA, RFA, LCC and Signing of IMD		Site Survey
13	2-Feb-18	Fri	Liongwei(13:05)SA171⇒ Johannesburg(17:20)SA286⇒	Site Survey	Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
14	3-Feb-18	Sat	Hong kong(14:55)SA138⇒Tokyo(20:15)	Liongwei(13:05)SA171⇒ Johannesburg(17:20)SA286⇒	Site Survey	Site Survey	Site Survey	Liongwei(13:05)SA171⇒ Johannesburg(17:20)SA286⇒	Site Survey		Site Survey
15	4-Feb-18	Sun		Hong kong(14:55)SA138	Report Preparation	Report Preparation	Report Preparation	Hong kong(14:55)SA138⇒Tokyo(20:15)	Report Preparation		Report Preparation
16	5-Feb-18	Mon			Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
17	6-Feb-18	Tue			Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
18	7-Feb-18	Wed			Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
19	8-Feb-18	Thu			Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
20	9-Feb-18	Fri			Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Liongwei(13:05)SA171⇒ Johannesburg(17:20)SA286⇒
21	10-Feb-18	Sat			Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Hong kong(14:55)SA138⇒Tokyo(20:15)
22	11-Feb-18	Sun		Liongwei(13:05)SA171⇒ Johannesburg(17:20)SA286⇒	Report Preparation	Report Preparation	Report Preparation	Report Preparation	Report Preparation		Report Preparation
23	12-Feb-18	Mon		Hong kong(14:55)SA138⇒Tokyo(20:15)	Site Survey	Site Survey	Liongwei(13:05)SA171⇒ Johannesburg(17:20)SA286⇒	Site Survey	Site Survey		Site Survey
24	13-Feb-18	Tue			Site Survey	Site Survey	Site Survey	Site Survey	Site Survey		Site Survey
25	14-Feb-18	Wed							Liongwei(13:40)ET1877⇒ Addis Ababa(20:40)		Site Survey

Third Field Survey (10th November 2018-17th November 2018)

#	Date	Day	JICA		Consultant	
			Mr. Kenshiro TANAKA Team Leader	Mr. Takashi WACHI Planning coordinator	Mr. Tomohiko NAKAMURA Project Manager/Road Planner	Mr. Masato WATANABE Deputy Project Manager/Road Planner
1	10-Nov	Sat	EK313 0030-0720 / Flight (Haneda -> Dubai) EK763 1005-1630 / Flight (Dubai -> (Johannesburg)		ET934 0800-2000 / Flight (Conakry -> Addis Ababa) ET308 2315-0120 / Flight (Addis Ababa -> Nairobi)	ET1411 1835-2355 / Flight (Narita -> Bangkok)
2	11-Nov	Sun	SA170 1000-1220 / Flight (Johannesburg -> Lilongwe)		ET051 0615-0730 / Flight (Nairobi -> Lilongwe)	ET629 0115-0600 / Flight (Bangkok -> Nairobi) ET877 0950-1250 / Flight (Nairobi -> Lilongwe)
3	12-Nov	Mon	09:00-10:00 Meeting at JICA Malawi Office 10:30-12:00 Courtesy visit to MoTPW (Principal Secretary and Director of Road) 14:00 Meeting with MotPW Roads Authority, Roads Fund Administration and LCC		09:00-10:00 Meeting at JICA Malawi Office 10:30-12:00 Courtesy visit to MoTPW (Principal Secretary and Director of Road) 14:00 Meeting with MotPW Roads Authority, Roads Fund Administration and	
4	13-Nov	Tue	09:00 M/D Discussion with MotPW Roads Authority, Roads Fund Administration and LCC 15:00 Meeting with Ministry of Finance, Director of Debt and Aid		09:00 M/D Discussion with MotPW Roads Authority, Roads Fund Administration and LCC 15:00 Meeting with Ministry of Finance, Director of Debt and Aid	
5	14-Nov	Wed	09:00 Final Discussion with MotPW and Signing of M/D 15:00 Report to JICA Malawi Office		09:00 Final Discussion with MotPW and Signing of M/D 15:00 Report to JICA Malawi Office	
6	15-Nov	Thu	09:00 Report to Embassy of Japan SA171 1305-1530 / Flight (Lilongwe -> Johannesburg)		09:00 Report to Embassy of Japan Site Survey	
7	16-Nov	Fri	EK764 1850-0505 / Flight (Johannesburg -> Dubai) EK312 0835-2245 / Flight (Dubai -> Haneda)		Site Survey	
8	17-Nov	Sat			ET876 1420-1920 / Flight (Lilongwe -> Addis Ababa) ET672 2315-1945 / Flight (Addis Ababa -> Incheon -> Narita)	

Fourth Field Survey (6th May 2018-18th May 2018)

#	Date	Day	JICA			Consultant		Environmental and Social Consideration Specialist
			Team Leader	Planning Coordinator	Project Manager/Road Planner	Deputy Project Manager/Road Planner	Environmental and Social Consideration Specialist	
1	6-May	Mon	Mr. Kenshiro TANAKA	Mr. Takashi WACHI EK313 0030-2305 / Flight (Haneda -> Dubai)	Mr. Tomohiko NAKAMURA SA7139 1820-2215 / Flight (Narita -> Hong kong) SA0287 2355-0705 / Flight (Hong kong -> Johannesburg)	Mr. Masato WATANABE SA0287 2355-0705 / Flight (Hong kong -> Johannesburg)	Mr. Taiji TANOGUCHI	
2	7-May	Tue		EK763 10005-1625 / Flight (Dubai -> Johannesburg) SA170 1000-1220 / Flight (Johannesburg -> Lilongwe)	SA0287 2355-0705 / Flight (Hong kong -> Johannesburg) SA0170 1000-12220 / Flight (Johannesburg -> Lilongwe)			
3	8-May	Wed			AM: Meeting with JICA Malawi Office PM: DOD Explanation to MOTPW			
4	9-May	Thu		Meeting at JICA Malawi Office Meeting with MoPW, Roads Authority, Roads Fund Administration and LCC			Meeting at JICA Malawi Office Meeting with Local consultant Site Survey	
5	10-May	Fri		M/D Discussion with MoPW (RA, RFA and LCC) Meeting with Ministry of Finance, Director of Debt and Aid Report to JICA Malawi Office			M/D Discussion with MoPW Meeting with Local consultant Site Survey	
6	11-May	Sat	00:30 HND -> 07:20 DXB (EK313) 10:05 DXB -> 16:30 JNB		Documentation of Draft M/D		Site Survey	
7	12-May	Sun	10:00 JNB -> 12:20 LLW (SA170)		Documentation of Draft M/D		Site Survey	
8	13-May	Mon	AM Meeting at JICA Malawi Office AM Courtesy visit to MoPW (Principal Secretary and Director of Road) PM Meeting with MoPW Roads Authority, Roads Fund Administration and LCC		M/D Discussion with MOTPW Documentation (Finalization of M/D)		M/D Discussion with MOTPW Meeting with Environment Section of RA, LCC (EIA and RAP report)	
9	14-May	Tue			Documentation (Finalization of M/D)			
10	15-May	Wed			M/D Discussion with MOTPW Documentation (Finalization of M/D)			
11	16-May	Thu			Final Discussion and Signing on M/D			
12	17-May	Fri	AM Report to JICA Malawi Office AM Report to Embassy of Japan 13:05 LLW -> 15:30 JNB (SA171) 18:50 JNB -> 05:05+1 DXB (EK764)			AM Report to JICA Malawi Office AM Report to Embassy of Japan 12:20 Arrival at the Kamuzu International Airport SA0171 1305-1530 / Flight (Lilongwe -> Johannesburg) SA0286 1735-1240 / Flight (Johannesburg -> Hong kong)		
13	18-May	Sat	05:05 DXB (EK764) 08:35 DXB -> 22:45 HND (EK312)			SA0286 1735-1240 / Flight (Johannesburg -> Hong kong) SA7138 1455-2015 / Flight (Hong kong -> Narita)		

3. List of Parties Concerned in the Recipient Country

(1) Malawi Side

Ministry of Transport and Public Works (MTPW)

Mr. Francis B. Chinsinga	Secretary for Transport and Public Works
Mr. Kelvin N. Mphonda	Deputy Director of Roads
Mr. John Ndola	Chief Engineer
Mr. Hastings Ngoma	Chief Economists
Mr. Edwin Matanga,	Principal Civil Engineer
Mr. Precious Kamndaya	Snr. Civil Engineer
Mr. Jason Mwatsika	Snr. Civil Engineer
Mr. Solomon Chirambo	Snr. Economist

Roads Authority (RA)

Mr. Emmanuel Matapa	Chief Executive Officer
Mr. Sam Kadangwe	Director of Construction
Mr. Sharmey Banda	Senior Planning Engineer
Mr. Jarrison Chilongo	Highway Engineer
Mr. Louis Stephen Siwande	Chief Planning Officer
Mr. Joel longwe	Chief Engineer
Mr. Evas machila	Snr. Material Technician
Mr. Allan Kaziputa	Environmental & Social Planner

Lilongwe City Council (LCC)

Mr. Mankhanga	Acting Chief Executive
Mr. Cleaverson Nyando	Director of Engineering
Mrs. Cathrine Kulemeka	Chief Town Planning Officer
Mr. Hastings Solomon Mumba	Housing and Estates Manager
Mr. Ronald Nyoni	Roads Engineer
Mr. Kamera	Deputy Director of Planning
Mr. Hasting Mumba	Deputy Director of Planning

Roads Fund Administration (RFA)

Mr. Alex Mankhwatha	Director of Finance
Mr. James Dzonzi	Chief Accountant
Mr. Francis Haiya	Director of Audit
Mr. Sangwani Gondwe	Technical Auditor
Mr. Joshua kangwezo	Technical Auditor

Ministry of Lands, Housing and Urban Development

Mr. Robins lukasi	Regional Commissioner
Mrs. Senia Kadzakumanja Banda	Snr. Physical Planning Officer

Ministry of Finance, Economic Planning and Development (MFEPD)

Mr. Madalo M. Nyambose	Director (Debt and Aid Management)
Mr. Davie Wirimad	Deputy Director (Debt and Aid Management)

Ministry of Finance, NAO Support Unit

Mr. Nations Msowoya Head of Unit

Environmental Affairs Department

Mr. Nisile Mwansunga Environmental Officer

Lilongwe Water Board

Mr. Maclenan Guy Nyang'wa Regional Technical Manager
Mr. Ephraim Banda, Infrastructure Planning Engineer
Mr. Emmanuel Sumbwi Planning Engineer/GIS Officer

ESCOM

Mr. Evilasio Mwale Snr. Distribution & Planning Engineer
Mr. Edson Dziwe Distribution & Planning Engineer
Mr. Lyson C Kazembe Land Surveyor

Malawi Telecommunications Limited (MTL)

Mr. Mjilange Mtawali Maintenance Regional Manager
Mr. Hamilton Kachiwanda Drawings Manager

(2) Japanese Side

EMBASSY OF JAPAN IN MALAWI

Mrs. Kae YANAGISAWA Ambassador Extraordinary and Plenipotentiary
Mr. Akihiro MUTO Chief of Economic and Development Cooperation, First Secretary
Mrs. Yoko SAKAGUCHI Economic and Development Cooperation Team, Expert Investigator

JICA MALAWI OFFICE

Mr. Koichi KITO Chief Representative
Mr. Yoshikazu WADA Deputy Resident Representative
Mr. Suguru KUBO Assistant Resident Representative
Mrs. Reiko MATSUI Project Formulation Advisor (Economic Development)
Mr. Kapalamula Godfrey Senior Programme Officer

4. Minutes of Discussions

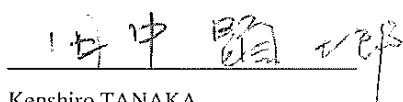
4.1 Minutes of Discussions 1 (M/D1)

26th October, 2017

**Minutes of Discussions
on the Preparatory Survey for the Project for
the Improvement of Major Roads in the City of Lilongwe
(The First Field Survey)**

In response to the request from the Government of Republic of Malawi (hereinafter referred to as “Malawi”), Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as “the Team”) of the Project for the Improvement of Major Roads in the City of Lilongwe (hereinafter referred to as “the Project”) to Malawi, headed by Kenshiro TANAKA, Senior Deputy Director, Team 1, Transportation and ICT Group, Infrastructure and Peacebuilding Department, JICA, from October 21st to October 27th, 2017. The Team held a series of discussions with the officials of the Government of Malawi and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Lilongwe, 26, October, 2017



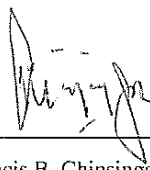
Kenshiro TANAKA

Leader

Preparatory Survey Team

Japan International Cooperation Agency

Japan

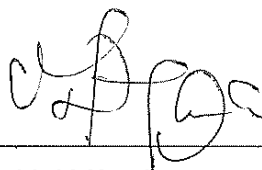


Francis B. Chinsinga

Principal Secretary

Ministry of Transport and Public Works

Republic of Malawi



Madalo M. Nyambose

Director (Debt and Aid Management)

Ministry of Finance, Economic Planning and
Development

Republic of Malawi

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen the traffic capacity by improvement of M1 National Road, thereby contributing to the revitalization of Southern Africa regional economy.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for the Improvement of Major Roads in the City of Lilongwe”.

3. Project site

Both sides confirmed that the site of the Project is the section of the M1 National Road from Mchinji Roundabout to Chidzanja Road Junction (Length is about 6.5km), which is shown in Annex 1.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

4-1. The Ministry of Transport and Public Works (hereinafter referred to as “the MT&PW”) will be the executing agency for the Project. MT&PW shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization charts are shown in Annex 2.

4-2. After the completion of the Project, MT&PW through relevant agencies will be responsible for maintenance and management of the facilities constructed by the Project.

5. Items requested by the Government of Malawi

5-1. As a result of discussions, both sides confirmed that the items requested by the Government of Malawi are as follows:

- 1) Widening of M1 National Road from Mchinji Roundabout to Chidzanja Road Junction: Length =6.5km, Width=25.5m
- 2) Construction of traffic control signal facilities wherever necessary
- 3) Improvement of intersections from Mchinji Roundabout to Chidzanja Road Junction wherever necessary

4) Construction of a parallel bridge along the existing Lilongwe River Bridge on M1 National Road

5-2. JICA will assess the feasibility of the above requested items through the survey and will report the findings to both Governments of Japan and Malawi. The final scope of the Project will be decided by the Government of Japan.

6. Procedures and Basic Principles of Japanese Grant

6-1. The Malawi side agreed that the procedures and basic principles and basic principles of Japanese Grant as described in Annex 3, Annex 4 and Annex 5 shall be applied to the Project.

As for the monitoring of the implementation of the Project, JICA requires Malawi side to submit the Project Monitoring Report, the form of which is attached as Annex 6.

6-2. The Malawi side agreed to take the necessary measures, as described in Annex 7, for smooth implementation of the Project. The contents of the Annex 7 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report.

The contents of Annex 7 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Schedule of the Survey

The Team will proceed with further first field survey in Malawi until 9th, December, 2017. The Team explained the tentative schedule of the Survey as follows:

7-1. The Team will visit Malawi three (3) times in total before finalizing the Preparatory Survey Report;

7-2. JICA will prepare an Interim Report in English and dispatch a mission to Malawi in order to explain its contents around January, 2018 and continue some additional field survey in Malawi;

7-3 JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Malawi in order to explain its contents around September, 2018.

7-4. If the contents of the draft Preparatory Survey Report are accepted and the undertakings for the Project are fully agreed by the Malawi side, JICA will finalize the Preparatory Survey Report and send it to Malawi around November, 2018.

7-5. The above schedule is tentative and subject to change.

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8. Environmental and Social Considerations

8-1. Through the discussions in the preliminary preparatory field survey in July, 2011, both sides confirmed that The JICA Guidelines for Environmental and Social Consideration (April, 2004) is applied to the Project. However, the commencement of the Preparatory Survey has been suspended for a long period of time from the request by Malawi.

From this circumstances, the Team explained that the Project applies the JICA Guidelines for Environmental and Social Considerations (April, 2010) based on the JICA regulation.

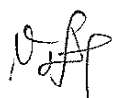
The Malawi side agreed on it and confirmed to give due environmental and social considerations before and during implementation, and after completion of the Project.

8-2. The Project is categorized as “B” from the following considerations: The project is not considered to be a large-scale road and bridge project, is not located in a sensitive area, and has none of the sensitive characteristics under the JICA guidelines for environmental and social considerations (April 2010), it is not likely to have a significant adverse impact on the environment. The guidelines can be downloaded at the following URL.

http://www.jica.go.jp/english/our_work/social_environmental/guideline/pdf/guideline100326.pdf

The Malawi side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment (EIA) /Initial Environmental Examination (IEE) and information disclosure, etc.) and make EIA/IEE report of the Project. The EIA/IEE approval shall be received from the responsible authorities and submitted to JICA by the end of July, 2018.

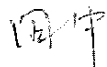
8-3. For the Project that will result in involuntary resettlement, the Malawi side confirmed to prepare a Resettlement Action Plan (RAP)/Abbreviated Resettlement Action Plan (ARAP) and make it available to the public. In addition, the Malawi side confirmed to provide the affected people with sufficient compensation and/or support in accordance with RAP/ARAP, which is consistent with JICA Guidelines for Environmental and Social Considerations (April, 2010), in a timely manner.



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9. Other Relevant Issues

9-1. The Inception Report

The Team explained the Preparatory Survey method based on the Inception Report. The Malawi side understood the contents and accepted the method.

9-2. Assistance to the Preparatory Survey

The Malawi side shall, at its own expense, provide the Team with the following items in cooperation with other organizations concerned


- 1) The submission of the data necessary, information for the survey;.
- 2) The quick response to the questions presented by the survey team;.
- 3) The appointment of the counterparts as coordinators for following activities;
The establishment of the contact and appointment to the affiliated organization required by the survey team;
The convenience grant of the field survey and accompanying visits, the acquisition of the required permission.;
As much as possible for the collection of data and information, aid and advice of the survey;
- 4) To conduct the survey properly, obtain permission to enter private property and restricted places and to take photographs;
- 5) The necessary measures for prompt provision of danger information and ensuring safety of members;
- 6) The required permission to take the limited data, such as maps and documents back to Japan for the appropriate implementation of the survey; and
- 7) The provision of the site office for the survey team.

9-3. Major Undertakings to be taken by Malawi Side

The Malawi side agreed that the following undertakings should be taken by the Malawi side at the Malawi expenses under the Project if implementation of the Project is approved by the Government of Japan;

- (1) To provide tax exemption for construction materials and equipment for the Project.
- (2) The Malawi side agreed those customs duties, internal taxes and other fiscal levies which may be imposed in Malawi are exempted under mutual agreement of Exchange of Notes (E/N).
- (3) If any expenses stated above are caused by some reasons such as the delay of execution of tax exemption, the Malawi side shall pay for it.

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- (4) To secure the lots of land necessary for the implementation of the Project including land for site office, plant yards, material storing yard, motor pool, temporary construction yard and waste disposal site;
- (5) To relocate existing utilities within the Project site;
- (6) To relocate/ demolish existing building(s), vegetation and obstructions if necessary;
- (7) To arrange issuance of license, permission and other necessary procedures for the Project;
- (8) To obtain the royalties/permission for taking raw materials such as stone/rock/filling materials from the quarry/river-bed/borrow pit;
- (9) To conduct traffic controls of existing road for the Project;
- (10) To maintain temporary diversion detour roads;
- (11) To provide security measures for all concerned working for the Project;
- (12) To provide utility services for all concerned working for the Project such as electricity, communication, water and so on; and
- (13) To take a permission necessary for the construction of the bridge at the Lilongwe River area from relevant organizations if necessary.

9-4. The Malawi side requested that another 2km section of M1 from Chidzanja Road Junction to boundary of the city be included in the Survey. The Team responded that the Survey will concentrate on the originally requested 6.5km section and the Malawi side understood.

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 Japanese Grant

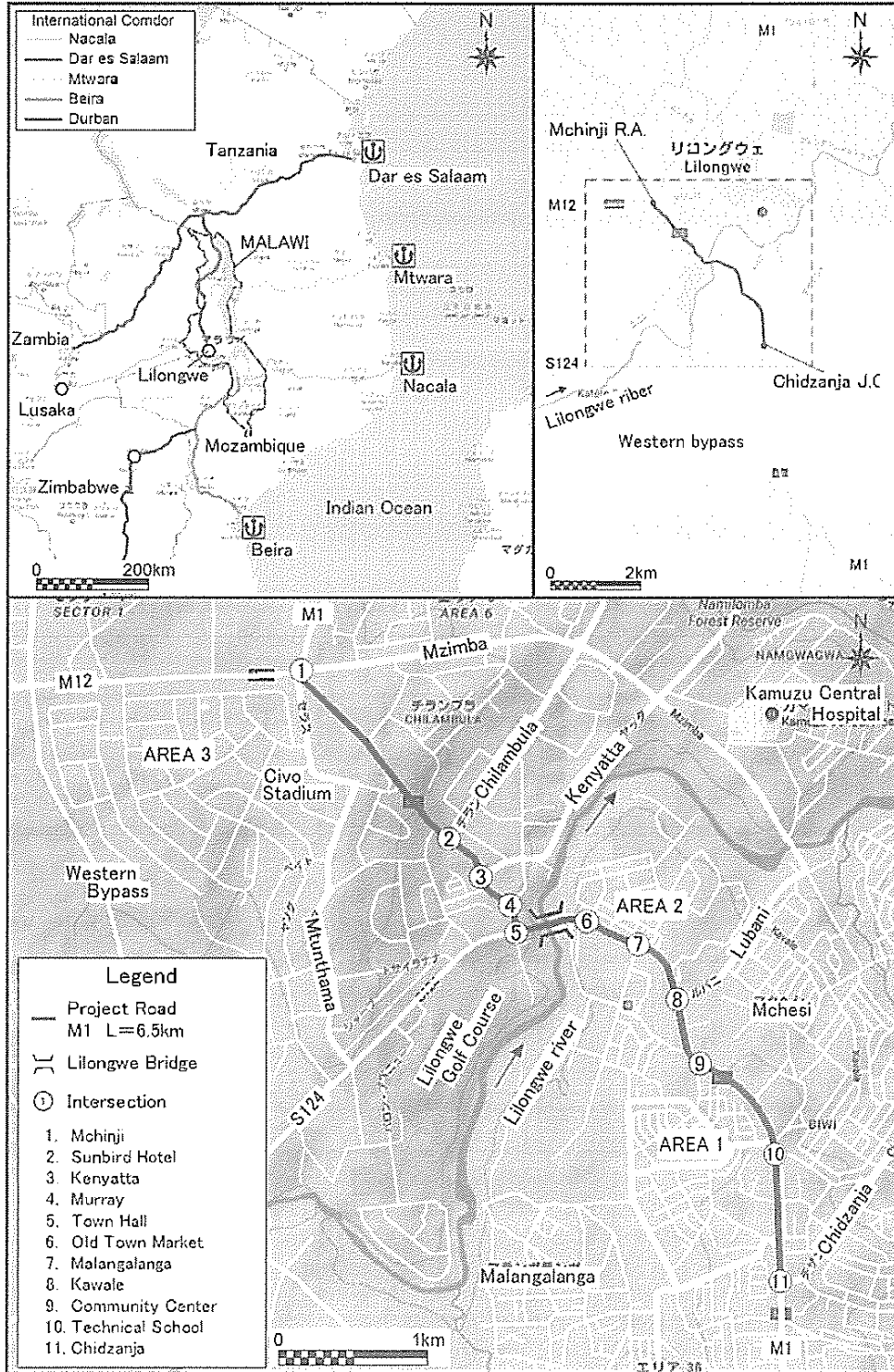
Annex 4 Flow Chart of Japanese Grant Procedures

Annex 5 Financial Flow of Japanese Grant

Annex 6 Project Monitoring Report (template)

Annex 7 Major Undertakings to be taken by Each Government

Annex-1: Project Site



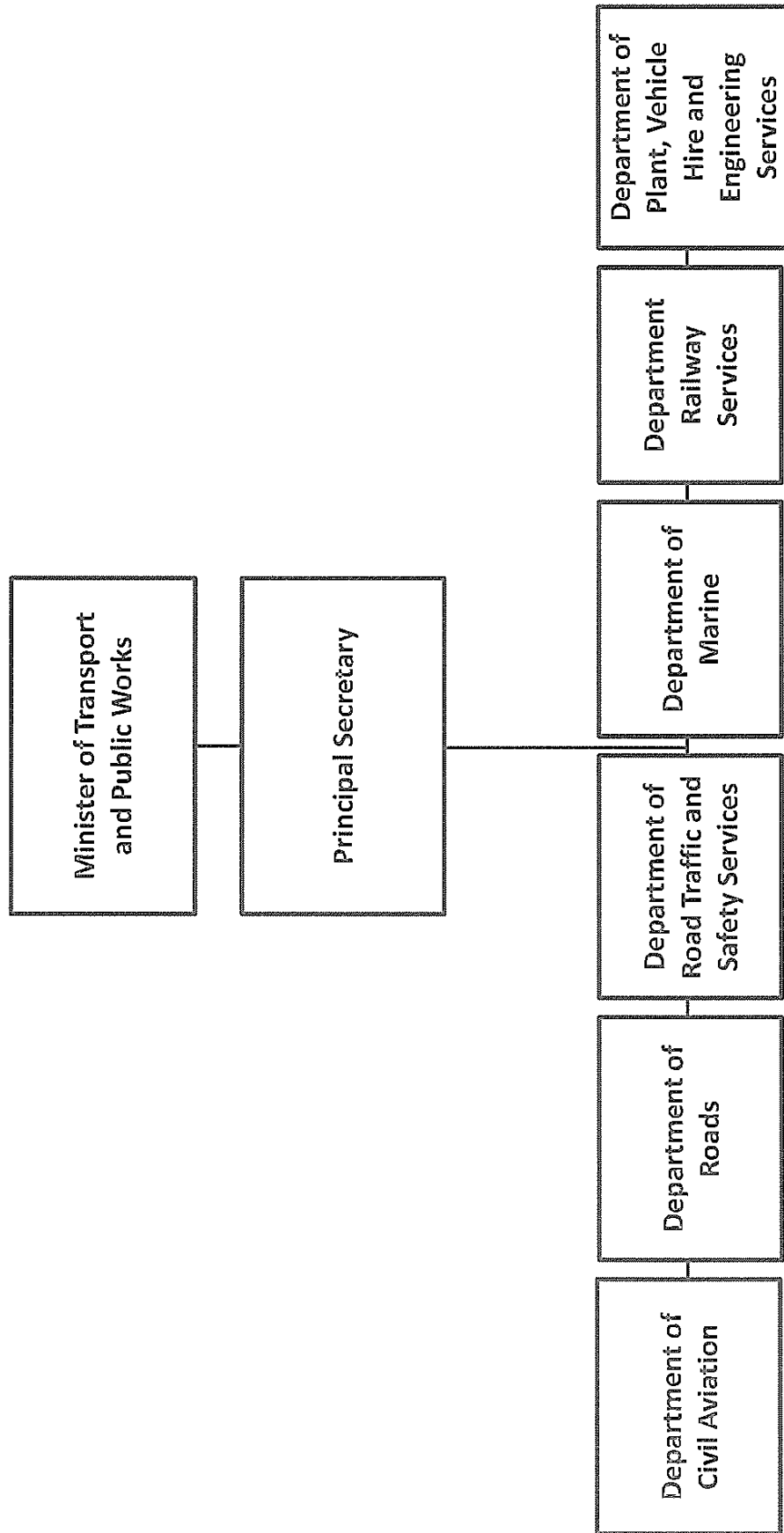
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Organization Chart



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Annex-3: Japan's Grant Aid Scheme

JAPAN'S GRANT AID

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 Grant Aid for Projects for construction of facilities, purchase of equipment, 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:

- 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 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 a 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 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, 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 Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient



country are to be purchased. The Grant Aid 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 Aid Project, the recipient country is required to undertake such necessary measures as Annex-6. 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 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 Aid 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 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"), in principle. JICA will execute the Grant Aid by making payments in Japanese yen, in principle, 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) Social and Environmental Considerations

The Government of the 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.

(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).

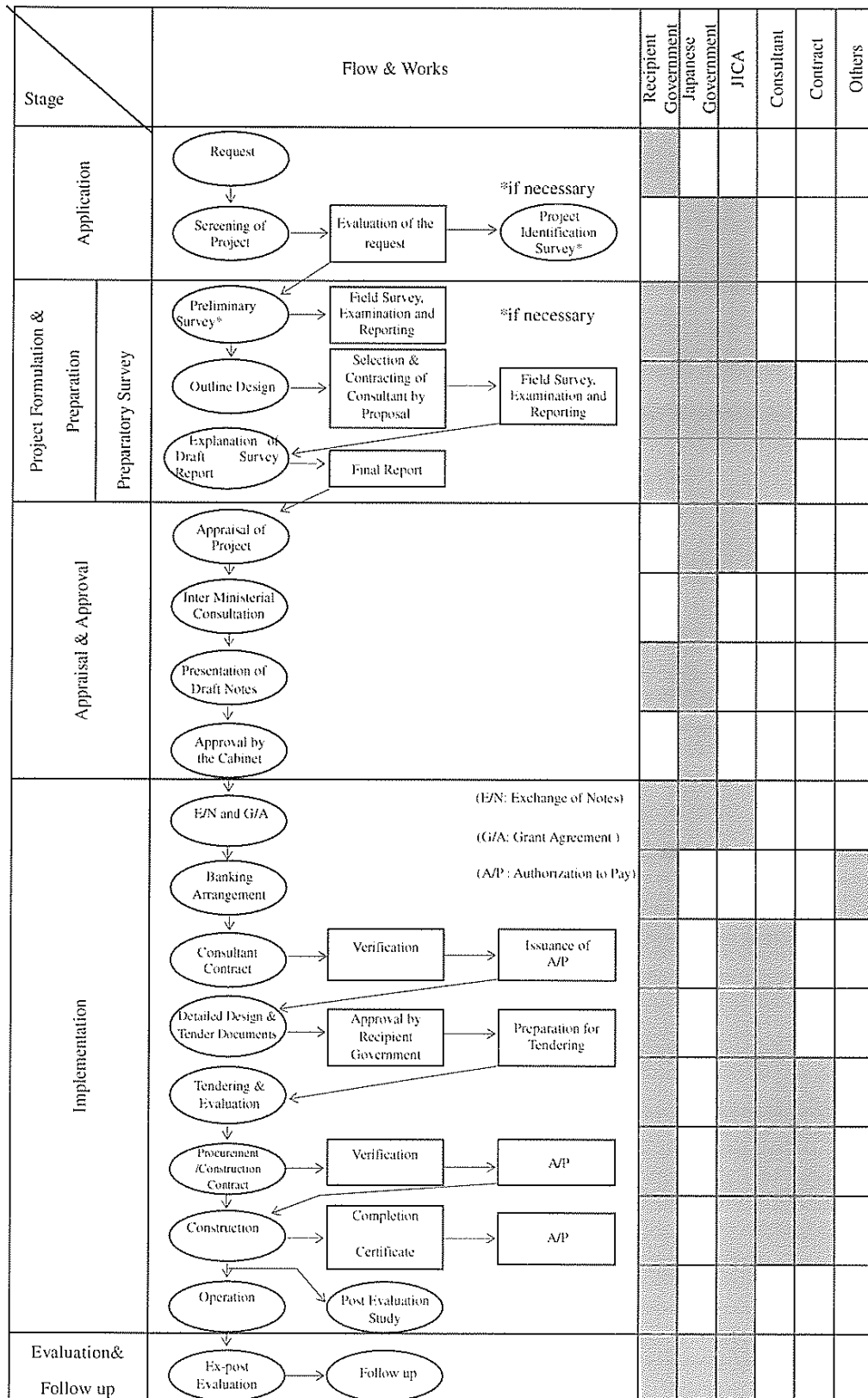
(12) Safety Measures

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

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FLOW CHART OF JAPAN'S GRANT AID PROCEDURES

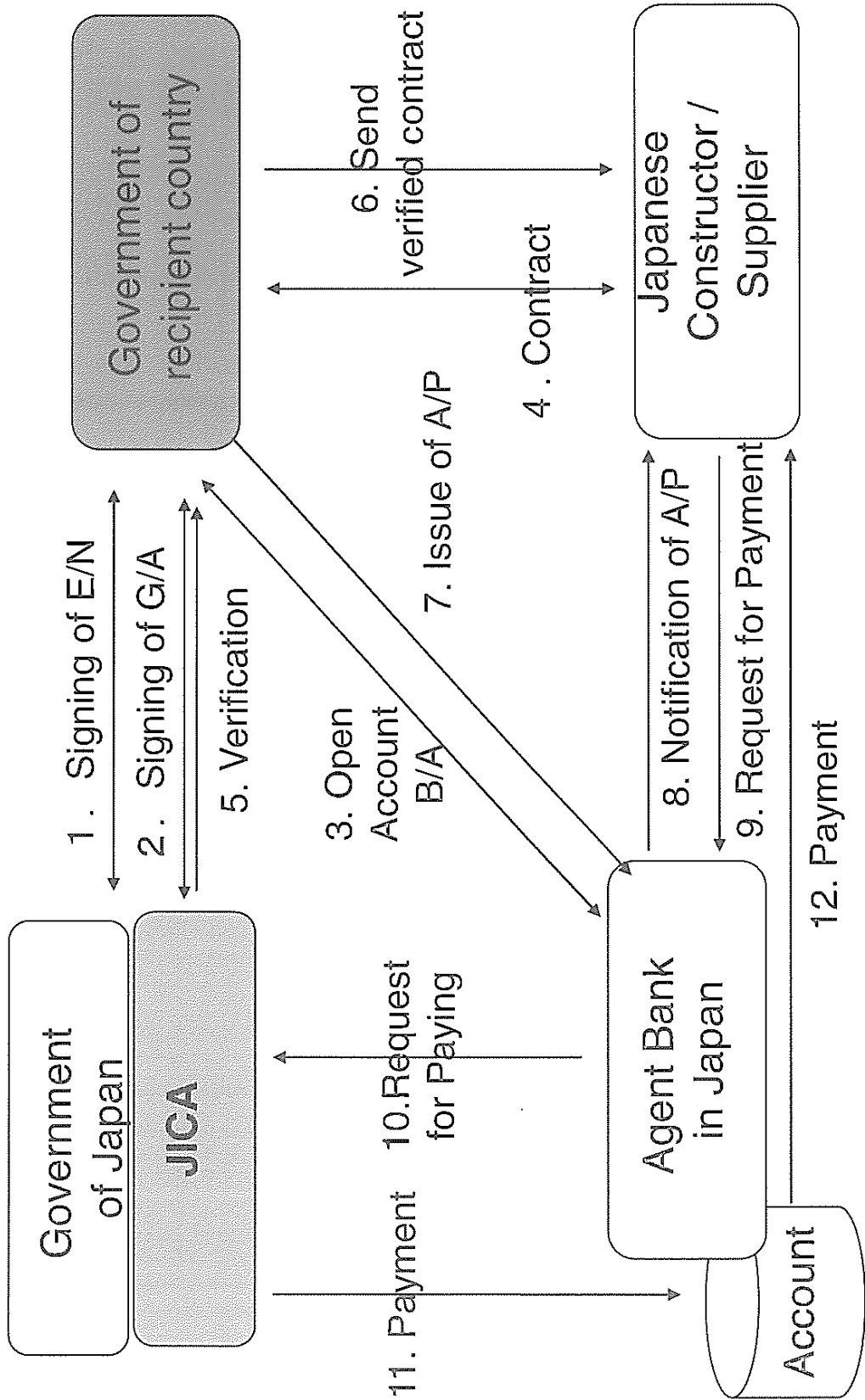


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JICA

Per

Financial Flow of Grant Aid



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Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXXX

Organization Information

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

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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Or

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

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: (P/R and PCR) Attachment(s):Map
-----------------	---	---

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

Items	Original	Actual
(M/D)	(M/D)	(P/R and PCR)

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

(P/R and PCR)

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	
[M/D]	(M/D)		(P/R,PCR) As of (Date of Revision) Please state not only the most updated schedule but also other past revisions chronologically.
Project Completion Date*			

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

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

(P/R and PCR)

2-3 Undertakings by each Government

2-3-1 Major Undertakings
 See Attachment 2.

2-3-2 Activities
 See Attachment 3.

2-4 Project Cost

2-4-1 Project Cost

Table 2-3-1 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)				
Consulting Services	- Detailed design - Procurement Management - Construction Supervision			
Total				

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

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Table 2-3-2 Comparison of Original and Actual Cost by the Government of XX

	Items		Cost (Million USD)	
	Original	Actual	Original	Actual
Total				

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

(P/R, PCR)

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: (P/R and PCR)

2-6 Environmental and Social Impacts

Report based on the agreed environmental checklist and monitoring form (See Attachment 4)

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)

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Original: (M/D)
Actual: (PCR)

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)	
(P/R and PCR)	

5: Evaluation

5-1 Overall evaluation

Please describe your evaluation on the overall outcome of the project.

(PCR)

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.

(PCR)

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Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Monitoring report on environmental and social considerations

Annex-7: Major Undertakings to be taken by Each Government

Major Undertakings to be taken by Recipient Government

1. Before the Tender

NO	Items	Deadline	In charge	Cost	Ref.
1	To approve IEE/EIA	within 1 month after G/A			
2	To implement EIA	before start of the construction			
3	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A			
4	To secure lands 1) right of way for Sta. **+***-Sta. **+*** 2) temporary construction yard and stock yard near the Project area 3) borrow pit and disposal site near the Project area	before notice of the tender document			
5	To obtain the planning, zoning, building permit	before notice of the tender document			
6	To clear, level and reclaim the following sites when needed the site to be confirmed in the DRAFT FINAL REPORT	before notice of the tender document			

2. During the Project Implementation

NO	Items	Deadline	In charge	Cost	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			
	2) Payment commission for A/P	every payment			
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country				
	1) Tax exemption and customs clearance of the products at the port of disembarkation	during the Project			
	2) Internal transportation from the port of disembarkation to the project site	during the Project			
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project			
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 exempted; Such customs duties, internal taxes and other fiscal levies mentioned above include VAT, commercial tax, income tax and corporate tax of Japanese nationals, 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	during the Project			
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			
6	To submit environmental monitoring report to JICA Malawi Office	during the Project			

3. After the Project

NO	Items	Deadline	In charge	Cost	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/Periodic inspection	After completion of the construction			

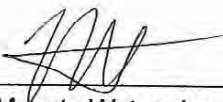
Major Undertakings to be covered by the Grant Aid

No	Items	Deadline	Cost Estimated (Million Japanese Yen)*	
1	To construct roads/bridges (or To procure equipment)		XX,XX	
	- Reconstruction of the road			
	- Reconstruction of the bridge			
	1) To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country			
	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 access roads			
	a) Within the site			
2	To implement detailed design, tender support and construction supervision (Consultant)		YY.YY	
3	Contingencies		ww.ww	
	Total		ZZ.ZZ	


Technical Notes
on the Preparatory Survey for the Project for
the Improvement of Major Roads in the City of Lilongwe

The JICA Preparatory Survey Team for the Project for the Improvement of Major Roads in the City of Lilongwe (hereinafter called the JICA Survey Team) and the Malawi side have confirmed on the items regarding to the plan and design for the target road in Annex. The final decision on the design policy and the scope of the project will be made by the end of the third site survey which is scheduled in August, 2018 through discussions between the Malawi side and the JICA Survey Team in Malawi and also discussions among JICA headquarter, the Ministry of Foreign Affairs of Japan and the JICA Survey Team in Japan. Therefore, the items on the design policy confirmed in the Annex are not the final.

Lilongwe, 1, December, 2017



Masato Watanabe
Deputy Chief Consultant
The JICA Survey Team



John M. L. Ndola
Chief Civil Engineer
Ministry of Transport and Public Works





Annex

1. Function of the Target Road

- The area where the target road is located has been developed as a commercial and business center, and highly populated, therefore there are many vehicles driving or parking and pedestrians on the road especially in daytime. It is observed that vehicles move between the Governmental/Institutional center (around Capital Hill) and the Commercial/Business Center (around the Lilongwe River Bridge) and within the Commercial/Business Center using the target road and many people walk on the target road especially around the Lilongwe River Bridge.
- After the Western Bypass was constructed, vehicles without a purpose to pass through the center of Lilongwe started to use it, while the target road is still being used by long-distance travel/transportation vehicles with a purpose to visit the center of Lilongwe.
- The current role of the target road is mainly **Urban Road** and **Community Road**. It is also recognized that the target road plays a role of **International Trunk Road** although it was replaced by the Western Bypass as a main corridor.

2. Basic Design Conditions

2-1 Design Standard

The design codes which are currently used in Malawi are to be adopted to the design for the project. Also, Japanese design standards or other countries' standards will be used secondarily in consultation with Road Authority.

Road Geometric Design:

Draft Code of Practice for the **Geometric Design of Trunk Roads**, September 1998 (Reprinted July 2001), **SATCC** and Addendum to SATCC (Road Authority in Malawi, March 2015)

Road Pavement Design:

Draft Code of Practice for the **Design of Road Pavements**, September 1998 (Reprinted July 2001), **SATCC**

Bridge and Culvert Design:

Draft Code of Practice for the **Design of Road Bridges and Culverts**, September 1998 (Reprinted July 2001), **SATCC**

Bridge Design Manual, Malawi

2-2 Right of Way (ROW)

ROW of the target road is 67m as declared under "the Town and Country Planning Act".



2-3 Typical Cross Section**2-3-1 Cross-sectional Elements of the Road and Design Speed**

Based on the Addendum to SATCC, the design Class "C2" is adopted for the design of the target road as a road in urban area.

Design speed is adopted to be 50 km/h as stipulated for "C2" in the Addendum to SATCC.

Note: the current speed limit of 60 km/h shall be amended to be 50 km/h.

Functional Classification	Design Class	Design Traffic Flow Range (AADT)*	Typical Surfacing	Road Type	Width (m)		Design Speed / Terrain (km/hr)			Urban/ Semi-Urban	
					Carriageway	Shoulder ¹	Flat	Rolling	Mountain		
Collector	Arterial	C1	11000 - 30000	Paved	Dual carriageway	2x7.40	3.00	120	100	80	50
		C2	11000 - 30000	Paved	Dual carriageway (urban)	2x6.80	(2.00)	-	-	-	50
		C3	11000 - 25000	Paved	4-lane, 2-way	14.20	3.00	120	100	80	50
		C4	5000 - 12000	Paved	2-lane, 2-way	7.40	2.50	120	100	80	50
		C5	1000 - 7000	Paved	2-lane, 2-way	6.80	2.00	100	80	70	50
	Access	C6	500 - 3000	Paved	2-lane, 2-way	6.20	1.50	80	70	60	50
		C7	150 - 500	LVSr	2-lane, 2-way	6.20	1.25	60	50	40	50
		C8	75-150	LVSr	2-lane, 2-way	5.50	1.00	70	60	50	50
		C9	150-500	Unpaved	2-lane, 2-way	9.00	-	60	50	40	50
		C10	50-250	Unpaved	2-lane, 2-way	7.00	-	60	50	40	30

Footway

Standard footway widths are:

Absolute minimum: 1.2m (for bridge decks)

Desirable minimum: 1.5m (two persons can pass each other closely)

Light volume: 2.0m (two persons can pass each other comfortably)

Heavy volume: 3.0m + (space for three persons)

Source: Addendum to SATCC

Recommended widths for cycle facilities

Type	Minimum width (m) Up to 100 cyclists/h	Standard width (m) 100 - 300 cyclists/h	Width for heavy usage (m) Above 300 cyclists/h
Cycleway (separate from carriageway)	2.0	2.5	3.5
Combined cycleway and footway	2.0	3.0	4.5
Cycle lane (one way)	1.5	2.0	2.5

Source: Addendum to SATCC

2-3-2 Proposed Typical Cross-Section

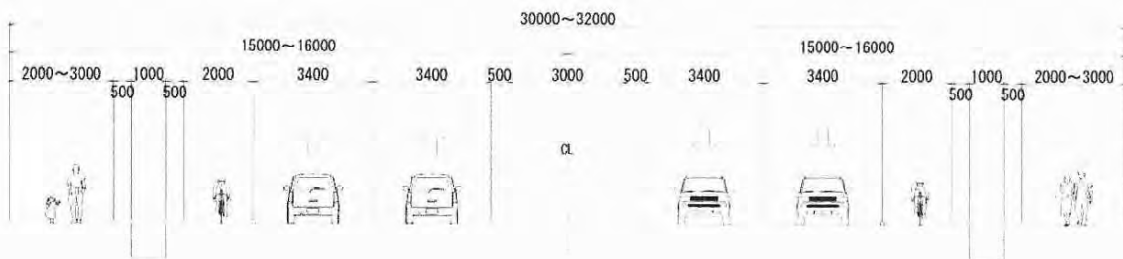
The cross-sectional elements in the typical cross-section of the target road are proposed below considering the land acquisition condition at the built-up areas or non-built-up areas.

Cross-section of 4-lane carriageway with cycleway and footway both sides is basically proposed but the necessary number of carriageway lane, cycleway or footway at each road section will be decided based on the traffic demand analysis and consideration on the amount of undertakings by the Malawi side such as utility relocation and compensation for the resettlement.

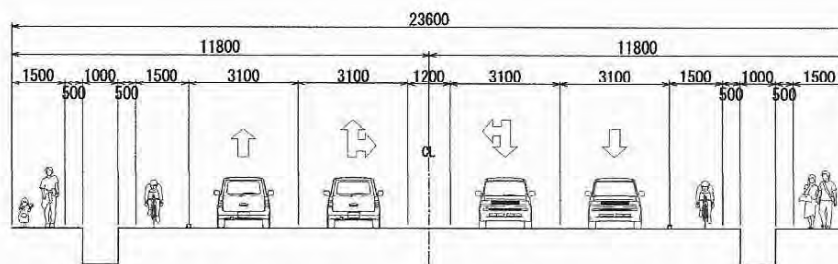
- 1) Carriageway width: 2x6.80 m or 2x6.20 m for built-up areas,
- 2) Median width: 0.0 m to 3.00 m,
- 3) Shoulder width: 0.50 m,
- 4) Cycleway: 1.5 m to 2.0 m both sides and
- 5) Footway: 1.5 m to 3.0 m+ both sides.

Examples of Typical Cross-Section

1) Non-Built-Up Area



2) Built-Up Area



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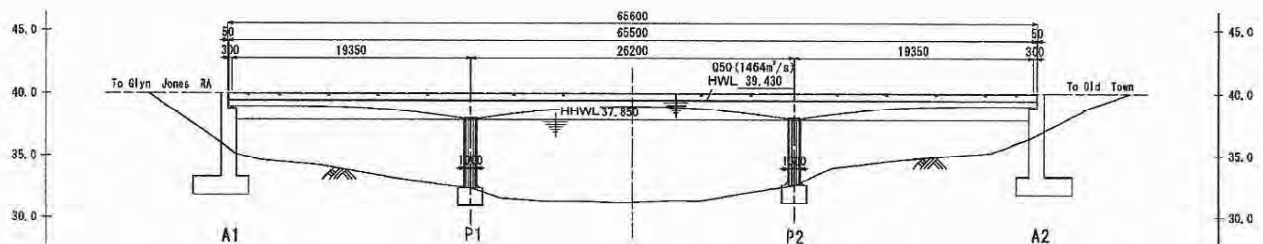
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2-4 Bridge Design

2-4-1 Design High Water Level and Clearance under Bridge Beam

The maximum experienced flood water level (37.850m: HHWL) is almost same as the top of the bridge piers according to the interview survey at the Lilongwe River Bridge. And, the water level of 50 years return period is higher than the maximum experienced flood water level according to the hydrological analysis conducted by the JICA Survey Team. The design high water level (39.430m: HWL) is to be set as same water level as 50 years return period.

The design flood discharge is more than 1,400 m³/s, therefore 1.0 m of the clearance under Bridge Beam to the design water level is to be set according to the Japanese River Structure Standard.



Note: The above-mentioned water levels are measured from the benchmark set by the JICA Survey Team.

Figure: Maximum Experienced Flood Water Level (HHWL), Design Water Level (HWL) and Requirement of Level of Bottom of Beam of Bridge

2-4-2 Replacement of the Existing Bridge

The level of the bottom of the beam of the existing bridge does not meet the requirement of the clearance under the bridge beam set in the previous section in this document.

The existing bridge will be replaced by the new bridge which has adequate width to accommodate necessary road cross-section.

3. Status of Related Projects to the Project

1) Road Widening to 4-lane

No sections are planned to be widened to 4 lanes along M1 except for this Project section.

2) BRT

The BRT Project proposed in Malawi National Transport Masterplan is not necessary to be taken into account for this Project.

4. Procedure and Schedule of EIA and RAP

Year		2017		2018							
Month		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
EIA	Preparation Work	▨									
	Data Collection		▨								
	Preparation of Project Brief			▨							
	Field Survey, Sampling, Analysis			▨	Rainy		▨	Dry			
	Preparation of the EIA Report				▨						
	Public Consultation Meetings			▲	First PCM		▲	Second PCM			
	Acquisition of EIA License from EAD								▨	▲	
RAP	Preparation Work			▨							
	Census Survey / Socio-economic Survey				▨						
	Preparation of aRAP Report					▨					
	Cut off date / Public Consultation Meetings			▲	First PCM / Cut off date		▲	Second PCM			

Period of "Acquisition of EIA License from EAD" is based on Guidelines for Environmental Impact Assessment (December 2007, EAD).

5. Role of Each Organization for the Project

	Japan	MoTPW	LCC	RA	RFA
Preparatory Survey					
Outline Design	✓ Responsible	✓ Delegated Authority (policy direction and oversee)			
EIA Report	✓ Draft preparation	✓ Delegated Authority		✓ Responsible (Comments, Submission, getting Approval)	✓ Fund for RA
RAP/ARAP Report	✓ Draft preparation	✓ Delegated Authority		✓ Responsible (Comments, Submission, getting Approval)	✓ Fund for RA
Implementation					
Resettlement		✓ Delegated Authority	✓ Responsible	✓ Responsible	✓ Fund
Obstacles Relocation		✓ Delegated Authority	✓ Responsible	✓ Responsible	✓ Fund
Detailed Design (Japan's Grant)	✓ Consultant (D/D, Bid Document preparation)	✓ Delegated Authority		✓ Owner	
Construction (Japan's Grant)	✓ Consultant (Supervise) ✓ Contractor (Construction)	✓ Delegated Authority		✓ Owner	

Minutes of Discussions
on the Preparatory Survey for the Project for
the Improvement of Major Roads in the City of Lilongwe
(The 2nd Field Survey)

On the basis of discussions and field survey in Republic of Malawi (hereinafter referred to as “Malawi”) in October, 2017 and subsequent technical examination in Japan, Japan International Cooperation Agency (hereinafter referred to as “JICA”) prepared an Interim Report (hereinafter referred to as “the Report”) on the Project for for the Improvement of Major Roads in the City of Lilongwe (hereinafter referred to as “the Project”) to Malawi. The Preparatory Survey Team (hereinafter referred to as “the Team”), headed by Kenshiro TANAKA, Senior Deputy Director, Team 1, Transportation and ICT Group, Infrastructure and Peacebuilding Department, JICA, explained the Report, held a series of discussions with the officials of the Government of Malawi (hereinafter referred to as “the Malawi side”) and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets. The Team will stay in the country from January 29 to February 2, 2018 and proceed with further studies and prepare the Preparatory Survey Report.

Lilongwe, 1, February, 2018



Kenshiro TANAKA

Leader

Preparatory Survey Team

Japan International Cooperation Agency

Japan

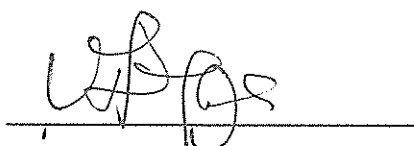


Francis B. Chinsinga

Principal Secretary

Ministry of Transport and Public Works

Republic of Malawi



Madalo M. Nyambose

Director (Debt and Aid Management)

Ministry of Finance, Economic Planning and
Development

Republic of Malawi

ATTACHMENT

1. The Length of the Project Road

The entire length of the Project road from Mchinji RA to Chidzanja Road JCT was confirmed as 5.82 km by the survey of the Team. The Team will coordinate with the Malawi side on the design of the end points at Mchinji RA and Chidzanja Road JCT.

2. Contents of the Report

The Malawi side agreed on and accepted in principle the contents of the Report explained by the Team, which includes the Minutes of Discussions on the Preparatory Survey for the Project signed on October 26, 2017 by the Malawi side and the JICA Preparatory Survey Team. The Malawi side requested that street lights shall be installed on the raised-up median, the median with a width of 1.2 m which was proposed at the built-up area shall be raised up and the locations of bus stop shall be determined based on the bus stop plan which was developed by the planning department of LCC. The Team understood the necessity of the requested items above-mentioned and will take it into consideration for the plan of the Project road. The Team requested the Malawi side that the Malawi side should take necessary measures against acts of vandalism to the facilities such as the robbery of street lights with solar panel or steel materials.

3. The Project Conceptual Plan

3-1. The construction of another bridge at the upstream side to the existing Lilongwe Bridge

The Team proposed that the construction of another bridge at the upstream side to the existing Lilongwe Bridge is effective for the smooth traffic due to the traffic demand forecast and the traffic congestion mechanism described in the Report.


3-2. The Undertakings to be taken by the Malawi side

It is understood that the Malawi side will finance and conduct land acquisition and relocation of existing public utilities necessary for construction work of the Project.

Both sides discussed realization of the Project based on the Comparative Study shown in the Annex 1. After discussion of the comparative study, the Malawi side requested to maintain the original scope of the project as shown in the original plan. The Team recommended the Plan 3. Both sides agreed to continue the discussions and to conclude them when the relocation drawings are ready. The Team shall finalize and submit to the Malawi side the relocation drawings at the end of March, 2018.

4. Relocation of Existing Public utilities

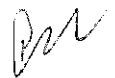


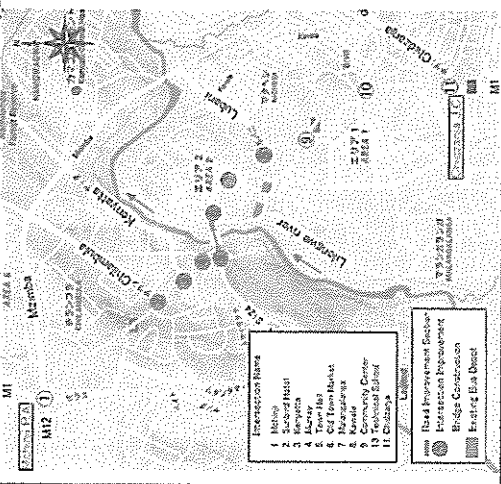
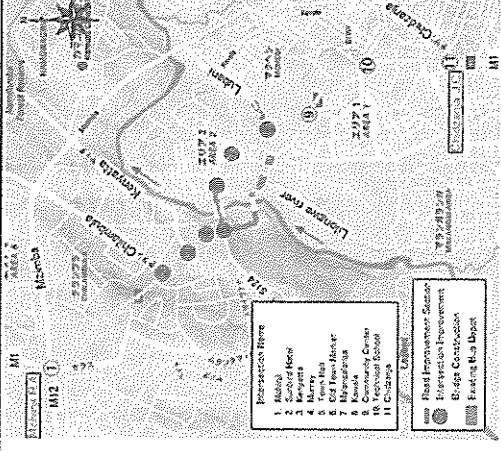
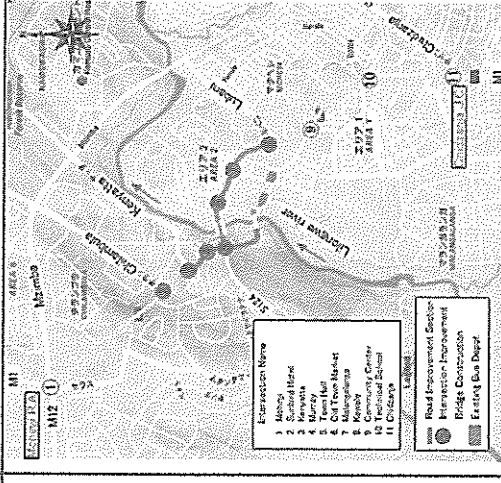
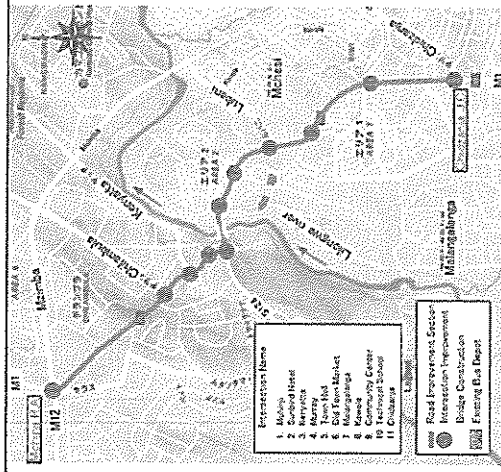
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The Team would provide the existing utility drawings by the end of March, 2018. For the smooth implementation for utility relocation, the Team requested that Malawi side take necessary actions for the implementation, e.g. cost estimation for budget arrangement, procedures for the utility relocation, negotiation with relevant organization responsible for public utilities and report it to JICA by the beginning of July 2018. The Malawi side agreed on it.

Annex 1 Comparative Study



Plan 1	Plan 2	Plan 3	Original Plan
 <p>Road Improvement 4-lane widening between ⑤ and ⑥ (360m)</p> <p>Intersection Improvement Improvement of intersections from ② to ⑧ (7 intersections)</p> <p>Bridge Construction New bridge Construction (5 lanes, L=90m (2 bridges))</p> <p>Utility Relocation Cost Covered by Malawi Utility relocation cost covered by Malawi (0.3 mil)</p> <p>Traffic Safety The pedestrian traffic around the bridge to be in danger during the bridge construction</p>	 <p>4-lane widening between ⑤ and ⑥ (360m)</p> <p>Improvement of intersections from ② to ⑧ (7 intersections)</p> <p>New bridge Construction (4 lanes, L=90m (2 bridges)) + (2 lanes, L=90m on 350-m upstream side)</p> <p>Utility relocation cost covered by Malawi (0.7 mil)</p> <p>Safety of the pedestrian traffic to be secured by the mini-bus detouring to the bridge on 350-m upstream side</p>	 <p>4-lane widening between ③ and ④ (1,790m)</p> <p>Improvement of intersections from ② to ⑧ (7 intersections)</p> <p>New bridge Construction (4 lanes, L=90m (2 bridges)) + (2 lanes, L=90m on 350-m upstream side)</p> <p>Utility relocation cost covered by Malawi (1.6 mil)</p> <p>Safety of the pedestrian traffic to be secured by the mini-bus detouring to the bridge on 350-m upstream side</p>	 <p>4-lane widening between ① and ⑩ (5,820m)</p> <p>Improvement of whole from ① to ⑩ (11 intersections)</p> <p>New bridge Construction (5 lanes, L=90m (2 bridges))</p> <p>Utility relocation cost covered by Malawi (5.3mil)</p> <p>The pedestrian traffic around the bridge to be in danger during the bridge construction</p>

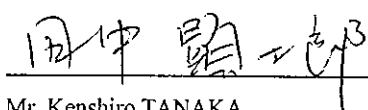
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Minutes of Discussions
on the Preparatory Survey for the Project for
the Improvement of Major Roads in the City of Lilongwe
(Third Field Survey)

On the basis of the discussions and field survey in the Republic of Malawi (hereinafter referred to as “Malawi”) in October, 2017; the explanation and discussions based on the Interim Report in February, 2018; subsequent technical examination in Japan and a series of discussions through video conference, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched a Preparatory Survey Team (hereinafter referred to as “the Team”) , headed by Kenshiro Tanaka, the senior deputy director of Team 1 from the Transport and ICT Group, part of the Infrastructure and Peacebuilding Department of JICA, from November 10 to 16, 2018 for discussion on the Project for the Improvement of Major Roads in the City of Lilongwe (hereinafter referred to as “the Project”) to Malawi. The Team and the officials of the Government of Malawi (hereinafter referred to as “the Malawian side”) held a series of discussions on the Project. In the course of the discussions, both sides have confirmed the main items described in the attached documents.

Lilongwe, 14, November 2018

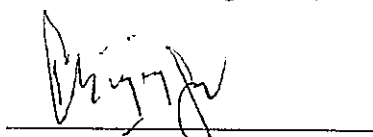


Mr. Kenshiro TANAKA

Leader

Preparatory Survey Team

Japan International Cooperation Agency



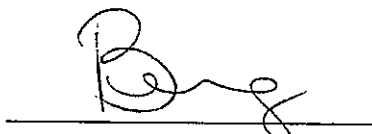
Mr. Francis B. Chinsinga

Principal Secretary

Ministry of Transport and Public Works

Republic of Malawi

Witness



Ms. Betty Ngoma

Director of Debt and Aid

Ministry of Finance, Economic Planning and
Development

Republic of Malawi

ATTACHMENT

1. Scope and Construction Period of the Project

The Team found out that the total cost of the Project, calculated based on the latest survey for M1 road improvement works, increased more than expected and the construction period prolonged. Consequently, JICA needs to reduce the total cost of the Project covered by Japan's Grant Aid, as well as the construction period, by narrowing the scope. Both sides agreed on the revised scope of the Project, namely, the section from Sunbird Hotel JCT to Kawale JCT shown in Annex 1.

The improvement of other sections from Mchinji R.A. to Sunbird Hotel JCT and from Kawale JCT to Chidzanja JCT, which are not covered by Japan's Grant Aid, are necessary to be implemented by the Malawian side to achieve the aim and outcome of the whole Project.

The Team will provide the Malawian side with necessary data, including technical specifications, drawings, etc., in order to secure the quality and consistency of the project design.

2. Route of Detour Road

The Team found out that the construction of detouring route at the river crossing section, a temporary bridge and a detour road besides the present bridge section, described in Annex 2, is necessary to shorten the construction period. Moreover, the Team explained Alternative-4 is the technically optimal route to shorten construction period. Both sides agreed on it in principle and confirmed that the detouring routes would be finalized in the survey..

3. Technical Assistance for Utility Relocation

The Malawian side requested technical assistance for planning and management of utility relocation for M1 road improvement works. The Team understands the necessity of such assistance for smooth implementation of the road improvement works and will convey it to JICA HQs.

4. Expected Schedule for the Commencement of the Project

The Team explained the expected schedule for the commencement of the Project as follows:

- Late November to Early December 2018

Additional Geological Survey, Environmental and Social Consideration Survey

- Mid-April 2019

Explanation of Draft Outline Design

- August 2019

Signing of Grant Agreement for Detailed Design
- June 2020
Signing of Grant Agreement for Construction Works

5. Removal or Relocation of Obstacles for Road Works

The works for removal or relocation of the obstacles shall be completed by May 2020.

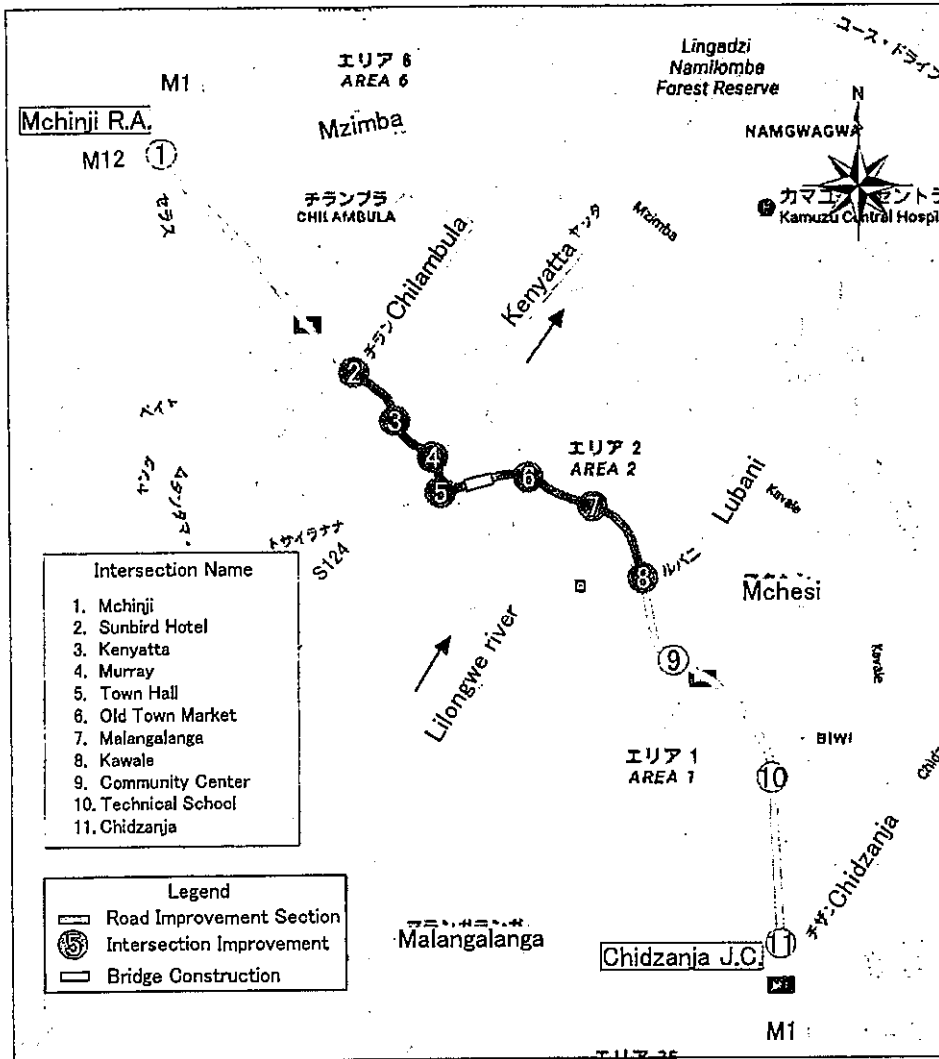
Annex 1 Scope of the Project to be covered by Japan's Grant Aid

Annex 2 Routes of Temporary Bridge

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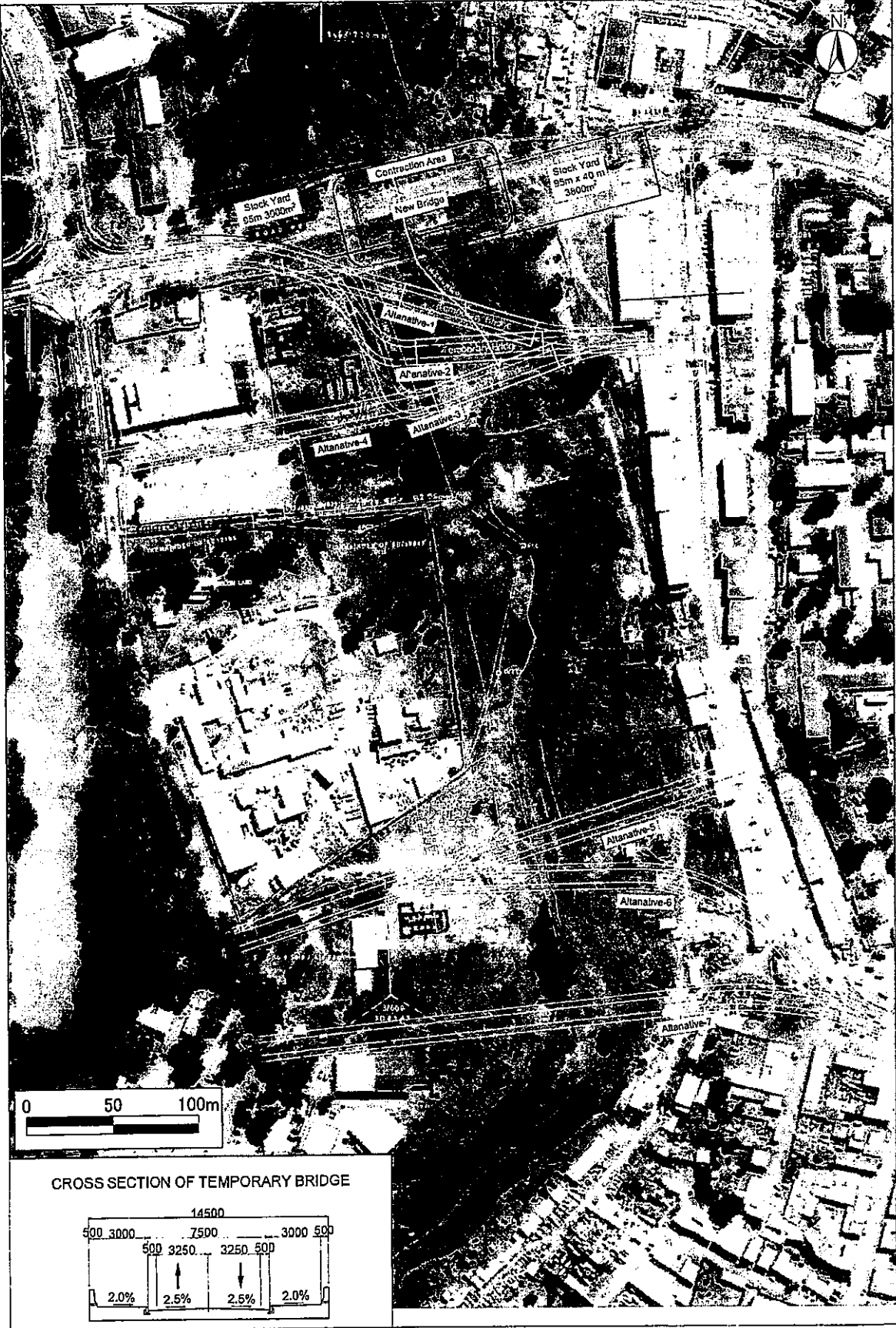
Annex 1 Scope of the Project



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Annex 2 Route of Temporary Bridge



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MINISTRY OF TRANSPORT AND PUBLIC WORKS

Private Bag 322
Capital City,
Lilongwe 3
Malawi

Ref. No.: ADM/2/1

4th December, 2018

The Resident Representative
Japan International Cooperation Agency
P.O. Box 30321
Capital City
Lilongwe 3

Dear Sir,

PROJECT : THE IMPROVEMENT OF MAJOR ROADS IN THE CITY OF LILONGWE

SUBJECT : CHOICE OF DETOUR ROAD AND TEMPORARY BRIDGE ACROSS LILONGWE RIVER

Reference is made to the recent discussions Malawi Government had with the JICA preparatory study team on the project for the improvement of major roads in the city of Lilongwe. The study team presented a number of alternatives on the proposed temporary bridge site and the detour road across Lilongwe river.

The Ministry is please to confirm that the preferred choice of the detour road and temporary bridge site is alternative number 4 (see attached map and plan). It is our sincere hope that the JICA study team will now proceed to carry out detailed designs for the detour road and the temporary bridge for alternative number 4.

Please accept our best regards and your usual cooperation is always appreciated.

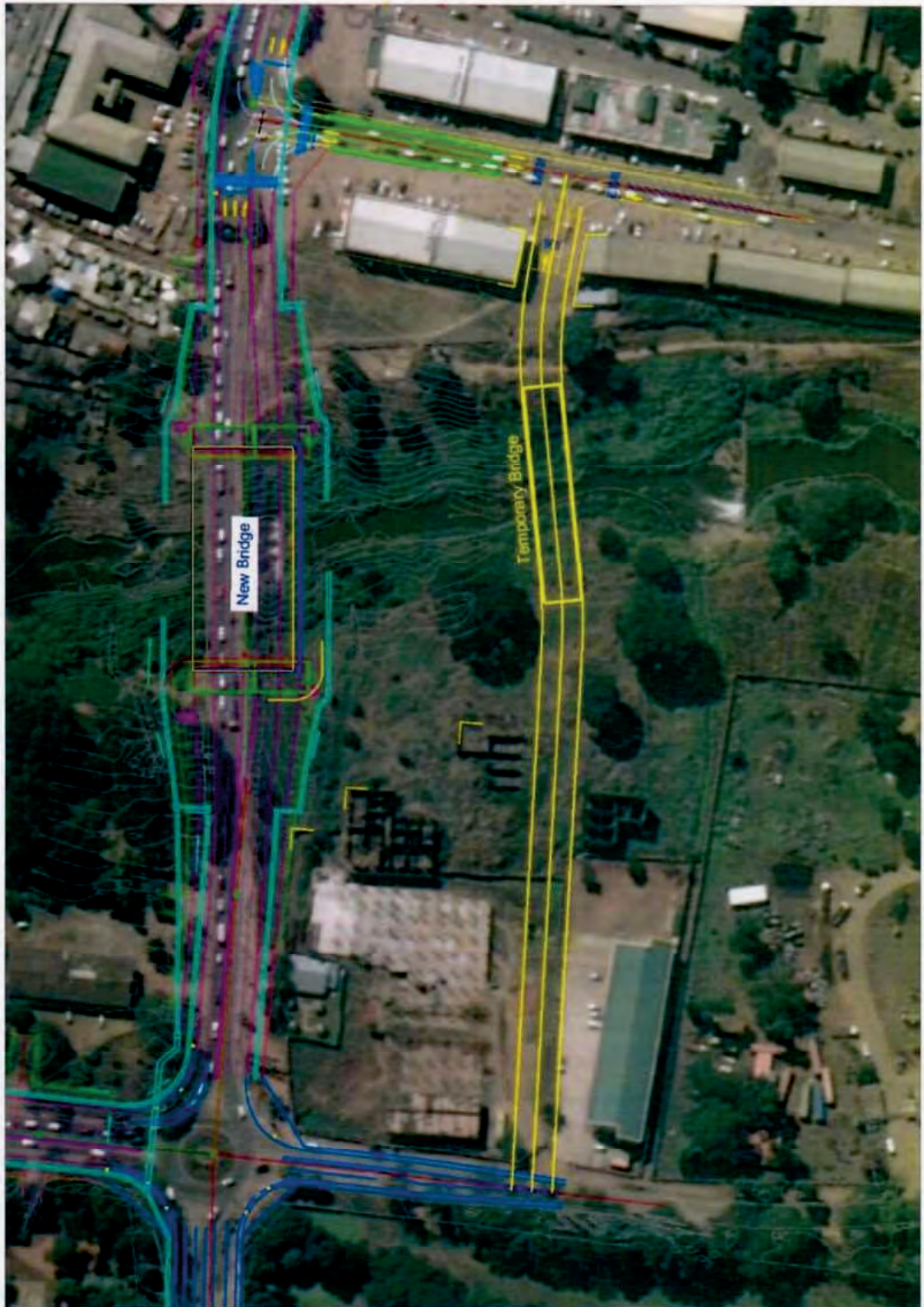
Yours faithfully,

A handwritten signature in black ink, appearing to read 'K. N. Mphonda'.

Kelvin N. Mphonda

For; **SECRETARY FOR TRANSPORT
AND PUBLIC WORKS**

Route of temporary bridge

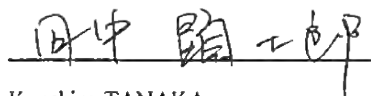


Minutes of Discussions
on the Preparatory Survey for the Project for
the Improvement of Major Roads in the City of Lilongwe
(Explanation on Draft Preparatory Survey Report)

With reference to the minutes of discussions signed between the Ministry of Transport and Public Works and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on October 26th 2017, February 1st 2018 and November 14th 2018 and in response to the request from the Government of the Republic of Malawi (hereinafter referred to as "Malawi") dated March 2010, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of the Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for the Improvement of Major Roads in the City of Lilongwe (hereinafter referred to as "the Project").

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

Lilongwe, 16, May 2019

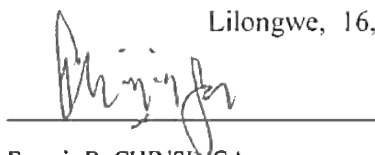


Kenshiro TANAKA

Leader

Preparatory Survey Team

Japan International Cooperation Agency



Francis B. CHINSINGA

Principal Secretary

Ministry of Transport and Public Works

The Republic of Malawi

Witness



Davie Y.C. WIRIMA

Deputy Director of Debt and Aid Management
 Division

Ministry of Finance, Economic Planning and
 Development

The Republic of Malawi

ATTACHEMENT

1. Project Site

Both sides confirmed that the site of the Project is the section from the M1 junction with Paul Kagame Road at Sunbird Lilongwe Hotel to the M1 junction with Lubani Road at Lilongwe CCAP which is shown in Annex 1.

2. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Malawi side agreed to its contents.

3. Cost Estimate

Both sides confirmed that the cost estimate shown in Annex 2 explained by the Team is provisional and will be further examined by the Government of Japan for its approval and that the cost estimate includes the contingency cost which would cover the additional expenses against natural disasters, unexpected natural conditions, etc.

4. Confidentiality of the Cost Estimate and Technical Specifications

Both sides confirmed that the cost estimate and technical specifications of the Project should never be disclosed to any third parties until all the contracts under the Project are concluded.

5. Procedures and Basic Principles of Japanese Grant

The Malawi side agreed that the procedures and basic principles of Japanese Grant, as described in Annex 3, Annex 4, and Annex 5, shall be applied to the Project. In addition, the Malawi side agreed to take the necessary measures according to these procedures.

6. Timeline for the Project Implementation

The Team explained to the Malawi side that the expected timeline for the project implementation is as attached in Annex 6.

7. Expected Outcomes and Indicators

Both sides agreed that key indicators for the expected outcomes are as follows. The Malawi side will be responsible for the achievement of the agreed key indicators targeted in the year 2027 and shall monitor the progress based on those indicators.

[Quantitative indicators]

Index	Current Value (as of 2018)	Design Value (as of 2027)
Volume of Passenger	86,000 person/day	133,000 person/day
Traffic Volume	26,000vehicle/day	39,800vehicle/day
Congestion degree (Traffic Volume/Traffic capacity)	1.63	0.93

Note: the above values correspond to the Lilongwe River Bridge

[Qualitative indicators]

- (1) An efficient and reliable transportation network is ensured in the target area
- (2) Access to services such as medical care and education by local residents will be improved
- (3) Traffic accidents are suppressed by reduction of traffic congestion and separation of pedestrians

8. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 7. With regard to the exemption of customs duties, internal taxes and other fiscal levies as stipulated in (2) 5 of Annex 7 and 8, both sides confirmed that such customs duties, internal taxes and other fiscal levies shall be clarified in the bid documents by the Ministry of Transport and Public Works during the implementation stage of the Project.

The Malawi side assured that the necessary measures and coordination will be taken, including allocation of the necessary budget, these being preconditions for the implementation of the Project. It is further agreed that the costs are tentative figures, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

Both sides also confirmed that the Annex 7 will be used as an attachment of Grant Agreement (hereinafter referred to as "G/A").

9. Monitoring during the Implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the Project Monitoring Report (PMR) form attached as Annex 9. The timing for the submission of the PMR is described in Annex 7.

10. Project Completion

Both sides confirmed that the project will be considered as completed when all the facilities constructed and equipment procured by the grant are in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

11. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be made public. The Malawi side is required to provide necessary support for the data collection.

12. Schedule of the Survey

JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Malawi side around June 2019.

13. Environmental and Social Considerations

13-1 General Issues

13-1-1 Environmental Guidelines and Environmental Category

The team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as "the Guidelines") are applicable for the Project. The Project is categorized as B because the Project is not considered to be a large-scale road project, is not located in a sensitive area, and has none of the sensitive characteristics under the Guideline, hence it is not likely to have a significant adverse impact on the environment.

13-1-2 Environmental Checklist

The environmental and social considerations, including major impacts and mitigation measures for the Project, are summarized in the Environmental Checklist attached as Annex 10. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, the Malawi side shall submit the modified version to JICA in a timely manner.

13-2 Environmental Issues

13-2-1 Environmental Impact Assessment (EIA)

Both sides confirmed the EIA report will be approved by the Environmental Affairs

Department, Malawi (EAD) in August 2019.

13-2-2 Environmental Management Plan and Environmental Monitoring Plan

Both sides confirmed that the Environmental Management Plan (EMP) and the Environmental monitoring Plan (EMoP) of the Project will consist as described in Annex 11, respectively. Both sides 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.

13-3 Social Issues

13-3-1 Land Acquisition and Resettlement

Both sides confirmed that 0.57 ha of land would be acquired and 287 people would be affected due to the implementation of the Project.

Such land acquisition and resettlement shall be implemented based on the Abbreviated Resettlement Action Plan (ARAP) as described in Annex 12, which was prepared in line with the Guidelines and authorized by the Malawi side in May 2019.

13-3-2 Indigenous People

Both sides confirmed that the Project does not affect indigenous peoples.

13-4 Environmental and Social Monitoring

13-4-1 Environmental Monitoring

Both sides agreed that the Malawi side will submit results of environmental monitoring to JICA with the PMR by using the monitoring form attached in Annex 13. The timing of submission of the monitoring form is described in Annex 7.

13-4-2 Social Monitoring

Both sides confirmed that the Malawi side will implement social monitoring regarding to the land acquisition and resettlement proposed in the ARAP. The Malawi side and the Team agreed that Roads Authority will submit results of social monitoring to JICA with the PMR by using the monitoring form attached in Annex 13.

13-4-3 Information Disclosure of Monitoring Results

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

The Malawi side agreed JICA will disclose results of environmental and social monitoring submitted by the Malawi side with the monitoring forms attached in Annex 13 on its website.

14. Other Relevant Issues

14-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which the project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

14-2. Operation and Maintenance of the Facilities (Equipment)

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 Malawi side shall secure enough staff and budgets necessary for appropriate operation and maintenance of the facilities.

14-3. Completion date of utility relocation

Both sides confirmed that it is important to relocate the utility for the implementation of this project. The Japanese side requested that the relocation of the utility be completed by April 2020 before signing of E/N for construction works.

14-4. Undertakings of Both sides around the Bridge

Both sides confirmed that the undertakings around the bridge (Between Town hall intersection and Old Town Market intersection) shown in the table below, Annex14 and 15 as obligations of ether sides.

No.	Necessary Undertakings for Bridge Reconstruction	Malawi Side	Japan Side
1	Secure areas necessary for the bridge construction (e.g. right of way, temporary construction yard, stock yard, detour and access road to the site)	x	
2	Water and sewer pipes	Temporary relocation	x
		Maintenance	x
		Operation/Management	x
		Relocation to the new bridge	
3	Temporary bridge for water and sewer pipes	Construction	x
		Maintenance	x
		Demolition	x
4	Street lights on the bridge	Removal	x
		New installation	x
5	Street lights except on the bridge	Removal	x
		New installation	
6	Telephone	Temporary relocation	x

	cables	Operation/Management	x	
		Relocation to the new bridge		x
7	Footbridge	Demolition	x	
8	Detour including temporary bridge	Construction		x
		Maintenance		x
		Traffic Management	x	
		Demolition		x

Annex 1 Project Site

Annex 2 Cost estimation

Annex 3 Japanese Grant

Annex 4 Procedures of Japanese Grant

Annex 5 Financial Flow of Japanese Grant

Annex 6 Project Implementation Schedule

Annex 7 Major Undertakings to be taken by the Government of Malawi

Annex 8 Procedure of Tax Exemption

Annex 9 Project Monitoring Report (template)

Annex 10 Environmental Check List

Annex 11 Environmental Management Plan/Environmental Monitoring Plan

Annex 12 (Abbreviated) Resettlement Action Plan

Annex 13 Environmental and Social Monitoring Form

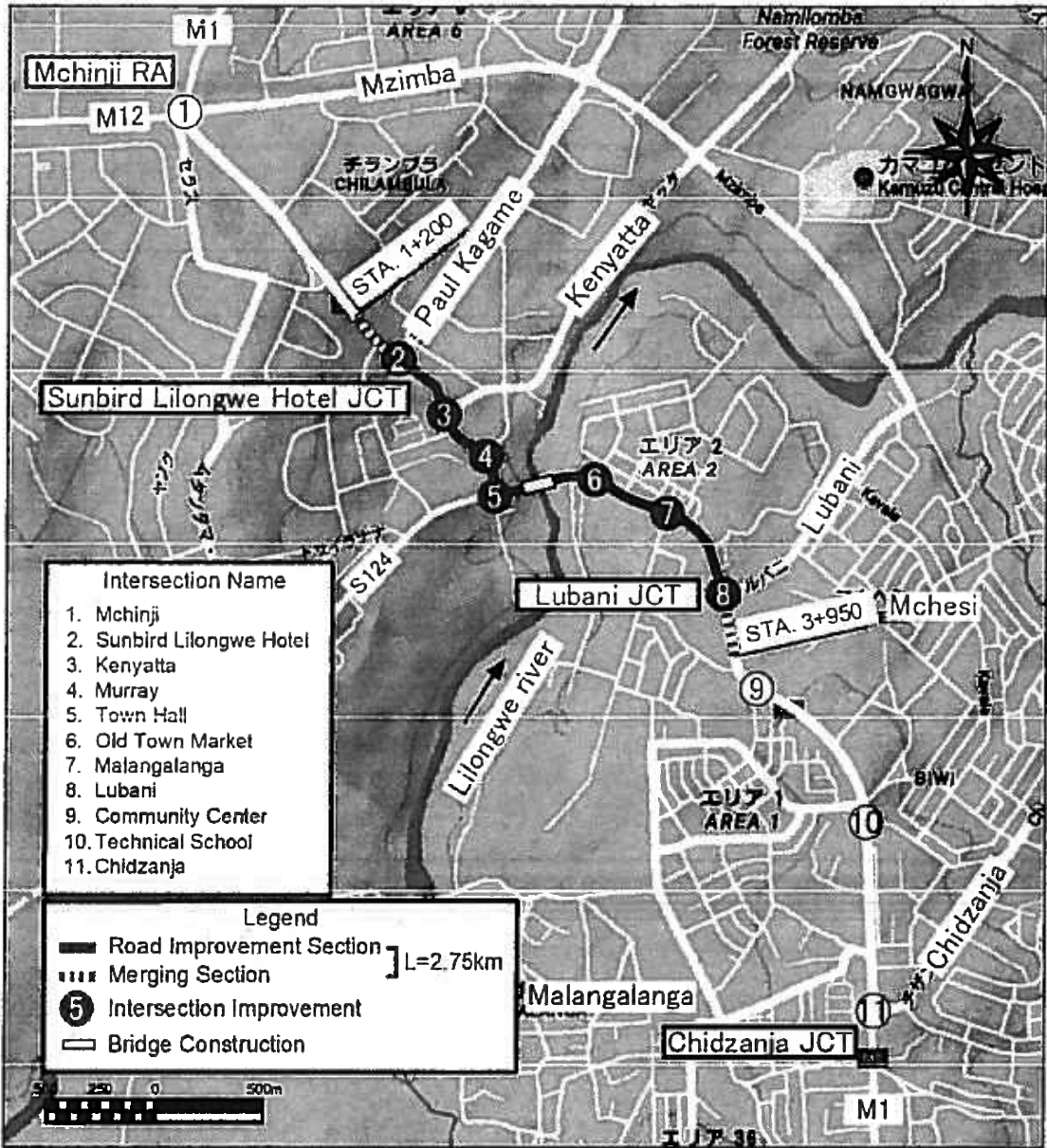
Annex 14 Construction Range of Water and Sewer Pipes

Annex 15 Demarcation for Bridge Reconstruction (Major Works)

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Scope of the Project



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Project Cost Estimation

CONFIDENTIAL

(1) Cost Borne by the Government of Japan

Total : JPY 3,214 million

- Construction : JPY2,718 million
- Detailed Design and Construction Supervisory Service : JPY 343 million.
- Contingency : JPY 153 million

(2) Cost Borne by the Government of Malawi

Total initial cost : USD 3.19 million

- Bank Charges : USD 0.026 million
- Relocations of underground obstacles : USD 1.00 million
- Removal of overhead obstacles : USD 0.28 million
- Expense/compensation for removal of buildings : USD 0.99 million
- Land acquisition, compensation : USD 0.89 million
- (Annual Maintenance Cost : USD 0.04 million)

(3) Cost Estimation Condition

- Estimated date : December 2017
- Exchange rates : USD 1.00=JPY113.22
- Others : The project is carried out based on the Japanese Government's Grant Aid Scheme. The above cost estimate does not assure the ceiling cost on the E/N and will be reviewed by the Government of Japan before signing of the E/N between the two Governments.

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JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or 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. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA

(2) Appraisal

- Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

- The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

- Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

- Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

- Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

- Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the 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

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relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant 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.
- Confirmation of Environmental and Social Considerations

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

JICA requests the Recipient to take 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 executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (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 feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

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 to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

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2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) 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 to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to 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 to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

(2) 17

Per

Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

A/P

PROCEDURES OF JAPANESE GRANT

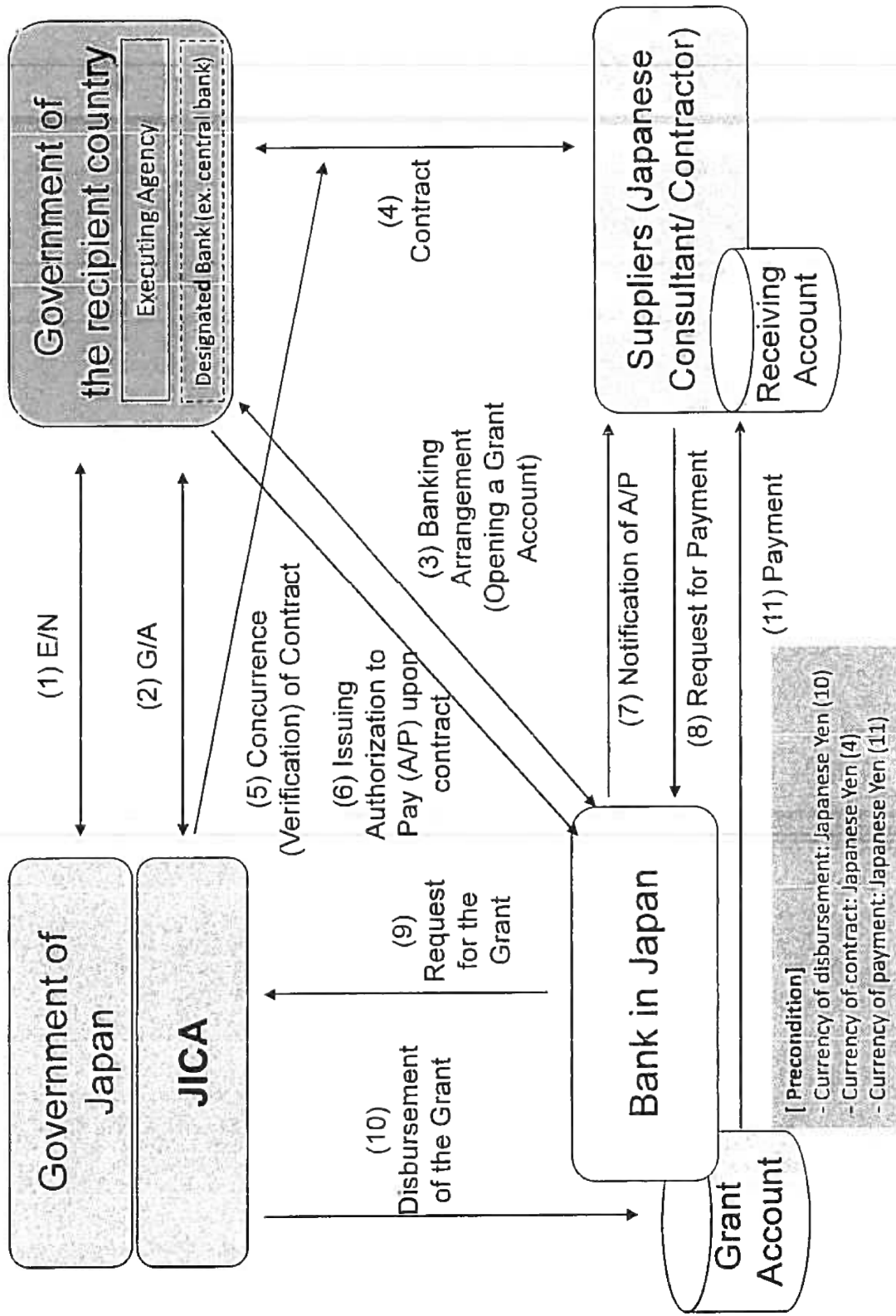
Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
	(2) Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
2. Appraisal	(3) Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
	(14) Completion certificate		x			x	x	
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

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Financial Flow of Japanese Grant (A/P Type)

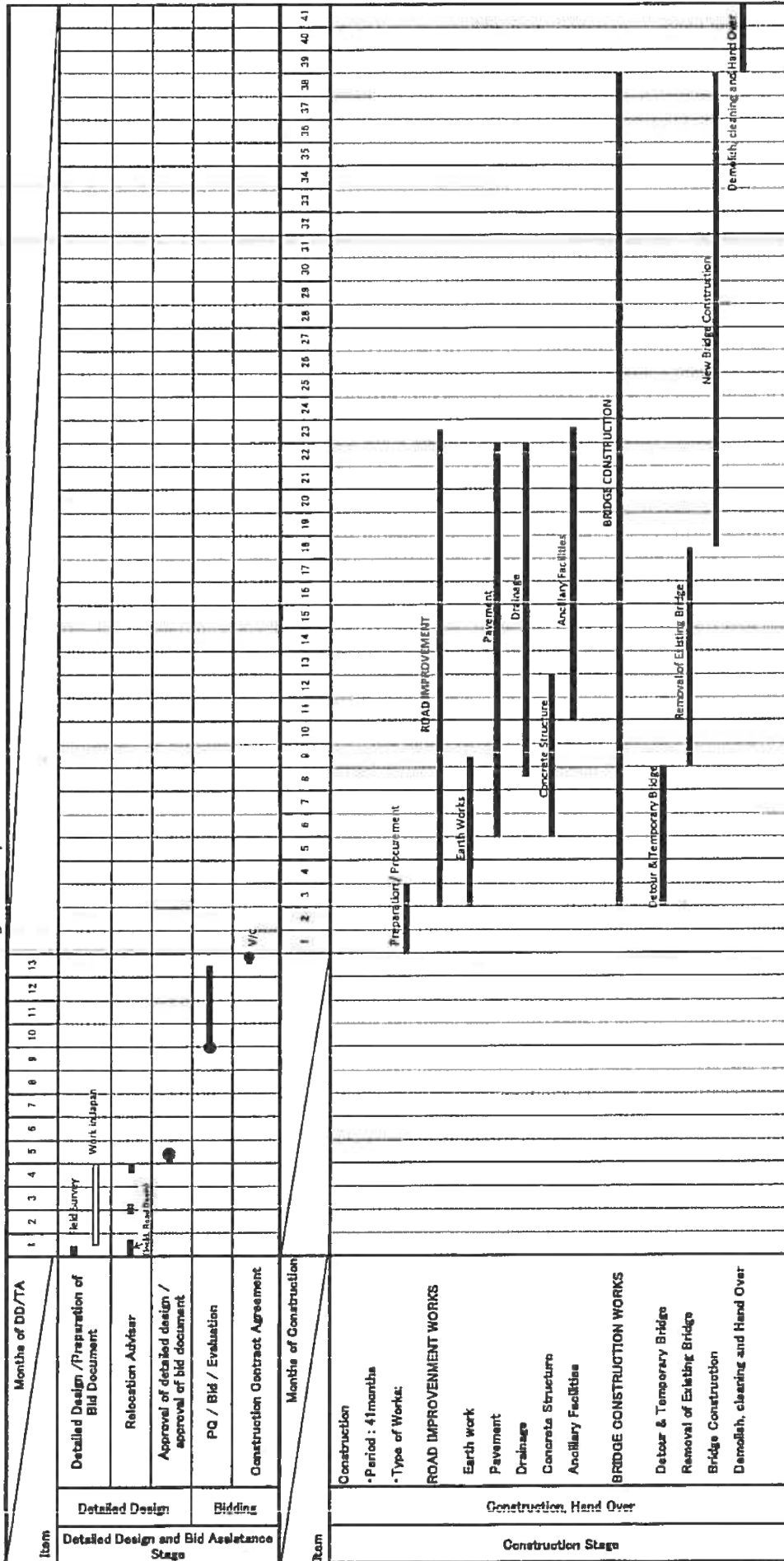


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Project Implementation Schedule



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Major Undertakings to be taken by the Government of Malawi

1. Specific obligations of the Government of Malawi which will not be funded with the Grant

(1) Before the Bidding

No.	Items	Deadline	In charge	Cost (US\$)	Ref.
1	To approve EIA (Conditions of approval should be fulfilled, if any) and secure the necessary budget for implementation of countermeasures obligated in the EIA.	before signing of the G/A	RA and EAD		
2	To open Bank Account (Banking Arrangement (B/A))	within 1 month after signing of the G/A	MOF		
3	To issue the Authorization to Pay (A/P) to a bank in Japan (the Agent Bank) for the payment to the Consultant	within 1 month after signing of the contract with the consultant	MOF	100	
4	To implement land acquisition and resettlement (including preparation of resettlement sites), and compensation with full replacement cost in accordance with approved Abbreviated Resettlement Action Plan	before notice of the bidding document(s)	LCC, RA, RFA and MOTPW	1,903,000	
5	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	till land acquisition and resettlement complete	RA		
6	To secure and/or clear the following lands 1) right of way for the Project 2) detour for the existing road closed during the bridge construction 3) temporary construction yard and stock yard near the Project area 4) borrow pit, quarry site and disposal site near the Project area	before notice of the bidding document(s)	LCC, RA and related agencies	Costs of 1), 2) and 3) are included in No.4	
7	To obtain the planning, zoning, building permit	before notice of the bidding document(s)	RA, LCC and related agencies		
8	To clear, level and reclaim the sites, as confirmed in the Draft Report (All costs for relocation of utilities and demolition of obstacles etc. are included) note: except for the water/sewer pipes on the existing bridge	before notice of the bidding document(s)	RA, LCC and related agencies	1,282,000	
9	To submit Project Monitoring Report (with the result of Detailed Design (DD))	before preparation of bidding document(s)	RA		

Notes: RA - Roads Authority

RFA-Roads Fund Administration

EAD - Environmental Affairs Department

LCC - Lilongwe City Council

MOF - Ministry of Finance

MOFA - Ministry of Foreign Affairs

MOHS - Ministry of Homeland Security

MRA - Malawi Revenue Authority

MOTPW - Ministry of Transport and Public Works

A/P

(3) During the Project Implementation

No.	Items	Deadline	In charge	Cost (US\$)	Ref.
1	To issue A/P(s) to the Agent Bank in Japan for the payment(s) to the Contractor(s)	within 1 month after signing of the contract(s)	MOF		
2	To bear the following commissions to the Agent Bank in Japan for the banking services based upon the B/A	during the Project	MOF		
	1) Advising commission of A/P	within 1 month after signing of the contract(s)	MOF	250	
	2) Payment commission for A/P	every payment	MOF	27,000	Total Amount
3	To ensure prompt customs clearance and to assist the Supplier(s) with internal transportation in the country of the Recipient	during the Project	RA, MOTPW and related agencies		
4	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 country of the Recipient and stay therein for the performance of their work	during the Project	RA, MOFA and MOHS		
5	To ensure that customs duties, internal taxes and other fiscal levies for the project which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted	during the Project	RA, MRA and MOF		
6	To bear all the expenses, such as necessary registration fee to the related agency, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	RA and MOTPW		
7	1) To submit Project Monitoring Report	every month	RA		
	2) To submit Project Monitoring Report (Final)	within one month after signing of Certificate of Completion of the Work under the contract(s)	RA		
8	To submit a report concerning completion of the Project	within six months after completion of the Project	RA		
9	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)				
	1) Electricity The distributing line to the temporary site	before start of the construction	RA, LCC and related agencies		
	2) Water Supply The city water distribution main to the temporary site	before start of the construction	RA, LCC and related agencies		
	3) Primary Electric Power Source Primary electrical power source up to the distribution boards of traffic signal system and street light system	during the construction	RA, LCC and related agencies		
10	To take necessary measure for safety construction - traffic control - public notifications	during the construction	RA, LCC and related agencies		
11	To implement Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP)	during the construction	RA and EAD	7,300	
12	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	RA and EAD		
13	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	during the construction	RA, EAD and LCC		

(4) After the Project

No.	Items	Deadline	In charge	Cost (US\$)	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 of structure 3) Routine check/Periodic inspection	After completion of the construction	RA, MOTPW and LCC	41,000 (Annual)	

2. Other obligations of the Government of Malawi funded with the Grant

No.	Items	Deadline	Amount (Million Japanese Yen)*
1	To construct roads - 4-lane widening at the section from the M1 junction with Paul Kagame Road at Sunbird Lilongwe Hotel to the M1 junction with Lubani Road at Lilongwe CCAP - Reconstruction of the Lilongwe River Bridge	Mar. 2024	
2	To implement detailed design, bidding support and construction supervision (Consulting Service)		
3	Contingencies		
	Total		3,214

*The Amount is provisional. This is subject to the approval of the Government of Japan.

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Tax Refund and Exemption Procedure

Tax Types	Tax Exempted or Not	Tax Exemption Facility / Procedures
Import Tax/Duty	Customs Duty on imported equipment and materials for exclusive use for the Project will be exempted (advanced) However, re-export is required for machinery.	<p>Organization in charge : RA, MRA</p> <p>Procedures</p> <ol style="list-style-type: none"> 1. Japanese Contractor submits Master Lists to MRA through RA 2. MRA approves the Master Lists 3. MRA provides approval letter through RA. <p>Only in case of temporary use of machine and equipment, import tax will be exempted.</p> <p>Duration : Approx. 1 month</p>
Value Added Tax (VAT)	Value Added Tax on local purchases for exclusive use on the Project will be exempted (advanced)	<p>Organization in charge : RA, MRA</p> <p>Procedures</p> <ol style="list-style-type: none"> 1. Japanese Contractor submits Master Lists to MRA through RA 2. MRA approves the Master Lists 3. MRA provides approval letter through RA. <p>Duration : Approx. 1 month</p>
Corporate Tax	Corporate Tax on Japanese Contractor will be exempted (Advanced)	<p>Organization in charge : RA, MRA</p> <p>Procedures</p> <ol style="list-style-type: none"> 1. Based on GA, Japanese Contractor applies corporate Tax Exemption to MRA through RA 2. MRA provides approval letter through RA. <p>Duration : Approx. 1 month</p>
Income Tax	Income tax for Japanese staff and employees from third countries will be exempted (Advanced).	<p>Organization in charge : RA, MRA</p> <p>Procedures</p> <ol style="list-style-type: none"> 1. Based on GA, Japanese Contractor applies Income Tax Exemption to MRA through RA 2. MRA provides approval letter through RA. <p>Duration : Approx. 1 month</p>

Note : RA: Roads Authority, MRA:Malawi Revenue Authority, GA : Grant Agreement

ADP




Project Monitoring Report
 on
Project Name
Grant Agreement No. XXXXXXXX

Organization Information

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

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

2: Project Implementation

2-1 Project Scope

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

Location	Original: (M/D)	Actual: (P/R and PCR)
	Attachment(s):Map	Attachment(s):Map

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

Items	Original	Actual
(M/D)	(M/D)	(P/R and PCR)

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

(P/R and PCR)

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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	
(M/D)	(M/D)		(P/R, PCR) As of (Date of Revision) Please state not only the most updated schedule but also other past revisions chronologically.
Project Completion Date*			

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

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

(P/R and PCR)

- 2-3 Undertakings by each Government
- 2-3-1 Major Undertakings
See Attachment 2.

- 2-3-2 Activities
See Attachment 3.

- 2-4 Project Cost
- 2-4-1 Project Cost

Table 2-3-1 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)				
Consulting Services	<ul style="list-style-type: none"> · Detailed design · Procurement Management · Construction Supervision 			
Total				

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

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Table 2-3-2 Comparison of Original and Actual Cost by the Government of XX

	Items		Cost (Million USD)	
	Original	Actual	Original	Actual
Total				

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

(P/R, PCR)

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: (P/R and PCR)

2-6 Environmental and Social Impacts

Report based on the agreed environmental checklist and monitoring form (See Attachment 4)

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: (PCR)

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(a): (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

IP

(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)	
(P/ R and PCR)	

5: Evaluation

5-1 Overall evaluation
 Please describe your evaluation on the overall outcome of the project.

(PCR)

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.

(PCR)

(2) P

BL

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Attachment

1. Project Location Map
 2. Undertakings to be taken by each Government
 3. Monthly Report
 4. Monitoring report on environmental and social considerations
-
-

Environmental Checklist

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) Y (b) N (c) Y (d) N	(a) EIA (ESIA) report has been prepared by conducting environmental impact assessment in accordance with EMA in Malawi and JICA guidelines. The EIA report will be submitted to EAD soon after the preparation. (b) Not yet. (c) EIA report will be unconditionally approved. (d) There is no environmental permit except Environmental License based on ESIA system.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design? (a) Have alternative plans of the project been examined with social and environmental considerations?	(a) Y (b) Y	(a) Contents of the project and the potential impacts were explained to local stakeholders at public consultation meeting, and understanding was obtained from the local stakeholders. (b) Comments from the local residents were recorded in minutes of meeting and reflected to the project design. (a) Including the view of the social and environmental considerations, some alternatives were examined. The alternative which gives minimum impacts were selected.
	(3) Examination of Alternatives	(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 comply with the country's air quality standards? Are any mitigating measures taken? (b) If air quality already exceed country's standards near the route, is there a possibility that the project will make air pollution worse?	(a) Y (b) Y	(a) This project is not a project increasing traffic volume significantly, but improving travel speed. Therefore the project substantially does not affect ambient air quality. (b) Ditto
2 Pollution Control	(2) Water Quality	(a) Is there a possibility that soil runoff from the bare lands resulting from earth moving activities, such as cutting and filling will cause water quality degradation in downstream water areas? (b) Is there a possibility that surface runoff from roads will contaminate water sources, such as groundwater? (c) Is there a possibility that the project will contaminate water sources, such as well water?	(a) Y (b) N (c) N	(a) Around the Lilongwe River, embankment is built. The embankment may cause water quality degradation of the Lilongwe River. To mitigate this, protection of the embankment will be prepared. (b) There is not a possibility that surface runoff from roads will contaminate water source such as groundwater. (c) Because the project does not have underground work, the project does not contaminate water sources.
	(3) Wastes	(a) In the case of that large volumes of excavated/dredged materials are generated, are the excavated/dredged materials properly treated and disposed of in accordance with the country's standards?	(a) Y	(a) Wastes will be generated by construction work. The wastes will be handled based on Malawi's waste management system.

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Environmental Checklist

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(4) Noise and Vibration	(a) Do noise and vibrations from the vehicle traffic comply with the country's standards? (b) Do low frequency sound from the vehicle traffic comply with the country's standards?	(a) Y/N (b) Y/N	(a) There is no standards of road noise and vibration in Malawi. Because this project is not a project increasing traffic volume significantly, it is expected that the project does not increase noise and vibrations. (b) There is no regulation for low frequency sound in Malawi.
	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas? (b) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (c) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (d) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (e) Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock?	(a) N (b) N (c) Y (d) N (e) N (f) N	(a) The project site is not located in/around protected areas. There is no possibility that the project will affect the protected areas. (b) The project site does not encompass primeval forests, tropical rain forests, ecologically valuable habitats. (c) The project site does not encompass the protected habitats of endangered species. (d) Reforestation done for cutting trees will be monitored. (e) The project site is in the center of urban area. Direct negative impacts on ecosystem are not expected. (f) This project site is in the center of urban area, there is no impacts on significant ecosystem.
3 Natural Environment	(2) Ecosystem	(e) Is there a possibility that installation of bridges and access roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered? (f) Is there a possibility that the changes in water flows due to the project will adversely affect aquatic environments in the river? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?		(f) The piers which are installed in Lilongwe river is designed to minimize the impacts on the water flows. It is expected that negative impacts on aquatic environment are few.
	(3) Hydrology	(a) Is there a possibility that hydrologic changes due to the installation of structures will adversely affect surface water and groundwater flows?	(a) N	The piers which are installed in the Lilongwe River is designed to minimize the impacts on the water flows. It is expected that negative impacts on aquatic environment are few.

DBP

Environmental Checklist

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(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? Are adequate measures considered to prevent 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 prevent soil runoff?	(a) N (b) N (c) Y	(a) Since the project site does not have steep slope, slope failures or landslides are not expected. (b) Ditto (c) Because embankment which is designed as approaches of bridge may cause soil runoff, protection for embankment is planned.
4 Social			(a) Y (b) Y (c) Y (d) Y (e) Y (f) Y (g) Y (h) Y (i) Y (j) Y	(a) Some vendors on the project site have to relocate. The alternative which minimizes the impacts was examined and selected. (b) Prior to resettlement, adequate explanation on compensation and resettlement assistance will be given to affected people. (c) Draft ARAP including compensation with full replacement costs, restoration of livelihoods and living standards has been developed. (d) The compensations are going to be paid prior to the resettlement according to ARAP. (e) Compensation policies are prepared in the draft ARAP. (f) Particular attention is paid for vulnerable peoples. (g) On the ARAP survey, most of the affected people agreed with the resettlement. (h) On the ARAP survey, the organization framework was examined. The capacity and budget for the ARAP implementation are secured. (i) Monitoring plan is described in the ARAP. (j) Grievance redress mechanism is established and described in the ARAP.

DBP

Environmental Checklist

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)	
4 Social Environment	(2) Living and Livelihood	<p>(a) Where bridges and access 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 alteration 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 infectious diseases, 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 the project will adversely affect road traffic in the surrounding areas (e.g., increase of traffic congestion and traffic accidents)?</p> <p>(e) Is there any possibility that project will impede the movement of inhabitants?</p> <p>(f) Is there any possibility that bridges will cause a sun shading and radio interference?</p>	<p>(a) N</p> <p>(b) N</p> <p>(c) Y</p> <p>(d) Y</p> <p>(e) N</p> <p>(f) N</p>	<p>(a) Due to the implementation of the project, road traffic will be improved.</p> <p>(b) There are no possibility that the project will adversely affect the living conditions of the inhabitants.</p> <p>(c) There is a possibility that Infectious diseases such as HIV/AIDS spread due to the inflow of construction workers into the project site during construction. Advocacy work for HIV/AIDS prevention and control will be implemented.</p> <p>(d) Because the project is implemented for the purpose of reduction of road congestion, there is no possibility that the project affects road traffic in the surrounding areas.</p> <p>(e) Project will not impede the movement of inhabitants.</p> <p>(f) Because height of new bridge is a ground line, there is no possibility that the bridge causes a sun shading and radio interference.</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) Y</p>	<p>(a) There is a cultural heritage along the project site. However, because the project was designed to avoid cultural heritage, there is no possibility that the project damages the cultural heritage.</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) Y</p>	<p>(a) Since the project is a road at-grade, there is no possibility that the project adversely affects the local landscape.</p>	
	(5) Ethnic Minorities and Indigenous Peoples	<p>(a) Are considerations 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 peoples in relation to land and resources respected?</p>	<p>(a) N</p> <p>(b) N</p>	<p>(a)(b) Since the project site is located in the center of Urban area, there is no habitat of ethnic minorities and indigenous peoples.</p>	
	(6) Working Conditions		<p>(a) Is the project proponent not violating any 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 safety 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 establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?</p> <p>(d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?</p>	<p>(a) Y</p> <p>(b) Y</p> <p>(c) Y</p> <p>(d) Y</p>	<p>(a) Compliance with laws and regulations is a first priority issue and consideration should be given to construction supervision.</p> <p>(b) Contractors appropriately implement safety considerations concerning occupational accident prevention.</p> <p>(c) Contractors prepare safety plans, and implement safety education for workers.</p> <p>(d) Contractors thoroughly instruct security personnel and supervise them not to violate the safety of the project stakeholders and local residents. Countermeasures and penalties in case of accident by security personnel are prepared in advance.</p>

Environmental Checklist

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(a) Y (b) Y (c) N	(a) Environmental management plan is prepared as mitigation measures for the impacts during construction. (b) Serious impact to the surrounding ecosystem is not expected since no endangered species observed at project site. Trees cut down to the minimum necessary, as much as possible. (c) Construction activities will provide local people with job opportunities. No significant impacts are expected.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (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?	(a) Y (b) Y (c) Y (d) Y	(a) Environmental monitoring plan (EMoP) against potential negative impacts has been prepared. (b) Draft EMoP was developed referring similar cases and taking into consideration the characteristics of the project site and legislations. Draft EMoP will be reexamined as necessary at the time of detailed design. (c) RA agreed the implementation of monitoring. Environmental personnel will be assigned and implement environmental monitoring. (d) RA will carry out monitoring quarterly during construction, then compile the result and report to JICA with project progress report.
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Roads, Railways and Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation). (b) Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities).	(a) Y (b) N	(a) This project includes a road improvement and construction of a bridge. Pertinent items described in the Roads and River checklist was checked. (b) This project does not include installation of power transmission lines and/or electric distribution facilities
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) Y	(a) Regarding global warming, although some trees are cut, reforestation will be done. Therefore there is no possibility that CO2 emission remarkably increases.

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

2) In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience). Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

Environmental Management Plan and Environmental Monitoring Plan

1. Mitigation Measures and Concomitant Costs

Table 1 demonstrates mitigation measures and accompanying costs. Except costs for embankment slope protection, construction-related costs are covered by the general construction service fees.

Table 1 Mitigation Measures and Expected Costs (Before/During Construction)

No.	Impact Item	Mitigation Measure	Cost	Implementing Entity	Responsible Entity
Pollution					
1	Air pollution	<ul style="list-style-type: none"> Spray water during construction Carry out routine inspection of construction machinery Operate construction machinery in a reasonable level 	To be included in construction service fees	Contractor	Roads Authority
2	Water pollution	<ul style="list-style-type: none"> Form embankment slopes Protect slopes in the early phase 	To be included in construction service fees	Contractor	Contractor and Roads Authority
3	Soil contamination	<ul style="list-style-type: none"> Carry out routine inspection of construction machinery Operate construction machinery in a reasonable level 	To be included in construction service fees	Contractor	Contractor and Roads Authority
4	Waste	<ul style="list-style-type: none"> Dispose construction wastes in the designated waste disposal site 	To be included in construction service fees	Contractor	Contractor and Roads Authority
5	Noise and vibration	<ul style="list-style-type: none"> Carry out routine inspection of construction machinery Operate construction machinery in a reasonable level 	To be included in construction service fees	Contractor	Roads Authority
Natural Environment					
6	Ecosystem	<ul style="list-style-type: none"> Replant trees in response to the cutdown of roadside trees 	MKW 1.3 million	Lilongwe City Council and Roads Authority	Roads Authority
7	Hydrology	<ul style="list-style-type: none"> Come up with a design which can prevent the deterrence of the river flow 	To be included in consulting fees	D/D consultants	Roads Authority
Social Environment					
8	Involuntary resettlement	<ul style="list-style-type: none"> Carry out land acquisition and resettlement based on ARAP 	To be included in ARAP	Lilongwe City Council	Lilongwe City Council and Roads Authority
9	Poor people	<ul style="list-style-type: none"> Carry out land acquisition and resettlement based on ARAP 	To be included in ARAP	Lilongwe City Council	Lilongwe City Council and Roads Authority
10	Local economy including employment and livelihood	<ul style="list-style-type: none"> Carry out land acquisition and resettlement based on ARAP 	To be included in ARAP	Lilongwe City Council	Lilongwe City Council and Roads Authority

No.	Impact Item	Mitigation Measure	Cost	Implementing Entity	Responsible Entity
11	Uneven distribution of benefits and damages	▪ Carry out land acquisition and resettlement based on ARAP	To be included in ARAP	Lilongwe City Council	Lilongwe City Council and Roads Authority
12	Risks of infectious diseases including HIV/AIDS	▪ Implement education and awareness programs targeting construction workers	To be included in construction service fees	Contractor	Roads Authority
13	Working conditions including occupational safety	▪ Prepare a construction safety plan	To be included in construction service fees	Contractor	Roads Authority
Others					
14	Transboundary impacts and climate change	▪ Carry out routine inspection of construction machinery ▪ Operate construction machinery in a reasonable level ▪ Replanting after the cutdown of roadside trees	To be included in construction service fees	Lilongwe City Council and Roads Authority	Roads Authority

2. Environmental Monitoring Plan

The environmental monitoring plan is presented in Table2.

Table 2 Monitoring Plan (Before/During Construction)

No.	Impact Item	Monitoring Item	Location	Timing	Cost	Responsible Entity
Pollution						
1	Air pollution	▪ Verify environmental measures in the construction plan	-	Before construction	Included in routine tasks of consultants	Roads Authority
		▪ Verify the following conditions during construction: - Sprinkling of water during construction - Routine inspection of construction machinery - Reasonable operation of construction machinery	Construction sites	At any time during construction	Included in routine tasks of consultants	Roads Authority
2	Water pollution	▪ Verify environmental measures in the construction plan	-	Before construction	Included in routine tasks of consultants	Roads Authority
		▪ Verify the following conditions during construction: - Current conditions of water quality of the Lilongwe River with the unaided eye - Progress of slope formation and protection	Construction sites	At any time during construction	Included in routine tasks of consultants	Roads Authority
		▪ Conduct water quality survey	Construction sites	Twice a year during construction	US\$ 950 per water quality survey	Roads Authority
3	Soil contamination	▪ Verify environmental measures in the construction plan	-	Before construction	Included in routine tasks of consultants	Roads Authority

No.	Impact Item	Monitoring Item	Location	Timing	Cost	Responsible Entity
		<ul style="list-style-type: none"> Verify the implementation of routine inspection of construction machinery 	Construction sites	At any time during construction	Included in routine tasks of consultants	Roads Authority
4	Waste	<ul style="list-style-type: none"> Verify environmental measures in the construction plan 	-	Before construction	Included in routine tasks of consultants	Roads Authority
		<ul style="list-style-type: none"> Verify conditions of waste disposal 	Waste disposal site	At any time during construction	Included in routine tasks of consultants	Roads Authority and Lilongwe City Council
5	Noise and vibration	<ul style="list-style-type: none"> Verify environmental measures in the construction plan 	-	Before construction	Included in routine tasks of consultants	Roads Authority
		<ul style="list-style-type: none"> Verify the following conditions during construction: <ul style="list-style-type: none"> Routine inspection of construction machinery Reasonable operation of construction machinery 	Waste disposal site	At any time during construction	Included in routine tasks of consultants	Roads Authority
Natural Environment						
6	Ecosystem	<ul style="list-style-type: none"> Check a tree cutting and replanting plan 	-	Before construction	Included in routine tasks of consultants	Roads Authority and Lilongwe City Council
		<ul style="list-style-type: none"> Verify replanting progress 	Replanting sites	Before construction and at any time during construction	Included in routine tasks of consultants	Roads Authority and Lilongwe City Council
7	Hydrology	<ul style="list-style-type: none"> Verify the project design 	-	During D/D stage	-	Roads Authority
Social Environment						
8	Involuntary resettlement	<ul style="list-style-type: none"> Verify the ARAP report 	-	Before construction	-	Roads Authority and Lilongwe City Council
		<ul style="list-style-type: none"> Verify the implementation of land acquisition and resettlement 	Project sites	Before construction and at any time during construction	Included in ARAP	Roads Authority and Lilongwe City Council
9	Poor people	<ul style="list-style-type: none"> Verify the implementation of land acquisition and resettlement 	Project sites	Before construction and at any time during construction	Included in ARAP	Roads Authority and Lilongwe City Council
10	Local economy including employment and livelihood	<ul style="list-style-type: none"> Verify the implementation of land acquisition and resettlement 	Project sites	Before construction and at any time during construction	Included in ARAP	Roads Authority and Lilongwe City Council
11	Uneven distribution of	<ul style="list-style-type: none"> Verify the implementation of land acquisition and 	Project sites	Before construction	Included in ARAP	Roads Authority

No.	Impact Item	Monitoring Item	Location	Timing	Cost	Responsible Entity
	benefits and damages	resettlement		and at any time during construction		and Lilongwe City Council
12	Risks of infectious diseases including HIV/AIDS	Verify education and awareness programs in the construction plan	-	Before construction	Included in routine tasks of consultants	Roads Authority
		Verify the implementation of education and awareness programs	-	At any time during construction	Included in routine tasks of consultants	Roads Authority
13	Working conditions including occupational safety	Verify the construction plan (safety plan)	-	Before construction	Included in routine tasks of consultants	Roads Authority
		Check the implementation of mitigation measures	Construction sites	At any time during construction	Included in routine tasks of consultants	Roads Authority
Others						
14	Transboundary impacts and climate change	Verify routine inspection of construction machinery Verify reasonable operation of construction machinery	Construction sites	At any time during construction	Included in routine tasks of consultants	Roads Authority
		Verify the implementation of replanting	Replanting sites	Before construction and at any time during construction	Included in routine tasks of consultants	Roads Authority

The monitoring process is portrayed in Table 3.

Table 3 Monitoring Process

	2019	2020	2021	2022	2023	2024
Project Implementation	(D/D, TA)	Detail Design	Tendering	Preparation of Construction	Road	
	(Construction)			Detour Road, Temporary Bridge	Demolition of Existing Bridge	Bridge
Monitoring of Environmental and Social Considerations		▲ Environmental license	Review of ESIA report			Monitoring on construction stage
			Land Acquisition and Resettlement			
			Monitoring of RAP			

3. Implementation Structure

The Roads Authority (RA), or the implementing agency will be the major responsible entity for monitoring. In specific, the Environmental and Social Planner under RA's Planning Section will carry out monitoring. Considering that the Lilongwe City Council (LCC) will be responsible for waste management and tree cutting and replanting, the council will implement monitoring in cooperation with the RA. In addition, monitoring results will be reported to the Environmental Affairs Department (EAD) and JICA.

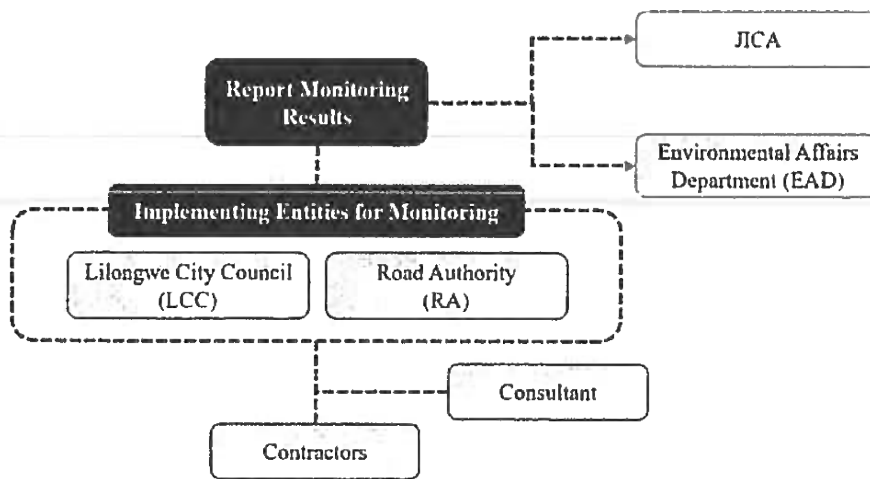


Figure 1 Implementation Structure for Monitoring

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**ABBREVIATED RESETTLEMENT ACTION PLAN (ARAP) FOR IMPROVEMENT
OF THE PAUL KAGAME JUNCTION TO LUBANI JUNCTION SECTION OF THE
M1 ROAD**

DRAFT REPORT



March 13, 2019

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LIST OF ACRONYMS

ARAP	Abbreviated Resettlement Action Plan
JICA:	The Japan International Cooperation Agency
PAP:	Project affected People (PAP)
RA:	Roads Authority
LCC:	Lilongwe City Council
GRC:	Grievance Redress Committee
MLHUD:	Ministry of Lands, Housing and Urban Development
LWB:	Lilongwe Water Board
ESCOM:	Electricity Supply Commission
KEI:	Katahira & Engineers International
EAD	Environmental Affairs Department
ESIA	Environmental and Social Impact Assessment
MoTPI	Ministry of Transport and Public Infrastructure
NGO	Non-Governmental Organization
NMT	Non-Motorised Traffic
NSO	National Statistical Office

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Table 1-1: Definition of terms used in this ARAP

Terminology	Definition
Compensation	Payment in cash or in kind for an asset or a resource that is acquired or affected by a project at the time the asset needs to be replaced.
Economic displacement	Loss of income streams or means of livelihood resulting from land acquisition or obstructed access to resources (land, water, or forest) resulting from the construction or operation of a project or its associated facilities
Displaced persons	Refers to persons affected in any of the ways described in Para 3 of the OP 4.12 – WB Involuntary resettlement
Physical displacement	Loss of shelter and assets resulting from the acquisition of land associated with a project that requires the affected person(s) to move to another location
Entitlement	The compensation, rights and assistance measures offered by this Abbreviated Resettlement Action Plan.
Cut-off date	Start date of the census and assets inventory of persons affected by the project. Persons occupying the project area after the cut-off date are not eligible for compensation and/ or resettlement assistance
Involuntary resettlement	Resettlement is involuntary when it occurs without the informed consent of the displaced persons or if they give their consent without having the power to refuse resettlement.
Livelihood restoration	Programs that will provide Project Affected Households with a viable opportunity to restore their livelihoods to pre-Project levels.
International best practice	Performance Standards on Land Acquisition and Involuntary Resettlement as outlined in JICA and World Bank Policies on involuntary resettlement
Project affected person (PAP)	Any person who, as a result of the implementation of a project, loses the right to own, use, or otherwise benefit from a built structure, land (residential, agricultural, or pasture), annual or perennial crops and trees, or any other fixed or moveable asset, either in full or in part, permanently or temporarily
Replacement cost	Method of valuation of assets that helps determine the amount sufficient to replace lost assets and cover transaction costs
Abbreviated Resettlement Action Plan (ARAP)	A public document which specifies the procedures and actions to be undertaken to mitigate adverse effects, compensate losses, and provide development benefits to project affected households. ARAP is recommended for less than 200 PAPs
Stakeholders	Individuals or groups who have views about cooperation projects

Source: Handbook for Preparing Resettlement Action Plan, International Finance Cooperation (IFC) and JICA Guidelines for Environmental and Social Considerations, April, 2010

Chapter 1: Description of the Project

1.1 General description of the project

The Malawi Government intends to upgrade the section of M1 Road from Paul Kagame Junction at Lilongwe Hotel to Lubani Junction at Police Mobile Force (PMF) as part of the project to improve the major roads in Lilongwe City. The Japan International Cooperation Agency (JICA) will provide financial support for the project while Katahira & Engineers International (KEI) is the Primary Consultant. The major works will involve widening of the 2.1 km section of the M1 road from a 2 to a 4 lane carriageway and the construction of a bridge along the existing Lilongwe River Bridge. The Lilongwe River Bridge will not be available during construction and therefore, a detour road and temporary bridge will be installed on the south side of Lilongwe River Bridge.

The project activities will involve clearing, excavation and levelling of soil, mining of gravel and quarry, transportation of materials, water abstraction, compaction of sub-base material, road sealing, construction of road related infrastructure such as bridges and drainage systems, shouldering, road signage and others. The contractor will use heavy equipment during the implementation of this project including heavy excavators, earth moving equipment, compactors and other lighter equipment. The contractor will build a campsite to accommodate staff and facilitate the storage of materials and equipment at some location along the proposed alignment yet to be identified.

The road will be reorganized while taking the following points into account:

- Securing walking space according to the volume of pedestrians traffic
- Securing parking space for delivery vehicles and customers
- Ensuring smooth traffic flow of the main road by consolidating the entry and exit points of roadside facilities

The ARAP has identified all the elements on the surface that will be affected by the project and includes billboards, trees, brick and chain-link wire perimeter fences, pedestrian bridge, Lilongwe Water Board valves. There are in addition, utilities such as water supplies, sewages and communication cables, electricity poles and cables that exist along this section of the M1 road. Most of the public utilities need to be relocated for the widening of the road. The study has also identified elements that will be affected by the detour road which includes trees, two nurseries and part of Wullian shopping complex.

This section of the M1 road is very crucial in facilitating efficient transportation of goods and services within the city and to neighboring countries of Zambia, Tanzania, and Mozambique and beyond. The City of Lilongwe is rapidly growing and so is the traffic volume. The traffic survey conducted by the JICA Team¹ indicated that traffic

¹ *The Study on Urban Development Master Plan for Lilongwe, Final Report, JICA, 2010*

volumes in the city varied between 1,200 and 27,000 cars per day. The most serious bottleneck point was between the Lilongwe Town Hall roundabout and the Old Town in Area 1 where the traffic volume was 27,000 cars per day. The upgrading of this section of M1 road will significantly improve traffic flow within the city of Lilongwe.

1.2 The project area

The proposed road project is situated in the City of Lilongwe. It is a 2.1 km stretch of the M1 Road, starting from M1 – Paul Kagame T-junction at Sunbird Lilongwe Hotel (intersection No. 2) through City Hall and Old Town to M1 – Lubani T-junction (intersection No.8). See Figure 1-1

Fig - 1-1: Project Area



Source: Source: JICA and Katahira and Engineers International, 2018, Interim Report

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Chapter 2: Potential Impacts

2.1 Description of the project components that gives rise to resettlement

Table 2-1 shows the project components that will give rise to resettlement, loss of livelihoods or disturbance of business operations. The project will primarily involve the expansion of the pre-existing roads and does not lead to a large-scale resettlement, thereby falling into Category B of JICA Guidelines for Environmental and Social Considerations (JICA Guidelines). Proposed projects are classified as Category B if their potential adverse impacts on the environment and society are less adverse than those of Category A projects². Generally, they are site-specific; few if any are irreversible; and in most cases, normal mitigation measures can be designed more readily.

Table 2-1: Scope of the Project

No.	Main Project Activity	Specification
1	Widening of the M1 National Road from Intersection No. 2 to No. 8	L=2.75km
2	Construction of traffic control signal facilities	As needed
3	Construction of bridge along the existing Lilongwe River Bridge	L=75m (3 spans x 25m), height from river: H=8m
4	Construction of temporary detour road and bridge	L=350m, W=12.0m Installed on south side of Lilongwe River Bridge during construction
5	Improvement of intersections including renovating drainage, kerb stones, road signs and road marking and repairing/ installing traffic lights	7 intersections

Source: JICA Study Team, 2018

The classification means that there is need to carry out an environmental and social impact assessment (ESIA) and develop a resettlement action plan as required by the Environmental Management Act (2017), and JICA's Guidelines for Environmental and Social Consideration (2010). However since the number of persons to be displaced by the project is less than 200, an abbreviated resettlement action plan (ARAP) suffices in line with JICA/ World Bank Guidelines.

² Project are classified as Category A if they are likely to have significant adverse impacts on the environment and society. These are projects with complicated or unprecedented impacts that are difficult to assess, or projects with a wide range of impacts or irreversible impact.

The expansion of the road from a single to a dual carriage way will result in asset loss and disruption of businesses in the project area. This is notwithstanding the fact that the ROW of M1 road is designated as 60m (Public Road Act). The impacts include:

- (a) Encroachment to privately owned land resulting into the land being incapable of any reasonable beneficial use
- (b) Loss to service roads also used as pedestrian walkways and parking areas for customers
- (c) Loss of fences and walls of properties along the road
- (d) Relocation of kiosks of airtime and mobile money dealers
- (e) Relocation of utility cables, advertising boards, traffic lights
- (f) Need to relocate the vendors at the purpose built Souvenir sheds at the FMB bank
- (g) Need to relocate the vendors in makeshift sheds at the FMB Bank
- (h) Need to relocate vendors at the Lilongwe River Bridge (during construction only)
- (i) The Lilongwe filling station (Total opposite Lilongwe Hotel)
- (j) Temporary occupation of land to be used as detour road
- (k) Partial demolition of Wullian shopping complex/ staircases only
- (l) Two flower nurseries on the detour road

The details of the negative impacts including the extent and their location are presented in Chapter 9 of this report.

The asset inventory confirmed that there will be no major acquisition of privately owned land. The Lilongwe Total filling station is the only property that will be significantly affected. Notwithstanding, it is important to note that there are vendors plying their trade at the purpose built and makeshift sheds at FMB Bank opposite the NICO Centre who will have to be relocated to another area. This will result into inevitable disruption of their businesses and temporary loss of income. In addition to the souvenir vendors, a detailed survey of the inventory of assets came up with a comprehensive list of the assets that will be affected by the project. This includes elements on the detour route. (See Annexes 1-1 and 1-2)

Underground utilities such as water supplies, sewages and communication cables, electric poles and cables, advertisement boards, a pedestrian bridge will also be affected.

2.2 Impacts identified through public consultations

Consultations were held between February and March 2018 by the ESIA team. The consultations came up with a list of impacts from the perspective of the stakeholders interviewed in the project area. The stakeholders included business people, banks, filling station owners, vendors, schools, faith based communities, traders, market committee representatives and communities in the project area.

We isolated compensation related issues/ concerns from other environmental and social issues/ concerns from the Environment and social impact Assessment (ESIA)

consultations report of March, 2018. Out of the seven issues we selected, the top 4 issues/ concerns mentioned included slowing down of business during the construction phase, loss of business/ property, fears of delays in payment of compensation or compensation not paid at all for loss of livelihood, and loss of parking area.

The ARAP specifies the measures to be undertaken to mitigate adverse effects, compensate losses, and provide development benefits to project affected households.

2.3. The Zone of impact

The zone of the impact is determined by what in ESIA terminology is called the extent of disturbance. This is defined by the physical extent of the impact which is anticipated to occur from the project. The extent of disturbance on a spatial scale is categorized as follows:

Table 2-2: Classification of zone of impact

Extent - Spatial Scale	
Localized	At localized scale and a few hectares in extent
Study Area	The proposed site and its immediate environs
Regional	District and provincial level
National	Country
International	Internationally

While the overall impacts of the project are many, of interest to the ARAP are the impacts that relate to involuntary resettlement and the associated loss or disruption of livelihoods. Thus the zone of impact of the project that trigger involuntary resettlement are localised, study/ project area and City wide as may be noted from the following:

- **Localised:** Loss of few hectares of land currently used as service roads (car parking and pedestrian walkways).
- **Localised:** Loss of less than a hectare of land currently occupied by vendors opposite at FMB Bank
- **Localised:** Temporary loss of use of the land to be taken by the detour road
- **Regional:** Allocation of alternative viable business location within the City
- **Regional:** Loss or disruption of livelihoods will impact on households largely within the City of Lilongwe

2.4 The alternatives considered to avoid or to minimize involuntary resettlement

2.4.1 Width configurations of non-built up and built up area

While it is desirable to maintain the same road width throughout the 2.1 km length of the road, minimizing loss of structures, vendor stalls and valuable service areas have been main consideration in determining the width configuration of the road.

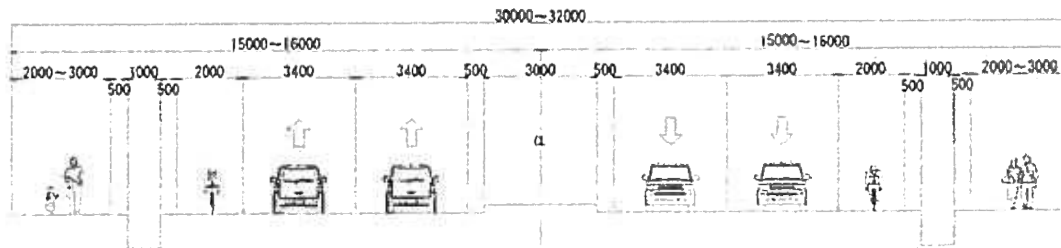
(DLP)

Consequently the road sections have been divided into “*Non-Built Area*” and “*Built-up Area*” and the width configurations have been considered accordingly.

(a) Width configuration for non-built up areas

The cross-sectional configuration of the non-built-up Area is considered to be the most desirable configuration for the improvement plan of the M1 road with a median strip width of 3.0 m. It enables the installation of a right-turn lane at the intersection to enable smooth traffic operation without obstructing straight-through vehicles. The safety of pedestrians and bicycle users will also be ensured by adopting a configuration that separates the sidewalk and bicycle path. In addition, a curb of about 10 cm will be set between the roadway and the bicycle path to ensure bicycle safety (see the diagram below)

Fig 2-1: Width configuration for non-built up areas



(b) Width configuration for built-up areas

For the built-up areas, the width configuration described above could not be secured without substantial loss to the service roads and encroaching on private land. As a result, the configuration has been planned using four lanes with reduced width. While the basic road configuration is the same, it uses a reduced width. Given that there are four lanes with reduced intersection, the centre lane is planned to be used by straight-through and right-turning vehicles, while the outside lane will be used by straight-through vehicles to eliminate obstructions to traffic flow.

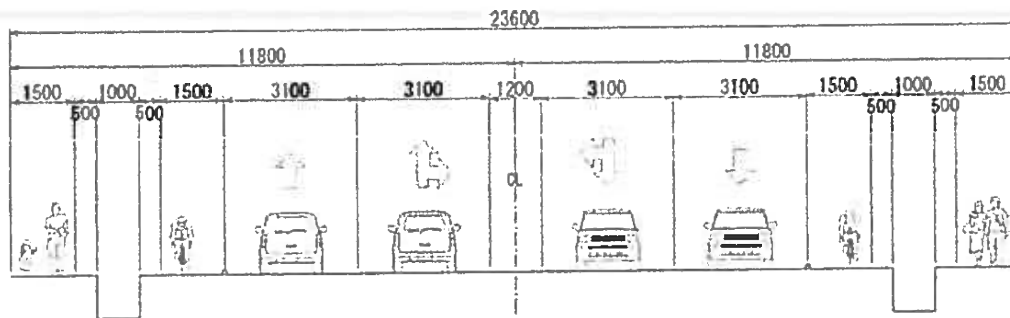
With the application of reduced widths for each element which forms the cross section, it has been possible to maintain parking space/ service roads as much as possible as well as pedestrian walkways.

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Fig 2-2: Width configuration for built-up areas



2.5 The mechanisms established to minimize resettlement during construction

The initial plan was to provide a detour route from Town Hall roundabout to Old Town which would have resulted in the demolition of one or two shops. The idea has been modified to an installation of 350 metre long and 12 metre wide detour road and temporary bridge upstream which avoids existing buildings. The project will have to employ a traffic management system that minimizes cutting off business from vehicular and pedestrian traffic.

The identification of the site (s) for the construction camps will be done in consultation with the Lilongwe City. The guiding principle is to allocate the camps on unoccupied public land of low community value land away from existing settlements/ businesses.

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Chapter 3: Objectives

3.1 The main objectives of the resettlement programme

This ARAP has been prepared consistent with the applicable policy provisions of the Government of Malawi and JICA. It is a public document which specifies the procedures and actions to be undertaken to mitigate adverse effects, compensate losses, and provide development benefits to project affected people. An ARAP is recommended for projects envisaged to displace and involuntarily resettle less than 200 persons. The ARAP presents an inventory (register) of people likely to be affected by expansion of the road and the provision of the detour route, a register of the assets that are likely to be displaced by the project and the proposed compensation and resettlement packages. Specifically the ARAP was prepared in order to:

- Raise awareness of the project and its consequences among the general public and particularly among those people who will be directly affected by the project;
- Determine the current occupants of the affected area in order to establish a base for the resettlement programme and exclude subsequent inflows of people for illegibility for compensation
- Undertake an inventory of assets to establish the number and size of the structures and other assets to be affected by the project, the extent of displacement and the magnitude of the expected loss
- Undertake an income and livelihood survey to establish the standard characteristics of the displaced individuals/ businesses
- Outline the legal framework for the resettlement programme, examining the scope of eminent domain and the nature of compensation associated with it in terms valuation methodology and the timing of payment of compensation and identifying the gaps between the laws of Malawi and the World Bank's resettlement policy and JICA Guidelines and propose approaches to address the gaps
- Identification of agencies responsible for the resettlement activities
- Define the displaced persons categorized as those with formal legal rights to land, those without recognisable legal rights or claim to the land they are occupying and develop criteria for their compensation including establishment of the cut-off date
- Develop and implement a valuation methodology that is consistent with international best practices in involuntary resettlement
- Outline resettlement measures in cases of loss of assets, physical relocation and income restoration as the case maybe
- Set out strategies to mitigate against adverse effects suffered by the PAPs including provision of channels and platforms for negotiations
- Provide an estimate of the costs necessary for resettlement and compensation.

Chapter 4: Socioeconomic Studies

4.1 Baseline survey

The baseline survey comprised three components: (a) the population census which was carried out on 14th and 15th September counted individuals residing in the project area and recorded attributes regarding sex, age, marital status, main source of income (employed or own business) as well as mobile phone contacts; (b) a detailed questionnaire was administered on 15th September targeting the vendors at FMB who will have to be relocated. A total of 25 respondents were interviewed and information was collected on their socioeconomic status; and (c) the survey carried out on 28th February, 2019 to establish elements that will be affected by the detour road and temporary bridge construction at Lilongwe River.

It is important to mention that there was an earlier survey conducted in February and March, 2018 as part of consultations for the ESIA report. We have extracted from the survey results impacts related to compensation that were frequently mentioned by the consultees.

4.1.1 Population census

The census counted a total of 287 persons in the project area comprising 247 (86%) males and 40 (14%) females. The majority 233 (81%) reported to be married while 49 (17%) were single. Most of the people 209 (72%) had business as their main source of income while 78 (27%) had employment as their main source of income. The population is very youthful with 35% in the under 30 bracket while only 6% reported to be 51 and above. See table 4-1 for details.

Table 4-1: Summary of census results

Attribute	Description	Number	Percent
Sex	Female	40	14
	Male	247	86
	Total	287	100
Age structure	18 - 30	101	35
	31-40	111	39
	41 - 50	36	13
	51 Plus	19	6
	Unspecified	20	7
	Total	287	100
Marital status	Married	233	81
	Single	49	17
	Other (divorced, widowed, deserted and separated)	5	2

	Total	287	100
Main Source of income	Business	209	73
	Employees	78	27
	Total	287	100

Source: Population census of the 14th & 15th September, 2018 & 28th Feb, 2019

In order to determine how the project is going to affect different categories of people we introduced two categories to represent those who own their businesses and those who are on paid employment. The PAPs were further broken down into sub-categories depending on the location and the nature of their businesses. It is important to note that the souvenir vendors located at the FMB Bank will be relocated to pave way for the expansion of the road. We counted 35 vendors owning businesses in the purpose made sheds and 32 in the makeshift shelters. The number of employees in the purpose built sheds and the makeshift sheds was 21 and 41 respectively totalling 62. The employees at the Lilongwe Total Filling is another sub-category of significance as the 12 employees are likely to lose their jobs as a result of closure of the business. The detour road will affect 2 flower nursery owners, 3 owners of vacant plots and Wullian Shopping Complex.

Table 4-2: Summary of census results – categories and locations of PAP

Status	Affected persons by category & location	Number
Own Businesses	Plots 3/ 1010, 2/ 763 and 2/ 633	3
	Wullian Shopping complex	1
	Lilongwe Total Filling Station	1
	Airtel/ TNM/ Zoono kiosks	18
	Vendors - makeshift FMB Bank	32
	Vendors – Purpose built sheds at FMB Bank	35
	Hawkers (Lilongwe Bridge)	103
	Flower nurseries	2
	Subtotal	195
Employed	Airtel/ TNM/ Zoono Kiosks	3
	Hawkers (Lilongwe Bridge)	15
	Lilongwe Total Filling Station	12
	Vendors at FMB Bank – Purpose built sheds	21
	Vendors at FMB Bank – Makeshift	41
	Subtotal	92
Grand Total		287

Source: Population Census of the 14 and 15th September, 2018 & 28th February, 2019

4.1.2 Socio-economic characteristics of the vendors at FMB Bank

A questionnaire was administered on 14th and 15th September involving 25 respondents to identify the standard characteristics of the households that will permanently be affected by the project. The respondents are located at the FMB Bank

opposite NICO Centre and include those in the Lilongwe City Council purpose build sheds and those in the open and makeshift sheds. The results of the survey are captured in the tables that follow.

(a) Status in family, sex and age disaggregation of the respondents

Table 4-3 shows that the respondents interviewed were predominantly male (96%) and household heads (96%) In terms of age, 20% of the respondents were within the 15 -20 age group, while the majority (68%) were in the 31-50 age group and the remaining 12% were in the 50 plus age group.

Table 4-3: Status in family, sex and age disaggregation

Indicator	Characteristics of respondents	No of responders	Percentage
Status in family	Head of household	24	96.0
	Child of household head	1	4.0
	Total	25	100.0
Sex disaggregation	Male	24	96.0
	Female	1	4.0
	Total	25	100.0
Age disaggregation	15 - 30	5	20.0
	31 - 50	17	68.0
	50 plus	3	12.0
	Total	25	100.0

Source: Socio-economic survey of 14th and 15th September, 2018

(b) Household sizes and number of children

Table 4-4 shows that the average household size is 6.5 persons and the minimum and maximum sizes are 3 and 12 respectively. Each family has a maximum of 6 children and an average of 2 orphans and 56 percent of the respondents indicated that they live with orphaned children in their households.

Table 4-4: Household characteristics and income levels (Malawi Kwacha)

	Attribute	Average	Minimum	Maximum
Household characteristics	Household size	6.5	3	12
	Number of children	3	1	6
	Number of orphans	2	1	4
	Main source	281,250.00	60,000.00	600,000.00
	Other sources	68000.00	40000.00	150000.00

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Household	Expenditure on food	3480.00	1500.00	6000.00
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Source: Socio-economic survey of 14th and 15th September, 2018

(c) Daily food expenditure of the respondents

The table below shows that the majority of the respondents (80%) spent between MK1, 500.00 and MK4, 000 on food on a daily basis.

Table 4-5: Daily expenditure on food

	Indicator	Number of respondents	Percentage
Daily household expenditure on food	1500 - 2000	1	8.0
	2001 - 3,000	11	44.0
	3001 - 4000	7	28.0
	4001 - 5000	4	16.0
	>5000	1	4.0
	Total	25	100

Source: Socio-economic survey of 14 and 15th September, 2018

(d) The number of days in a month that the household of the respondents struggle to meet household needs.

Table 4-6 shows the number of days in a month that the household of the respondents struggle to meet household needs. Up to 92% of the respondents indicated that they had difficulties to provide basic household needs in some days in a month.

Table 4-6: Days in a month household struggles to meet basic needs

Days in a month household struggles to meet households needs	Yes	23	92.0
	No	2	8.0
	Total	25	100.0

Source: Socio-economic survey of 14th and 15th September, 2018

(e) Level of education

Table 4-7 shows that 44% of the respondents reported to have obtained a primary school certificate while only 12% reported to have obtained Secondary School certificate.

Table 4-7: Education attainment

Education level	Number of respondents	Percentage
Cannot read/ write	1	4.0
Primary Certificate	11	44.0
Secondary Certificate	12	48.0
Other certificate	1	4.0

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Total	25	100.0
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Source: Socio-economic survey of 14th and 15th September, 2018

(f) Assets, access to utilities and type of schools attended

The table below shows that 60% of the households use electricity for lighting and 40% use other sources such as candles and kerosene lamps. Fifty two percent of the respondents reported to have piped water within their plot while 28% use community pipes and 8% have piped water within their dwelling unit and the remaining 8% use water from unsafe sources. Fifty six percent of the respondents sent their children to public schools while 36% of the respondent have their children in private schools. The majority 76% owned a television set.

Table 4-8: Assets, access to utilities and type of schools attended

Indicator	Asset/ utility/ school attended	Number of respondents	Percentage
Uses electricity	Yes	15	60.0
	No	10	40.0
	Total	25	100.0
Source of water	Community pipe	7	28.0
	Piped water at plot	13	52.0
	Piped water in dwelling house	2	8.0
	Wells	3	12.0
	Total	25	100.0
Own TV set	Yes	19	76
	No	6	24
	Total	25	100
School attended	Public school	14	56
	Private school	9	36
	Total	23	92

Source: Socio-economic survey of 14th and 15th, September 2018

4.1.3 Asset inventory

The way-leave taken into account is a 30 meters' radius, thus 15meters on both sides from the centre line of the proposed route. The survey commenced at the M1 – Paul Kagame Road Junction at Sunbird Lilongwe Hotel and proceeded along the MI South Road through the City Hall to M1· Lubani Road Junction at Police Mobile Force. Table 8-2 shows details of assets and property that will be affected by the road extension program.

The main permanent features to be affected include perimeter fences (brick and chain-link) Filling stations forecourt, canopies and pump islands, car parks and pavements and advertising billboards.

Apart from the permanent structures, the other affected assets include:

- Road signs
- Lilongwe Water Board valves and sub-valve manholes
- Business premises
- Landscaping, flowers and shrubs
- Natural and exotic trees
- Hedges
- The predominant assets along the road are business sign posts and billboards.

Most of these road signage and billboards are made of welded iron and steel. The other affected structures, for example walls and fences, are made of burnt bricks bonded with cement mortar and chain-link wire respectively. Other affected perimeter walls are made of brick walls, reinforced with steel iron bars in between the panels. Concrete man-holes for (LWB) water valves, strong concrete pavements and parking spaces and fiber glass materials for Airtel/ TNM/ Zoono kiosks. The trees on the way leave are primarily Acacias, Cinderella, Gmelina, mthethe, blue gum and some natural trees.

4.1.4 Standard characteristics of displaced households

The details of family characteristics of the displaced persons are discussed under 4.1.1 and 4.1.2 above.

4.1.5 Other studies

Land tenure: The Land Act, 2016 categorizes land as either public or private. Public land is classified as either Government land or unallocated customary land while private land is classified as either freehold, leasehold or customary estate. The land in the project area falls within the public land category and the Government Land classification. With the 60m road reserve provision for the M1 road, there will be no significant land acquisition for the road expansion project.

Public infrastructure to be affected: As noted earlier, the project will affect some public infrastructure, notably the service roads used as parking areas and walkways. The pedestrian bridge near Lilongwe River Bridge will also be affected. However the bridge is hardly used for crossing the road by pedestrians and as such the negative impact will be negligible. Utility cables and pipes will be affected and will have to be relocated before construction work begins.

Existing Vendors' governance structures: The Lilongwe Street Vendors Association is the umbrella body that represent all vendors in Lilongwe through market committees for each market or locality. The Association together with the Market Committees originated from the ushering in of multiparty dispensation in 1994. The democratic transition gave vendors an opportunity to mobilise and organise to improve their welfare. The main role of the Association is to present the interest of the vendors to the City Council. The Local Government on the other hand sees the Association as the appropriate structure to engage with on behalf of vendors in a market or a particular area. The Chairman of the Association or Committees acts as focal persons for City as well as the Central Government and are consulted first whenever the City has some issues with the vendors. The Committees are also responsible for conflict resolution in their respective markets or areas

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