



KENYA URBAN ROADS AUTHORITY

Efficient and safe urban roads

IKM PLACE, Bishops Road, Tel: 254-020-8013844

Email: info@kura.go.ke Web: www.kura.go.ke

P.O. Box 41727-00100, GPO, NAIROBI

Ref. No: KURA/F&A/PROC/3/Vol.23 (93)

Date: 26th March, 2019

To All Bidders

RE: ADDENDUM 1

Reference is made to the above subject matter.

This is to notify all bidders that an addendum has been issued for the tenders below:

S/NO	TENDER NO.	TENDER NAME	AMENDMENT
1	KURA/DEV/HQ/174/2018-2019	Feasibility Study, Preliminary Engineering Design and Environmental and Social Impact Study of Roads within Mbale Town and Busia Town in Vihiga and Busia Counties.	Replace pages cover page, pages 9,10,29-32,42,46-54 and 68-70
2	KURA/DEV/HQ/173/2018-2019	Feasibility Study, Environmental and Social Impact Study and Preliminary Engineering Design of Narok and Kajiado Town Roads	Replace pages 10,30,31,33, 34, 44-56 and 70.

The mandatory Pretender Site Conference has been moved to 2nd April, 2019 for Feasibility Study, Environmental and Social Impact Study and Preliminary Engineering Design of Narok and Kajiado Town Roads and 4th April, 2019 for Feasibility Study, Preliminary Engineering Design and Environmental and Social Impact Study of Roads within Mbale Town and Busia Town in Vihiga and Busia Counties.

The closing/opening date has been changed to 12th April, 2019 at 10.00am. Bids to be delivered at the tender box on 4th floor at IKM place, 5th Ngong Avenue. Details of the addendum can be accessed on www.kura.go.ke.

Saadia H. Adankhalif

Deputy Director, Supply Chain Management

FOR: DIRECTOR GENERAL



KENYA URBAN ROADS AUTHORITY

Efficient & Safe Urban Roads

**CONSULTANCY SERVICES
FOR
FEASIBILITY STUDY, PRELIMINARY ENGINEERING DESIGN AND
ENVIRONMENTAL AND SOCIAL IMPACT STUDY
OF
ROADS WITHIN VIHIGA AND BUSIA COUNTIES**

REQUEST FOR PROPOSAL

TENDER No.: KURA/DEV/HQ/174/2018-2019

MARCH 2019

**DIRECTOR, POLICY STRATEGY AND
COMPLIANCE
KENYA URBAN ROADS AUTHORITY
P.O. Box 41727 - 00100
NAIROBI.**

**DIRECTOR GENERAL
KENYA URBAN ROADS AUTHORITY
P.O. Box 41727 - 00100
NAIROBI.**

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APPENDIX "A"

Reference Clause

1.1 & The name of the Client is:
2.1 **Director General,
Kenya Urban Roads Authority**

1.2 The method of selection is: **Quality and Cost Based Selection**

Technical and Financial Proposals are requested: **Yes**

A Technical Proposal only is requested: **No**

The name, objectives, and description of the assignment are:

FEASIBILITY STUDY, PRELIMINARY ENGINEERING DESIGN AND ENVIRONMENTAL AND SOCIAL IMPACT STUDY OF ROADS WITHIN VIHIGA AND BUSIA COUNTIES

To carry out feasibility, preliminary and detailed engineering design of the optimum alignment and identify the most economically justified geometric and pavement design solution.

1.3 A pre-bidders conference will be held: **Mandatory on 4th April 2019 from 10AM at KURA Western Regional office Boardroom. Tenders open for Consultants registered in Kenya only.**

The name(s), address(es) and telephone numbers of the Client's official (s) are:

**Eng. Abdulrashid S. Mohammed
Director, (PS&C)
Kenya Urban Roads Authority or
P.O. Box 41727-00100
NAIROBI**

**Richard Kyalo
Deputy Director (S&EP)
Kenya Urban Roads Authority
P.O. Box 41727-00100
NAIROBI**

Tel: +254-020-8013844 Tel: +254-020-8013844

Email: asmohamed@kura.go.ke OR rkyalo@kura.go.ke

1.4 The Client will provide the following inputs subject to availability, at a nominal fee to be indicated at the time of tendering:

- i). Standard specifications for Road and Bridge construction (1986)
- ii). Road Design Manual Part I – Geometric Design for Rural Roads (1979)
- iii). Road Design Manual Part III – Pavement Design and Materials (1987)

1.5 The client shall also give assistance to facilitate the timely granting of the Consultant and his personnel of:

- i). Unobstructed access to all sites and locations involved in carrying out the services
- ii). Necessary Visas and customs clearance for entry and exits

3.3

- i) The consultant will be responsible for determining the number of professional staff months to be assigned for any activity.
- ii) The duration required to complete the assignment is: **twelve (12) months.**
- iii) The minimum required experience in years of proposed professional staff and the

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points assigned to each is as shown hereunder:-

	Professional staff name	Years
a)	Project Director: BSc (Civil Eng.)	15
b)	Highways Engineer: BSc (Civil Eng.)	15
c)	Materials Engineer: BSc (Civil Eng.)	12
d)	Structural/Drainage Engineer: BSc (Civil Eng.)	10
e)	Surveyor: BSc (Survey or Equivalent)	10
f)	Environmental: BSc or BA and must have undertaken Environmental Studies on Infrastructural projects	10
g)	Sociologist: BSc or BA and must have undertaken Social and Resettlement Action Plans and Studies on Infrastructural projects	10
h)	Transport Economist	10

3.4 The consultants shall not change the proposed key personels named in the RFPs when awarded the contract. The proposed personels should be available for a minimum of six months from the date of award of consultancy contract.

- 3.5 (i) Training is a specific component of this assignment: **Yes**
- (a) The Consultant shall provide training of a course on "Government Contracting" at ESAMI for two (2) No. Project supervision staff (Public Service JG 'S') nominated by the Client.
 - (b) offer two internship (with government approved allowance) during the contract period, the interns shall be nominated by the client.
 - (c) Provision of training in the use of HDM4 software and provide a new laptop (Hp Spectre x360 Convertible 13 Intel 8th Generation, Core i7-8550U, 1.80GHz, 16GB DDR4 1000GB SSD 13" 4K UHD Display Wi-Fi Webcam HDMI Backlit Keyboard) to Project Team by the first month of commencement of consultancy.
 - (d) The Consultant shall include the cost of training of Clients two staff in his financial proposal, including the associated allowances.

3.7 Taxes:
The Consultant shall be liable to pay all taxes, duties and levies including VAT in accordance with the laws of Kenya and the Client shall not reimburse any amount paid in this context.

4.2 Consultants **MUST** submit 1 (One) original and 2 (Two) additional copies of each proposal.

4.3 Proposals should be submitted not later than the following date and time:
12th April 2019 at 10AM

4.4 The proposal submission address is:
**Director General
Kenya Urban Roads Authority
IKM PLACE, 5th Ngong Avenue, 1st Floor
P. O. Box 41727 – 00100, GPO, NAIROBI
Tel: 254 – 020 – 8013844**

The outer envelope shall also be clearly marked:

FEASIBILITY STUDY, PRELIMINARY ENGINEERING DESIGN AND ENVIRONMENTAL AND SOCIAL IMPACT STUDY OF ROADS WITHIN VIHIGA AND BUSIA COUNTIES

TENDER No.: KURA/DEV/HQ/174/2018-2019

SECTION E: TERMS OF REFERENCE

FEASIBILITY STUDY, PRELIMINARY ENGINEERING DESIGN AND ENVIRONMENTAL AND SOCIAL IMPACT STUDY OF ROADS WITHIN MBALE TOWN AND BUSIA TOWN IN VIHIGA AND BUSIA COUNTIES

1.0 STUDY BACKGROUND

1.1 General

The Government of the Republic of Kenya (GoK) has earmarked funds through the Development Vote for use in engaging the services of a Consultancy Firm to undertake Feasibility Study, Preliminary Engineering Design and Environmental and Social Impact Study Roads within Mbale Town and Busia Town in Vihiga and Busia Counties respectively.

The Government of Kenya, through its implementing agency, the Kenya Urban Roads Authority (KURA) shall require the Consultant to render all technical support services which may be deemed relevant to the above study. The detailed description of the consulting services to be performed is described in these Terms of Reference (TOR).

1.2 Selection Criteria

The Consultant selected to undertake the design shall have had extensive experience in the Feasibility Studies, Engineering Design, Tender Documentation and Environmental and Social Impact Assessment of road construction projects. This is a lumpsum Contract.

1.3 Project Description

1.3.1 Project Location

The project roads are located in Mbale Town in Vihiga County and Busia Town in Busia County with a total length of approximately **164.4 km** as detailed below:

A. Vihiga County

S/NO	ROAD ID	ROAD NAME	LENGTH(KM)
1	UCBU3-VIHIGA	Mbale -Vihiga	7.73
2	UCBU2-VIHIGA	Mbale -Viyalo(stend-kisa)	7.5
3	UCBU4-VIHIGA	Chavakali-Kiritu	6
4	E1262J1	Mbale-Mbihi-Magada	7
5	UP 11	Mbale-Kisangula	6
6	D291	Majengo-Kisambayi-Hamisi	20
7	U_L1	Mbale-Munoywa	3
8	U_G93143	Kisambayi-Chango	3.5
Total			60.73km

B. Busia County

S/NO	Road number	Road Name	Length (Km)
1	K3_Busia	Busia-Alupe	5.43
2	E9025	Angorom-Ojaamong Primary-Otimong	7.70
3	L1_Busia	Ojamii Junction-Amoni	2.02
4	Nr_40_483	Amoni-Opakasi Bridge-Angorom	1.05
5	Nr_40_482	Busia County Assembly Offices-Amoni	0.87
6	P16_Busia	St. Luke Amoni Pri-Amoni Junction	1.40

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7	L2_Busia	Busia Airstrip Ecd-High Rock-Angorom (Ongole)	3.88
8	L3_Busia	Mogola Centre-Angorom (B13)	1.90
9	L4_Busia	Mogola Junction-Amerikwai (B13)	1.81
10	P38_Busia	Highrock Junction-Amerikwai (B13)	1.59
11	P39_Busia	Busia-Little Angels Academy Ecd-Amerikwai Centre	1.68
12	Nr_40_497	Amerikwai - Kijana Msafi_Rd	1.23
13	P41_Busia	Border Palace-Amerikwai	0.83
14	Nr_40_494	Busia Christian Community Center - Busia Airstrip_Rd	0.50
13	Nr_40_495	Airstrip - Kisii Estate_Rd	0.46
16	Nr_40_493	Ojamii - Mtongwe_Rd	0.98
17	E_40_N_484	Angoromo K3 Busia-Angorom B13	1.19
18	N4_Busia	Angorom-Alupe	1.29
19	P34_Busia	Angorom_Alupe_Rd_2	0.23
20	P35_Busia	Angorom_Alupe_Rd_3	0.46
21	P36_Busia	Amoni Ecd_Alupe_Rd_1	0.66
22	P40_Busia	Bugengi_Rd_3	0.09
23	P42_Busia	Angorom_Alupe_Rd_4	0.74
24	P43_Busia	Angorom_Alupe_Rd_5	0.41
25	P44_Busia	Angorom_Alupe_Rd_6	0.17
26	P45_Busia	Angorom_Alupe_Rd_7	0.68
27	P46_Busia	Angorom_Alupe_Rd_8	0.56
28	Nr_40_325	Ministry Of Repentance And Holiness - Bugeng'i Pri. School	1.95
29	E_40_N_326	Bugeng'i - Rueru_Rd	1.29
30	L5_Busia	Burumba Ecd_St Marys Burumba Pri School_Rd_1	1.46
31	P22_Busia	Busia Ebenezer Ecd_St Marys Burumba Pri School_Rd_1	0.14
32	N5_Busia	Busia Church Of God Ecd_St Marys Burumba Pri School_Rd_1	0.55
33	Nr_40_289	Burumba-Busia_Rd	1.21
34	L6_Busia	Busia Soko Mjinga_Burumba	2.58
35	F9010	Burumba_Esirisia_Road Block	3.66

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36	E_40_N_293	St. Francis Insight Academy-Burumba-Street_2	6.21
37	C826	Busia - Mayenje - Mukinda	12.00
38	Nr_40_294	Lukonyi Boys' Primary School-Busia_Rd	0.60
39	P1_Busia	Busia_Rd_2	0.90
40	P2_Busia	Busia_Rd_3	0.44
41	P5_Busia	Busia_Rd_9	0.68
42		Public Works-Unity-Younear	1.50
43	P6_Busia	Busia_Rd_10	1.05
44	P7_Busia	Busia_Rd_11	0.80
45	P8_Busia	Busia_Rd_12	0.44
46	P9_Busia	No Mans Land-Busia Town	0.73
47	P10_Busia	Jadeng It Computer Accessories-No Mans Land	0.67
48	Nr_40_286	Bulanda-Busia_Rd	0.89
49	Nr_40_287	Busia-Mayenje-2_Rd	1.17
50	Nr_40_289	Burumba-Busia_Rd	1.21
51	Nr_40_290	Burumba Secondary School-Busia Church Of God_Rd	0.32
52	Nr_40_291	Burumba Secondary School-Busia_Rd	1.10
53	Nr_40_292	Sio-Burumba_Rd	0.19
54	Nr_40_294	Lukonyi Boys' Primary School-Busia_Rd	0.60
55	Nr_40_296	Ymca Kenya-Busia-Street_3	0.73
56	E_40_N_288	Busia-St. Mary Burumba Primary School_Rd	0.53
57	E_40_N_269	Bugenga-Mundika_Rd	4.03
58	P21_Busia	Brother Nicholas Sec_St Marys Burumba Pri School_Rd_1	0.14
59	P22_Busia	Busia Ebenezer Ecd_St Marys Burumba Pri School_Rd_1	0.37
60	P23_Busia	Busia_St Marys Burumba Pri School_Rd_2	0.38
61	P24_Busia	Busia_St Marys Burumba Pri School_Rd_3	1.00
62	P25_Busia	Busia_Rd_4	0.60
63	P26_Busia	Busia_Rd_5	1.05
64	P27_Busia	Busia_Rd_6	0.36

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65	P28_Busia	Busia_Rd_7	0.31
66	P29_Busia	Mabale Ecd_St Marys Boys Academy_Rd_1	0.67
67	N3_Busia	Mayenje_Rd_1	1.56
68	N5_Busia	Busia Church Of God Ecd_St Marys Burumba Pri School_Rd_1	1.01
69	N1_Busia	Busia_Mayenje_Rd_1	6.78
Total			103.67

2.0 STUDY OBJECTIVES

The study will provide the decision makers in the Government of Kenya through Kenya Urban Roads Authority, with sufficient information to later undertake Detailed Engineering Designs and construct the road.

3.0 SCOPE OF WORK

3.1 General

The Consultant shall perform all work necessary as called for in these Terms of Reference including all technical studies, field investigations and related services. In carrying their work, the Consultant shall co-operate fully with the concerned agencies of the Government of Kenya, in particular the Strategy & Economic planning Department, Kenya Urban Roads Authority, Ministry of Transport & Infrastructure, Provincial Administration, Ministry in charge of Lands, County Governments amongst others. The Consultant shall provide the necessary support services related to and necessary for the completion of the assignment. The work shall cover but not be limited to the aspects outlined in these Terms of Reference.

3.2 Description

3.2.1 The study consists of: -

i. Feasibility Study

Collection of social, economic, environmental, operating, and physical data that is necessary to support conclusions about the technical feasibility and socio-economic viability of the road and any related feeder roads required to support the project road and preparation of Feasibility and Economic Study report.

ii. Preliminary Design

- Review of the existing data on the proposed road project and social and economic activities in the project study area;
- Collection of social, environmental, and physical data that is necessary to assist in the design of the project road;
- Preliminary corridor definition including plot boundary information, details of encroachments and illegal allocations.
- Preliminary engineering survey and design work for the optimum alignment and design standards including preliminary costs estimates and implementation schedule;
- Carrying out an environmental impact and social impact assessment of the project area in relation to the proposed project including preparation of an Environmental Impact Assessment Report and preparation of a Resettlement Action Plan for project affected persons.

Economic Evaluation

4.3.36 The Consultant shall undertake evaluation of the economic viability of each option following the completion of the study of the road using HDM III or HDM IV as directed by the Client. The Consultant shall calibrate the HDM III or HDM IV as the case may be. For this, the economic costs of the option being evaluated shall be compared with the relevant level of economic user benefits arising from implementation of the project.

4.3.37 The economic viability for each option shall be expressed in terms of :

- a) The Economic Internal Rate of Return,
- b) The Net Present Value in relation to the Government's current opportunity cost of capital,
- c) The Benefit-Cost ratio, and
- d) First Year Rate of Return.

Preferred software for analysis is HDM4 software

4.3.38 The Consultant shall also express the results of the analysis in terms of the first year Rate of Return to indicate the optimum year of construction and opening of each road.

4.3.39 In view of the inevitable uncertainty about the precise values of some key variables of the cost/benefit equation, the Consultant shall subject these key variables to a sensitivity analysis. The Consultant shall also undertake sensitivity analysis and risk analysis for the different identified options.

4.3.40 Based on the results of different options, the Consultant will rank them and make recommendations for the Client and the Fund. The recommendations will then be presented to and discussed with the Client and the Fund.

4.3.41 The consultant shall also conduct and give a report on the socio-economic base line survey of the road projects preferably one kilometre radius for future economic impact analysis.

Environmental Impact and Social Assessment (ESIA)

4.3.42 The Consultant shall conduct analyses which shall detail the positive and negative effects of the development of the project on the environment, and prepare an EIA report recommending appropriate solutions to minimize any undesirable effects resulting from improvements of the road. The analyses shall include, but not limited to the following factors:

- i) The role of the project in the development plans at national and regional level;
- ii) Preservation of areas and land use of particular value including agricultural and, natural conservation areas, forests and other important natural resources, cultural and historic sites, etc;
- iii) Assessment of direct impact on agriculture and forestry, particularly the utilization of the fuel wood and water;
- iv) Disturbance of vegetation, and plans for re-vegetation;

Addendum 1

Participatory Approach

- 4.3.49 The Consultant shall undertake a stakeholder analysis to identify relevant participants/participatory groups. The Consultant shall work closely with stakeholders, NGO's, donors, transport operators, and the local communities at different stages of the study. In addition, with the assistance of the Government, and immediately after submission of draft feasibility study reports, the Consultant will initiate and organize seminars on the improvements proposed to the study road section areas and take into account any suggestions for consideration and inclusion in the study.

5.0 REPORT AND TIME SCHEDULE

5.1 Commencement

- 5.1.1 The Consultant shall commence the study as specified in Clause 5.9 of Appendix "A".

5.2 Reports

- 5.2.1 The Consultant shall prepare and submit to the Project Manager, KURA Technical Team the following reports. All reports shall be in English and prepared on A4 metric size paper. All reports will be submitted in six hard copies and two soft copies in CD ROM format. The consultant will discuss and get approval of the software format used to prepare the soft copies for drawings to ensure compatibility with available software in the Client's establishment. In order to facilitate speedy review by the Client of Consultant's work, the Consultant is encouraged to organize parts of the main reports into working papers for prior discussion with the Client before compilation into deliverables.

a) **Inception Report (One (1) Month)**

This shall summarize initial findings and give proposals covering methodologies of the preliminary engineering studies, and the detailed work plan for the conduct of the preliminary design – 6 hard copies and two softcopies for the client.

b) **Preliminary Feasibility Study Report (Two (2) Months):**

This shall summarize the findings, analysis, results, and recommendations of the study, and shall contain all supporting material and include an executive summary.

The Consultant shall prepare preliminary design drawings and reports in accordance with the format and title sheets as directed by the Team Leader, Project Technical Team. These documents to be submitted in five hard copies and two softcopies to be submitted to the Team Leader-Project Technical Team shall include a description of: -

- i. Feasibility Study, Environmental and Social Impact Assessment
- ii. Topography, geology, rainfall, vegetation and land use
- iii. Hydrological analysis, existing drainage structures and requirements.
- iv. Traffic survey and forecast
- v. Soil and materials investigations
- vi. Recommendations for the new construction
- vii. Estimate of the quantities and construction cost within an accuracy of approximately +/- 20% and a description of physical and pricing problems that may arise during the construction
- viii. Location plans to scale 1:50,000, plan and longitudinal profile drawings to a scale of 1:2,500 and 1:250 vertical, typical cross-section details, and
- ix. General arrangement drawings for the main drainage structures.
- x. **Preliminary Design Report:** This shall incorporate all revisions deemed necessary arising from comments received from the Team Leader, Project Technical Team, following discussions and agreement between him and the Consultant. It shall include a concise executive summary in which the project design standards and cost estimates broken down into foreign and local currencies shall be shown clearly – 5 hard copies and two softcopies to be submitted to the Team Leader-Project Technical Team.

The report will generally incorporate comments generated from the presentation of the Inception Report as well as comments from the Client's Technical Team.

c) **Draft Final Feasibility Study Report (Five (5) Months)**

This report will encompass the entire scope of the consultancy in detail, including all technical investigations and studies: engineering; traffic; socio-economic and environmental, preliminary engineering design, including topographic surveys, alternative alignment design drawings, alternative upgrading scenarios, cost estimates, land acquisition plans and material source plans. The report shall also include economic evaluation and financial viability analysis.

The report will generally incorporate comments generated from the presentation of the Preliminary Feasibility Study Report as well as comments from the Client's Technical Team.

The Draft Feasibility Study Report shall conform to the report structure shown in section 5.5 of the Terms of Reference.

Final Feasibility Study Report (Four (4) Months)

Addendum 1

The report will generally incorporate comments generated from the presentation of the Draft Final Feasibility Study Report as well as comments from the Client's Technical Team. (Ten hard copies and two soft copies).

The Final Feasibility Study Report shall conform to the report structure shown in section 5.5 of the Terms of Reference as a bare minimum.

The environmental and social impact assessment reports, as well as the Preliminary Engineering design Report shall be packaged as separate volumes.

d) **Progress Reports (Monthly)**

These shall be submitted monthly and shall detail all work performed during the reporting period and utilization of the study personnel. This shall contain preliminary conclusions (covering such topics as traffic studies and design standards), based on the analyses substantially completed, and shall also identify actual and anticipated difficulties and delays in the work, their causes and the remedies proposed to solve them – 3 hard copies and two softcopies to be presented to the Team leader-Project Technical Team

Records of Documents

5.2.2 After delivery of all final documentation, the originals of the following documents are to be deposited with the Director (Policy, Strategy & Compliance).

- i) All drawings, both in full size and photo-reduced, inclusive of land acquisition drawings, all in transparent Engineering Matte film material..
- ii) Tabulated test result of the materials investigations and any interpretation there from inclusive of materials charts
- iii) Earthworks computations inclusive of mass-haul diagram
- iv) Structural calculations
- v) Hydrological and water way calculations.
- vi) Setting out data and earthworks computation on a mass storage device.

5.3 Time Schedule

The feasibility study and preliminary engineering designs shall be completed and forwarded to the Team Leader, KURA Technical Team within Twelve (12) months of the commencement of the assignment. The Consultant should be prepared to attend meetings with the Client to discuss the assignment at any stage.

Schedule: Proposed Time Schedule for Consultancy

ACTIVITY	MONTHS								
	M 1	M 2	M2	M3	M4	M5	M6	M7	M....
Inception Report									
Comments KURA									
Preliminary Design Report									
Comments by KURA									
Draft Final Feasibility Report									
Comments by KURA									
Final Feasibility Study Report									

5.4 Lateness in reporting

Where a report required is delayed beyond the stipulated time for submission, the consultant shall provide to the Client an explanation satisfactory to the Client for the delay in submission and the remedial measures to be undertaken.

5.5 Report Structure

The "Feasibly Study Report shall include the following Chapters, Sub-Chapters, and Appendices as a bare minimum:

Executive Summary

Chapter 1 – Introduction

- Background
- Objectives and Scope of the Project
- Terms of Reference – Feasibility Study
- Report Structure

Chapter 2 - Socio-Economic Review

- Introduction
- National Economic Framework – Vision 2030
- Population and Land Area
- Transport Implications

Addendum 1

- Selected Socio Economic Characteristics
- Predominant Economic activity and related Facilities

Chapter 3 - Strategic Development Plan

- General
- National Transportation Planning Framework
- National Roads Network – Goals & Strategy (Road Sector Investment Programme, Annuity Programme, Low Volume Sealed Roads programme)
- The National Development Goals and Planning

Chapter 4 – Preliminary Engineering Design

- Introduction & Description of Project Roads
- Technical Field Investigations
- Technical Design Standards and Guidelines
- Climate Change Adaptation (El – nino)
- Proposed Road Upgrading Alternative Scenarios (including “Do Nothing” as base scenario)
- Cost Estimates
- Engineering Appendices:
 - Appendix 1. Preliminary Topographic Survey data
 - Appendix 2. Preliminary Engineering Design Drawings
 - Appendix 3. Proposed Land Acquisition Plans and estimated costs
 - Appendix 4. Materials Source Maps
 - Appendix 5. Cost Estimates

Chapter 5 - Social & Poverty Assessment and Safeguards

- Socio-Economic Context of Regions and Districts
- National Poverty Reduction Strategy
- Causes and Characteristics of Poverty
- Poverty in the Project Area
- Socio-Economic Profile of the Study Area
- Consultation Meetings
- Beneficiary Profile
- Poverty and Social Impact Assessment (PSA)
- Gender Assessment
- Social Action Plan
- Indicators for Monitoring
- Resettlement Framework
- Conclusions
- Social Appendices
 - Appendix 1 - Resettlement Screening
 - Appendix 2 - Resettlement Action Plan
 - Appendix 3 - Poverty reduction and social strategy
 - Appendix 4 - Socio – Economic Profile

Chapter 7 - Environmental Impact Assessment

- Introduction
- Assessment of Policy, Legal Framework and Institutional Capacity
- Anticipated Environmental Impacts
- Environmental Assessment for Subprojects and/or Components
- Consultation, Information Disclosure, and Grievance Redress Mechanism
- Institutional Arrangement
- Monitoring and Reporting
- Appendices
 - Appendix 1- Environmental Assessment Checklist Form
 - Appendix 2 - Environmental Impact Assessment Report

Chapter 8 - Climate Change Adaptation

- Climate Change
- Identified Environmental Risks and Climate Change Vulnerability
- Climate Change as a Development Challenge
- Anticipated Risks of Climate Change on Road Upgrading

Chapter 9 – Traffic – Reviews of Existing Studies

- Background and Data Sources

Addendum 1

- Road Network in the Study Area
- Survey Methodology
- Surveys Conducted
- Average Daily Traffic (ADT) & Average Annual Daily Traffic (AADT)
- Road Side Survey (O-D) in respect of the Bypass roads
- Induced Traffic
- Estimated Traffic Growth Rate
- Future Traffic Generators
- Traffic Demand Forecast for the Project roads
- Appendices:
 - Traffic Survey Forms
 - Detailed Traffic Data, by Vehicle Type
 - Traffic Demand Forecasts

Chapter 11 - Economic Evaluation

- Introduction
- Objectives of Economic Evaluation
- Analytical Scenarios/Alternatives
- Road Characteristics & Cost Estimates of Alternative Scenarios
- Unit Costs and Operating Data, by Vehicle Type
- Traffic
- Quantifiable Benefits
- Estimating Multiplier & Retainer Local Share of Investment/Maintenance Costs
- Proxy for Social Benefits and Affected Population
- Residual Share of Bridges and Special Culverts
- Environmental/Road Safety Impacts
- Standard Economic Analysis, 12% Discount Rate - Summary Results
- Alternative Economic Analysis - at 5% Discount Rate
- Sensitivity Analysis
- Distribution of Benefits
- Risk Analysis
- Conclusion and Recommendations

Chapter 11: Financial Viability Analysis

- Financing options
- Repayment Plan
- Repayment capacity analysis
- Conclusions and recommendations

6.0 OBLIGATIONS OF CLIENT AND CONSULTANT

6.1 Documents and Reports

- 6.1.1 Kenya Urban Roads Authority (KURA) shall supply all pertinent data and information and give such assistance as shall reasonably be required for the conduct by the Consultant of his duties under this contract save that such assistance shall not be extended to the provision of any supplies or services. The Consultant will be required to pay for purchase fee of maps, manuals and other documents. The following will on request be supplied by the Director (Policy, Strategy & Compliance) to the Consultant who will be awarded the consultancy: -
- Standard specifications for Road and Bridge Construction 1986
 - Road Design Manual Part I – Geometric Design of Rural Roads 1979
 - Road Design Manual Part III – Pavement design and Materials 1987
 - Analysis of Contract Rates, latest edition
 - Sample standard drawings

Please note that appropriate charges will be levied for certain documents.

- 6.1.2 The Client will:

- i) Ensure free access to all sites and locations connected with the execution of the study;

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- ii) Provide the Consultant with any assistance as the Consultant may be entitled to in accordance with the Terms of Reference
 - iii) Provide the Consultant with all documents, data, any existing photographs and other information pertaining to the study that are available with the KURA
 - iv) Provide, at their option, two counterpart personnel (interns) for on-the-job training with the consultant during the contract period paid at Government approved Rates
 - v) Facilitate the issuance of work permits and entry visas for the Consultant's expatriate staff.
- 6.1.3 In particular, the Government shall provide the following
All data and reports pertaining to the design studies that have been carried out for the road under study if any;
Available data and information on road inventory and traffic counts;
Recent road construction and maintenance costs; and Unhindered access to pertinent data.
- 6.2 **Liaison**
- 6.2.1 The Directorate of Policy, Strategy & Compliance shall provide liaison with other Ministries and Departments in order to introduce the Consultant to them. The Consultant shall be fully responsible for collecting data and information from these agencies, including paying for it where necessary.
- 6.3 **Taxes and Duties**
The Consultant shall be liable to pay all duties and taxes in connection with this assignment including VAT and other taxable payable under the laws of Kenya. No tax or duty exemption shall be given to the Consultant. The Consultant shall be deemed to have taken the above into consideration while preparing his financial proposal.
- 6.4 **Correspondence**
- 6.4.1 The Client shall ensure that correspondence exchange in respect of the implementation of the study is treated promptly in order to avoid any delay. Correspondence by e-mail shall be on Microsoft Outlook (for Client).
- 6.5 **Consultant's Obligations**
- 6.5.1 All information, data and reports obtained from the Client in the execution of the services of the Consultant shall be properly reviewed and analysed by the Consultant. The responsibility for the correctness of using such data shall rest with the Consultant. All such information, data, and reports shall be treated as confidential and returned to the Client upon completion of the assignment.
- 6.5.2 The consultant shall be responsible for analyses, interpretation, and conclusion made from the data and information provided by the client.
- 6.5.3 The Consultant shall be responsible for arranging for all necessary office and living accommodation, transportation (**including 200 days per diem allowance at JG 'S' and transport for Client supervision staff and provide a vehicle for the supervision team for half of the contract period**), equipment and supplies, surveys, investigations, materials testing, secretarial services, related to the performance of the works. Specifications and provisions for vehicle are as follows: 4WD Double Cab less than 4 years old, a driver, travel per month of 4,000Kms and vehicle shall revert back to consultant after 6 month use by client.
- 6.5.4 The Consultant shall be responsible for the printing of all reports, drawings, maps, etc.

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- 6.5.5 The Consultant shall provide a training plan for any counterpart personnel as approved by the Client.
- 6.5.6 All reports and documents relevant to the project, maps, field survey notes, computer programs and electronic data, etc. shall become the property of the Client. The Consultant shall provide the originals of maps, plans and all drawings with final tender documents both in hard and soft copies in CD ROMs and in acceptable electronic format.
- 6.5.7 The consultant shall remunerate the two counterpart personnel (intern) provided by the client as per government approved rate.

7.0 REQUIREMENTS

7.1. Staff Requirements

The Consultant shall provide all the staff required for the performance of the duties described in the ToR. Curriculum Vitae not exceeding four pages per person shall be provided in respect of each key staff.

It is anticipated that **45 staff man– months** of key professional staff stated below would be required to accomplish the tasks stated in the TOR of the assignment.

The profiles of the key experts to be provided by the Consultant for this assignment are as follows:

a) **Project Director (PD)**

The PD will oversee, plan, manage and monitor the consultancy and will advise the Client on all aspects of works contract implementation. The PD will provide the overall backstopping for the project, to ensure timely execution and completion of the project.

The PD should be a qualified and competent registered professional civil engineer with a recognized degree in Civil Engineering or equivalent and a minimum of 15 years post qualification experience in management and supervision of similar works contracts in developing countries, particularly in the Africa region.

The PD shall have at least 10 years' experience at Project Director level on road rehabilitation projects of similar nature. The PD should be able to combine this engineering experience with management and communication skills in order to support the Kenya Urban Roads Authority in ensuring that all objectives and deliverables of the consultancy and the works contract are achieved. The candidate must have a proven record as Project Director/ Deputy Project Director for at least three successfully completed large assignments of similar nature in the last five years. Fluency in both written and spoken English is essential.

b) **Transport Economist (TE)**

The T E will lead the Feasibility Study activities. The TE will perform the following specific tasks:

- Lead the feasibility sub-study task team;
- Ensure all deliverables are prepared in accordance with quality and time constraints;
- Research and review data, including that associated with planned government or private development in the area of influence of the road and incorporate in the economic analysis as appropriate;
- Determine financial and economic vehicle operating costs for representative vehicle types;
- Prepare an economic evaluation of the proposed road upgrading options following National Guidelines for the Economic Analysis of Projects. Reduction in travel time and transport costs, cost of accidents, increased agricultural production and other net social benefits arising from the project will be taken into account;
- Identify the cost benefits of climate change adaptation options and provide recommendations based on most cost effective measures;
- Undertake switching value calculations and sensitivity analysis for variations in key parameters and budget constraints.
- Undertake risk analysis in accordance with National Guidelines for Integrating Risk Analysis of Projects;
- Analyse how limited access to transportation services contributes to poverty in the project area of influence;
- Based on the economic analysis, estimate the expected distribution of project net benefits among freight transport users, passenger transport users, vehicle owners, NMT and the government;

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- Prepare feasibility reports for submission to the Client. The report should be prepared following National guidelines, taking into account direct and indirect impacts during pre-construction, construction and operation, and of implementing mitigation measures and monitoring plans.

The TE shall be a qualified with a graduate degree in Transportation Engineering, Transport Economics, Transport Planning or equivalent and a minimum 10 years post-graduate experience, of which not less than 5 years have been in undertaking studies in road upgrading and construction projects. Must have at least 5 years of recent experience in transportation planning, transportation engineering and economic analysis in the roads sector. Knowledge of inter-modal transport systems is desirable.

c) **Highway Engineer (HE)**

The HE will be responsible for the preliminary designs underpinning the feasibility studies. The HE will perform the following tasks:

- Lead the preliminary engineering design sub-study task team;
- Ensure all deliverables are prepared in accordance with quality and time constraints;
- Review available engineering data, including any data relating to availability and quality of construction materials.
- Identify potential future climate change impacts that should be catered for design of the road and evaluate costs associated with incorporation of adaptation measures in the project design.
- Assess recommendations and inputs from the Structural / Drainage Engineer and Environment Specialist for other potential adaptation measures which could be incorporated into the design.
- Guide topographic and other preliminary physical surveys.
- On the basis of projected traffic levels, determine cost effective options for upgrading the road taking into account varying terrain characteristics along the route, and minimum serviceability standards.
- In conjunction with the Materials / Geotechnical Engineer, survey areas of actual and potential slope instability, analyse their cause and develop preliminary recommendations for mitigating them.
- Review road safety implications for each design alternative and prepare preliminary designs for road safety features.
- Review environmental implications of construction, including those related to opening of borrow pits and disposal of spoil.
- Estimate the civil works costs for each design alternative, separately identifying taxes and duties to an accuracy of $\pm 15\%$.
- Prepare a preliminary engineering design report, consolidating all technical inputs from other specialists as appropriate.

The HE should be a qualified and competent registered professional civil engineer with a recognized degree in Civil Engineering or equivalent and a minimum of 12 years post qualification professional experience as a Highway Design Engineer on major road contracts of similar nature. Knowledge of various internationally accepted design codes and methodologies and familiarity with internationally 'best practices' as well as proficiency in latest computer aided road design software is essential. Experience in roads design, supervision and construction management will be required. Fluency in both written and spoken English is essential.

d) **Environmental Expert (EE)**

The EE will undertake an environmental assessment of the project in accordance with the EMCA Act. The Environmental Specialist will perform the following tasks:

- Ensure that the project is prepared in compliance with both the government's environmental policies and environmental assessment guidelines;
- Assess the potential environmental impacts of the project in accordance with the EMCA Act and other national policies and guidelines;
- Prepare an Environmental Impact Assessment Report taking into consideration direct and indirect impacts during pre-construction, construction and operation, and identifying costs of mitigation measures and implementation of a monitoring plan;
- Identify potential impacts of the road on surrounding vulnerability;
- Synthesize the most recent and relevant assessments of future climate changes, within the scope of the project objectives, and provide recommendations to the project team of

expected climate changes, including their probabilities of occurrence and certainty;

- Prepare recommendations for integrating climate change considerations into the design of the project.

The Environmentalist shall be a Registered Lead Expert and having a Valid Practicing License issued by NEMA, registered as a member of Environment Institute of Kenya (EIK) and must hold at least a Graduate Degree in environmental science, environmental engineering or any other relevant field and at least 10 years professional experience after graduation, of which not less than 5 years have been in undertaking environmental impact assessments of road sector related projects. Familiarity with World Bank, Africa development Bank and NEMA environmental impact assessment guidelines is essential. Fluency in both written and spoken English is essential.

e) **Socio- Economic Specialist (SES)**

The SES will undertake screening and scoping for social impacts. The Social Safeguards Specialist will perform the following tasks:

- Undertake screening and scoping and prepare the resettlement and indigenous peoples screening forms and checklists for the project.
- Assess land acquisition and resettlement impacts in accordance with the National resettlement guidelines and prepare a resettlement plan (RP).
- Submit the RP;
- Assess the social impacts of the project and prepare analyses for inclusion in the feasibility study reports and in the IEE. Recommend mitigation measures where needed and estimate their cost.

Must possess University Degree (BSc or BA) in socio – Economic Studies or equivalent. Must have a minimum of 15years practical post-qualification experience. Must have broad experience in socio – economic assessment and of at least three (3) roads construction project of comparable magnitude within urban setup. Previous experience on road projects in East Africa will be an added advantage.

f) **Materials Engineer (ME)**

The ME will provide inputs relating to slope stability, availability of construction materials and design of pavement options. The ME will perform the following tasks:

- Identify potential geotechnical constraints on the proposed road upgrading, particularly identifying specific locations where mitigation measures will be required.
- Guide site specific surveys as required for preliminary assessment and design of mitigation measures for geotechnical instabilities.
- Prepare preliminary designs in sufficient detail for assessment of cost, and social and environmental impacts, particularly resettlement impacts.
- Assess potential sources of materials, particularly pavement materials required for the works, along with processing requirements and oversee preliminary laboratory testing.
- Prepare a detailed program, implementation schedule and budget for geotechnical investigations necessary for the design of the works.

The ME should be a qualified and competent registered professional civil engineer with a recognized degree in Civil Engineering and a minimum professional experience of 12 years (post qualification) as a materials engineer of which 5 years should be on major road contracts. Thorough knowledge of modern techniques of materials investigation and laboratory testing is essential. The PME shall have at least 10 years of experience in pavement engineering including design using diverse pavement materials and methods, in preparing specifications and in construction control of pavement structures. The PME shall have at least 6 years of on-site experience in construction control. Fluency in both written and spoken English is essential.

g) **Engineering Surveyor (ES)**

The ES will be responsible for all topographic survey. The Survey Manager will:

- Acquire necessary physical / cadastral plans from the relevant Government bodies, and use the same to identify existing road corridors;
- Manage a team of technician surveyors, ensuring best practice and appropriate accuracy;
- Conduct control surveys and install permanent and stable benchmarks suitable for reference during detailed design work and construction;
- Conduct preliminary topographic surveys of the road corridor, sufficient for preliminary design work;
- Ensure timely and accurate transfer of survey information to the design engineers;
- Prepare land acquisition plans.

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The ES will be a competent and qualified candidate, with a degree in Survey & Photogrammetry and a minimum of 10 years post qualification professional experience, of which not less than 5 years have been in survey for design and construction of major highway contracts of similar nature. The candidate should be conversant with modern methods of survey including the use of Total Stations and GPS equipment. Fluency in both written and spoken English is essential.

h) Structural / Drainage Engineer (SDE)

The SDE will be responsible for the preliminary design and cost estimation of drainage and drainage structures including bridges, culverts and side drains. The Structural Engineer will undertake the following tasks:

- Study the existing hydrological regime based on an analysis of rainfall, flood records and local inquiry.
- Estimate the required hydraulic capacity of bridge structures, including an estimate of the incremental capacity needed to cater for climate change considerations. A period of 50 years will be considered for major drainage structures and bridges, and 20 years for minor drainage structures including side drains and culverts.
- Assess existing structures and bridges along the route and recommend retention or otherwise.
- Assess the need for new drainage structures, where the existing structure is inadequate, or realignment requiring new drainage structures is proposed and prepare preliminary designs and cost estimates,
- Assess the need for new bridges and large drainage structures, where the existing structure is inadequate, or realignment requiring new structures is proposed and prepare preliminary designs and cost estimates,
- Prepare a program of geotechnical investigation needed for the design of drainage structures and bridges. Estimate the cost of the proposed geotechnical investigations;
- Prepare a program of geotechnical investigation needed for the design of drainage structures. Estimate the cost of the proposed geotechnical investigations.

The Structural Engineer shall have at least 10 years relevant experience and shall be a professionally qualified civil engineer. Fluency in both written and spoken English is essential.

7.2 Support Staff – 30 Man-months

The consultants shall provide the necessary support staff – including junior engineers, draftsmen, field surveyors, laboratory technicians, field supervisors and office support staff – needed in order to carry out their tasks and fulfill their responsibilities effectively.

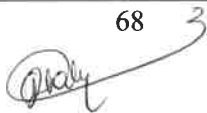
It is anticipated that about **30 staff-months** of support staff would be required

7.3 Work Schedule

The consultant shall propose a schedule of activities and corresponding deployment of manpower, which will ensure that all duties entrusted to him/her, will be adequately performed. This schedule, together with a comprehensive statement justifying the proposed deployment will be incorporated in the methodology statement.

SPECIAL CONDITIONS OF CONTRACT

Number of GC Clause	Amendments of and Supplements to Clauses in the General Conditions of Contract
1.1(i)	The Member in Charge is _____ [name of Member]
1.4	The addresses are: Client: Director General Kenya Urban Roads Authority (KURA) P. O. Box 41727 – 00100 <u>Nairobi, Kenya</u> Attention: Director, Policy Strategy & Compliance Consultant: _____ Attention: _____ Telephone; _____ Telex: _____ Facsimile: _____
1.6	The Authorized Representatives are: For the Client: Director, Policy Strategy & Compliance For the Consultant: _____
2.1	The date on which this Contract shall come into effect is (_____) [date]. <i>Note: The date may be specified by reference to conditions of effectiveness of the Contract, such as receipt by Consultants of advance payment and by Client of bank guarantee</i>
2.2	The date for the commencement of Services is _____ [date]
2.3	The period shall be <u>12</u> _____ [length of time]. The Consultant shall be charged Liquidated Damages at the rate of 0.05% of the contract sum per day for the extra days beyond the official contract period plus any time extensions granted by the Client, to a maximum of 5% of the Contract Sum, beyond which the Contract shall be terminated in accordance with the conditions of this contract. <i>Note: Fill in the period, e.g., four months or such other period as the Parties may agree in writing.</i>
2.4	The Consultant shall sign a Service Level Agreement with the Client which shall quantify the minimum acceptable service to the Client and the Consultant's performance will be assessed every quarterly during the implementation of the Contract. The format of the Service Level Agreement is attached in Appendix K of this RFP.
2.5	The consultant shall be held responsible for the accuracy of the data up to the time of implementation e.g. survey data, material investigation, land acquisition, etc
3.1	Notwithstanding Clause 3.1 of the GC:- i) The consultant shall be held responsible for the accuracy of the data up to the time of implementation.
3.4	The risks and coverage shall be: i. Professional Liability: Full amount of this Contract ii. Loss of or damage to equipment and property: KShs 5,000,000 iii. Third party Liability: KShs 5,000,000 iv. Third party motor vehicle insurance: KShs 3,000,000 v. Employer's Liability and workers compensation: KShs 5,000,000



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4.1 ***All the proposed/approved key staff must be present during presentation of the design reports to the client.***

6.2(a) The amount in foreign currency or currencies: Nil

6.2(b) The amount in local Currency is _____ [Insert amount]

Payments shall be made according to the following schedule:

Twenty (20) percent of the Contract Price shall be paid upon submission and acceptance by the Project Manager of the inception report

Thirty (30) percent of the Contract Price shall be paid upon submission and acceptance by the Project Manager of the Preliminary Feasibility Study Report.

Thirty (30) percent of the Contract Price shall be paid upon submission and acceptance by the Project Manager of the Draft Final Feasibility Study Report.

Twenty (20) percent of the Contract Price shall be paid upon submission and acceptance by the Project Manager of the Final Feasibility Study Report.

Payments in Ksh shall be made to the following Account

Account Number: _____

Account Name: _____

Bank: _____

Address: _____

4.39.1 Payments will be made within 90 (ninety) days of receipt of the invoice and the relevant documents specified in Clause 6.4 above. Late payment will attract interest from the client.

4.39.2 The Consultancy services rendered by the Consultant shall be carried out to the full satisfaction of Director (Policy, Strategy & Compliance) following which a contract completion certificate shall be issued and final payment made under clause 6.2 (b) of the Special Conditions.

7.2 Disputes shall be settled by arbitration in accordance with the following provisions:

1. Selection of Arbitrators. Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions:

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- (a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to *the Institution of Engineers of Kenya* for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, *the Institution of Engineers of Kenya* shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.
 - (b) Where the Parties do not agree that the dispute concerns a technical matter, the Client and the Consultant shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by *the Chartered Institute of Arbitrators of Kenya*.
 - (c) If, in a dispute subject to Clause SC 7.2 1 (b), one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to *the Chartered Institute of Arbitrators of Kenya* to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute.
2. Rules of Procedure. Except as stated herein, arbitration proceedings shall be conducted in accordance with the rules of procedure for arbitration of the *Chartered Institute of Arbitrators of Kenya* as in force on the date of this Contract.
 3. Substitute Arbitrators. If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.
 4. Nationality and Qualifications of Arbitrators. The sole arbitrator or the third arbitrator appointed pursuant to paragraphs (a) through (c) of Clause SC 7.2 1 hereof shall be a nationally recognized legal or technical expert with extensive experience in relation to the matter in dispute and shall be a Kenyan.

Miscellaneous. In any arbitration proceeding hereunder:

- (a) proceedings shall, unless otherwise agreed by the Parties, be held in *Nairobi, Kenya*
- (b) *English* language shall be the official language for all purposes; and
- (c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.