

TERMS OF REFERENCE FOR DESIGN REVIEW AND SUPERVISION OF REHABILITATION AND UPGRADING WORKS OF LAKE MANYARA AIRPORT

1. BACKGROUND

The Government of the United Republic of Tanzania has received a credit from the International Development Association (IDA) in the Financial Year 2022/23 towards the cost of the Tanzania Integrated Transport Project (TanTIP). It is intended that to apply part of the proceeds toward the cost of Consultancy Service for Design Review and Construction Supervision of the Rehabilitation and Upgrading of Lake Manyara Airport.

1.1. Description of the Airport

The Lake Manyara Airport has a gravel surfaced runway oriented at 12/30 having a total length of 1220meter and 21 meters wide Runway (1220m x 21m) with PCN 5300Kg. The aerodrome is elevated at 4150FT AMSL and reference temperature 24.0°C. It is generally a domestic airport in the Northern Zone serving primarily tourists.

Location of Lake Manyara Airport



The original design of Lake Manyara Airport was completed in 2017 by Yooshin Engineering Corporation of South Korea in association with Intercontinental Consultants & Technocrats Pvt (ICT) of India and M/s Hyewonkaci Architects of South Korea.

1.2 Description of the Works

The airport is now a Code 2B airport without an Air Traffic Control Tower (ATC) and is to be upgraded to a Code 2C airport. The works will include rehabilitation and upgrading of the gravel surfaced runway to asphalt surface including extending and widening it from 1220m x 21m to 1500m x 30m. construction of asphalt surfaced taxiway and apron, construction of a new passenger terminal building which accommodates the control tower on top with necessary operational equipment and furniture, construction of asphalt paved access road and car parking, construction of security fence and associated gravel peripheral road, construction of energy centre (power house) and Rescue and Fire Fighting Services Building, Supply and Installation of Navigational Aids and Meteorological (MET), safety and security facilities.

2. OBJECTIVES OF THE ASSIGNMENT

The main objective of this assignment is to carry out the Consultancy Services for review of design and the supervision of the rehabilitation and upgrading works to completion of the Lake Manyara Airport. The specific objectives of the Consultancy services are as follow:

- (i) Review of existing design of the runway, taxiway, and apron of Lake Manyara Airport to accommodate ATR 42 and the equivalent aircraft.
- (ii) Design review for the Access road to accommodate the change in the alignment.
- (iii) Review the design drawings and advice the client where necessary.
- (iv) Design review of the Airfield Ground Lights (AGL), DVOR/DME and other appropriate Navigational Aids facilities.
- (v) Design review of the Passenger Terminal Building which accommodates the control tower on top
- (vi) Design review of the Meteorological (MET) facilities.
- (vii) Supervision of the works contract to ensure that the works comply with the approved design, drawings, specifications, conditions of contract and the sound engineering practice.
- (viii) Supervision of the maintenance activities during the Defects Liability Period.

3. SCOPE OF CONSULTANCY SERVICES

3.1 General

The Consultant is expected to perform all necessary duties as required to achieve the above objectives. In doing so, the Consultant shall provide key and back up staffs as required in the TOR and exercise all necessary engineering, surveying, testing, quantity/ quality and financial control of the works in accordance with the respective Contract. The specific scope of the assignment shall include but not limited to the following activities:

3.2 Design Review

The purpose of this review is to ensure that the documents and data are correct, complete and conform to the internationally acceptable standards, IDA and National Guidelines. The Consultant will be required to study the existing Airside Pavement design that includes the Runway, Taxiway and Aprons, passenger terminal building including tower cabin, design review of AGL system, Navigational and Meteorological facilities, and review of all design drawings and come up with the appropriate suggestions where necessary.

3.3 Construction Supervision Services

The Consultant shall be fully responsible for the supervision of the rehabilitation works in accordance with the **FIDIC Conditions of Contract**. The Consultant shall, in general, exercise the powers of the Engineer in all matters concerning the contract and the execution of the works. He shall supervise the construction works with due diligence, efficiency and in accordance with sound technical, administrative, financial, socially responsive, environmentally sound and economic practices. He shall perform all duties associated with such tasks to ensure that only the best construction practices are followed and that the final product is in all respects equal to, or better than that specified, at the most economic costs and is carried out in full compliance with the governing specifications.

In particular, the Consultant's duties and responsibilities shall include but not be limited to:

- i. Receive, analyze and approve the Contractor's program of works prior to the commencement of the construction activities. The Consultant shall provide the appropriate and timely inputs to the program where required to ensure that the construction works are implemented using effective and realistic plans and schedules considering working on live Airport.
- ii. Monitoring of Contractor's mobilization progress for staff, equipment and materials and provide appropriate advices when required to facilitate the process.
- iii. Study the available designs, specifications, drawings and other relevant documents and propose modifications where necessary as agreed with the Client.
- iv. Prepare necessary working drawings for the scope to be implemented where modifications are made.
- v. Receive and review the contents and amounts of all relevant Insurance Certificates submitted by Contractor as required by the Works Contract and advise the Client accordingly.
- vi. Receive and verify the Registration Cards of key equipment and plants mobilized on site by the Contractor for the execution of Works before submitting the same to the Client.
- vii. Ensure the correctness of beacons and benchmarks for setting out of works, and cause Contractor to re-establish the missing ones where needed in accordance with the works requirements and agreed specifications.
- viii. Check and approve the contractors setting out of the Works
- ix. Inspect sources, and verify the quality of borrow pits and quarries or any other naturally occurring materials for incorporation into the works and monitor their compliance with specifications and national environmental regulations and laws

- x. Prepare a quality assurance plan, in consultation with the Contractor, including arrangements to check the quality of materials brought to the site, to ensure that the quality of the construction is consistent with the technical specifications, and to maintain test records.
- xi. Review the Contractor's submissions of relevant suppliers and specifications of the equipment and facilities to be supplied; including supervision of installation, testing and commissioning of the same.
- xii. Coordinate and ensure that relevant training by suppliers to the Engineers and Technicians is conducted for each equipment as specified in the Works Contract; and ensure that operational and maintenance manuals are availed to the Client.
- xiii. Measure or verify quantities of the completed works and prepare monthly interim payment valuations for Client's review and payment.
- xiv. Keep and update all records including reports, works diaries, correspondences, instructions given to the contractors, test records, measurements and quantity calculations, payment records and all other relevant documents pertaining to the works and supervision contracts.
- xv. Perform routine design review during construction stage and propose appropriate changes when necessary. All design changes that affect the quality, scope, cost or completion period of the works are subject to prior consultation and approval from the Client.
- xvi. Organize and keep records of monthly site meetings between the Contractor and the Consultant to discuss the progress of works, challenges encountered and the ways forward. The Client will also be attending the meetings when found necessary.
- xvii. Prepare consolidated monthly reports on physical and financial status, site meetings, contractual matters, etc. with recommendations for action by the Client. The reports shall be submitted in hard and soft copies and shall include chart-supported analysis on physical and financial slippage and requirements to remedy delays.
- xviii. Coordinate with all relevant parties in ensuring that the Environmental Management Plan and any applicable Tanzanian environmental laws, permits and regulations are adhered to during the execution of the project.
- xix. Perform routine and periodic comparison between the works' schedules and the actual progress of works, and cause the Contractor to review the program whenever the previous program is inconsistent with the actual works on site or with the Contractor's obligations.
- xx. Recording, examining and evaluating all claims submitted by the Contractor, and submit appropriate information within the timeframe indicated in the Conditions of Contract for Client's consideration. The Consultant's determination of the Contractor's claims and subsequent submission of the same to the Client is expected to include at least the following information:
 - a) Description of the claim,
 - b) Source and reason of the claim,
 - c) Consultant's evaluation and opinion on the legitimacy and the scope of the claim, and
 - d) Consultant's conclusions and recommendations on the claim

- xxi. Assist the Client in the claim rebuttal process and provide the support if required in the Arbitral procedure
- xxii. Prepare and submit to TANROADS the final account of the executed works
- xxiii. Check and compile as built drawings prepared by the Contractor.
- xxiv. Prepare a draft final report within one month after completion of the works, including a financial summary. A summary of works is to be compiled comparing the executed works versus the original contract estimate together with a full justification for any variance between the two. The final report will be produced after acceptance and approval of the draft final by the Client.
- xxv. Provide appropriate instructions and guide to the Contractor in order to protect, store or secure a part of the completed or on-going works against any serious deterioration, loss or damage.
- xxvi. Preparation and submission of the detailed progress report (soft and hard copy) with an updated cost of the civil works contract, implementation schedules and any substantiated request related to additional funding, needed for full completion for the project. The Report shall be prepared when the implementation of the civil works contract reaches a value of 50% and 80% of the initial construction contract.
- xxvii. Receive, review (give recommendations if any) and submit the Maintenance Manuals.
- xxviii. Determine and agree with the contractor on the rates of new works in the Contract (if any) and seek prior approval from the Client on the agreed rates.
- xxix. Prepare a draft provisional acceptance certificate of the works
- xxx. Facilitate the preparation, review and approve as-built drawings of the Runway, Taxiway, Apron, AGL Installations, Access Roads, Buildings, Sheds and Car Parking prepared by the Contractor.
- xxxi. Organizing and undertaking on the job training to the selected counterpart staff. The Client will attach technical staff to work with the Consultant during the execution of the works contract. The training will cover all key aspects of supervision of the airport works including scheduling of works, quality control of materials and completed works, setting out and measurement of works, and preparation of the as-built drawings and the final completion/project's report.
- xxxii. Provide appropriate capacity building for TANROADS Engineers in accordance with the content and programme submitted to and approved by the Client (See section 3.5 of the TOR).
- xxxiii. Review and approve the contractor's safety arrangements and participate in semi-annually aviation stakeholders' consultative meetings to address concerns of the airport and ensure that Contractor comply with aviation-related applicable regulations/ rules such ICAO Policy/Rules/Regulations.
- xxxiv. The Consultant shall provide any other additional services if so requested by the Client, at rates and under conditions to be mutually agreed which fall within general ambit of these terms of reference.

xxxv. The Consultant shall ensure that the Contractor's ((Environmental, Social, and Health and Safety - ESHS) ESHS performance is in accordance with TANROADS Environmental, Social, and Health and Safety (ESHS) Code of Conduct (accessible through <https://www.tanroads.go.tz/policies>), Contractor's ESHS obligations and good international industry practice. The ESHS related services include but are not limited to: -

- a) Review and approve the Contractor's Environment and Social Management Plan (C-ESMP) prior to any construction works, including all updates and revisions (within a reasonable time and prior to any significant works that would be covered by the proposed material changes) in consultation with the Environmental, HS or Social specialists of TANROADS;
- b) Review and approve the Contractor's OHS Plan
- c) Monitor the implementation of the Contractor's ESHS requirements, including impact mitigation and monitoring measures, during the construction of the works,
- d) Ensure that the Contractor's insurance is in place and valid at all time and that incidents are reported by the contractor promptly
- e) Review and approve ESHS provisions of method statements, implementation plans, Gender Based Violence (GBV)/ Sexual Exploitation and Abuse (SEA)prevention and response action plan, drawings, proposals, schedules and all relevant Contractor's documents;
- f) Review and consider the potential ESHS risks and impacts of any proposed design change proposals and advise if there are implications for compliance with ESIA, C-ESMP, consent/permits and other relevant project requirements;
- g) Undertake audits, supervisions and/or inspections of any sites where the Contractor is undertaking activities related to the Works, to verify the Contractor's compliance with ESHS requirements including its GBV/ SEA obligations, with and without contractor and/or client relevant representatives, as necessary, but for GBV related issues not less than once per month,
- h) review the Contractor's EHS workers training and related materials and activities related to workers whom predominate language is Swahili,
- i) Develop and maintain ESHS checklists and supervision reports related to audits and and inspections related to Contractor's ESHS compliance and performance and support TANRAODS in preparing the Root Cause Analysis and Safeguards Corrective Action Plan reports,
- j) Routinely review and undertake audits and inspections of Contractor's worker EHS training records, accident logs, community liaison records, EHS inspection and monitoring findings and other ESHS related documentation, as necessary, to confirm the Contractor's compliance with ESHS requirements;
- k) Promptly report any identified non-compliance issues to Construction Contractor and TANROADS and work with these entities to define acceptable remedial action/s and their timeframe for implementation in the event of a noncompliance with the

Contractor's ESHS obligations remedial action/s and their timeframe for implementation in the event of a noncompliance with the Contractor's ESHS obligations;

- l) In the case of any significant or material ESHS incident (such as death or seriously accident, significant spill, pandemics like COVID 19 etc.), report within one day of knowledge of such event to TANROADS and work to define acceptable remedial actions to investigate, remediate and prevent such events in the future (**see Section 7.0 for related reporting**),
- m) In relation to all significant material and service providers to the Contractor (such as sites/provides of road base and fill materials, construction waste disposal services and sites), undertake site visit and assessment of such material and service providers in terms of potential significant ESHS issues
- n) Ensure appropriate representation at relevant meetings including site meetings, and progress meetings to discuss and agree appropriate actions to ensure compliance with ESHS obligations;
- o) Review and critique, in a timely manner, the Contractor's ESHS documentation (including regular reports and incident reports) regarding their accuracy and efficacy;
- p) Undertake liaison, from time to time and as necessary, with project stakeholders to identify and discuss any actual or potential ESHS issues
- q) On behalf of TANROADS, establish and maintain a grievance redress mechanism with support of the Contractor, including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of GBV/SEA.
- r) Ensure any GBV/SEA instances and complaints that come to the attention of the Consultant are registered in the grievance redress mechanism and resolved,
- s) Prepare and submit to TANROADS, as part of monthly progress report, issues on ESHS project construction compliance and performance (see Section 6 for details)
- t) Upon completion of project construction or closure of any specific work area or camp site, perform an inspection of such site/area to ensure Contractor compliance with ESHS requirements and whether there are any existing unmitigated ESHS impacts, and if issues are identified then promptly notify the Contractor and TANROADS and work with such entities to define acceptable remedial actions to resolve all issues

3.4 Duties during Defects Notification Period

The Consultant shall supervise maintenance of the works (including the administrative aspects of the Works) during the Defects Notification Period. For the purposes of fulfilling the Consultant's obligations during the Defects Notification Period (DNP), the Resident Engineer will carry out the inspection including receiving feedback from the airport manager, of the works and equipment and subsequently prepare and issue the final certificate.

During DNP, the Consultant shall be expected to draw the attention of the Contractor to any defects as soon as such defects are noticed and reported and shall supervise the subsequent remedial works (quality of works, materials, and workmanship). As the liability period for the Contract is 12 months, an inspection will be carried out in an interval of 3 months after completion of the total works and any deficiencies noted on the completed works and its remedial measures proposed to the Contractor. Depending on the nature of deficiency, repair work will be carried out under the Consultant’s supervision.

The Resident Engineer shall also exercise his duties by amicable resolving disputes over any defects and remedial works before the end of defects notification period. Any disagreement on such disputes should, immediately, be referred to the DAAB for hearing and adjunctions

At the end of the 12 month notification period, a final inspection will be carried out under the supervision of the Resident Engineer who will prepare and sign the Inspection Report and distribute to the Contractor, TANROADS HQ, Airport Manager - Manyara and TANROADS Regional Manager - Manyara Region.

3.5 Training

The Consultant shall organize and undertake the theoretical and on-the-job training for at least four engineers. The engineers will be seconded to the Consultant by TANROADS during the execution of the works contract. The training is expected to cover all aspects of the supervision of the airport rehabilitation and upgrading contract including:

- (i) Review of the airport design;
- (ii) Planning of construction of works for live airport;
- (iii) Setting out and the measurement of works;
- (iv) Quality control of materials and the completed works;
- (v) design review, installation and supervision of equipment installation and commissioning
- (vi) Preparation of As-Built Drawings; and
- (vii) Preparation of project’s and final completion reports and other topic of interest to be agreed by the Client and the Consultant

4.0 CONSULTANT’S PERSONNEL

The Consultant shall provide qualified Professional key staff for the assignment, prepare a work program, manning schedule and the corresponding staff input as required for the execution of the services. The Consultant shall employ only such key staff whose CVs have been approved by the Client. In addition to the expert personnel, in consultation with the Client, the consultant shall determine the level of support staffing required to assist with the on-site supervision of the works. The Consultant must provide in the proposal, CVs and copies of highest education certificates for all proposed professional and the technical staff.

The estimated number of professional Key staff –months required for executing the assignment are **175 staff months**. The desirable inputs of the key staff are provided as follows: -

Stage	Estimated Staff months for Consultancy Service for Design Review and Construction Supervision of the Rehabilitation and Upgrading of Lake Manyara Airport
A	During Design Review

	Key Position	Staff Month
1.	Team Leader/Resident Engineer	2
2.	Drainage Engineer	2
3.	Topographic/Land Surveyor	2
4.	Electrical/ Aeronautical Engineer	1.5
5.	Navigational Aids Specialist	1.5
6.	Quantity Surveyor	2
7.	Environmentalist	1.5
8.	Sociologist	1.5
	Sub-Total 1	14
B	During Construction Supervision	
	Key Position	Staff Month
9.	Resident Engineer	24
10.	Materials Engineer	20
11.	Drainage Engineer	18
12.	Topographic/Land Surveyor	23
13.	Electrical/ Aeronautical Engineer	8
14.	Navigational Aids Specialist	8
15.	Electromechanical Engineer	10
16.	Quantity Surveyor	18
17.	Environmentalist	10
18.	Sociologist	10
19.	Health and Safety Officer	10
	Sub-Total 2	159
C	During Defects Liability Period	
	Key Position	Staff Month
	Resident Engineer	2
	Sub-Total 3	2
	TOTAL	175

The following is a list of the proposed professional staff with detailed descriptions of their qualification's requirements: -

4.1 Resident Engineer:

The Resident Engineer (RE) should be a Registered Civil Engineer with a degree in Civil Engineering. Postgraduate qualification in Airport, Civil, Highway, Structural or related field is an added advantage. He/

She must have at least 15 years of cumulative experience related to airports design and construction supervision. The RE must have served in similar capacity in at least two (2) airport projects with similar nature, magnitude and complexity in the last ten (10) years. Experience in contract administration under FIDIC Conditions of Contract in at least one (1) project. She/he must be conversant with the IATA, British and ICAO Standards. She/he must have a working experience of at least 3 years in Developing countries and Proficiency in written and spoken English is mandatory.

4.2 Pavement/Materials Engineer

The Material Engineer must be a registered Civil Engineer with a degree in Civil Engineering or Pavement or Materials Engineering. Postgraduate qualification in Pavement or Materials Engineering is an added advantage. She/he must have a minimum of ten (10) years of specific experience in Pavement/Materials matters related to roads/airport works. She/he must have served in similar capacity in at least two (2) airport projects of similar magnitude and complexity in the last 10 years. She/he must be conversant with the British and ICAO Standards. She/he must have a working experience of at least 3 years in Developing countries and Proficiency in written and spoken English is mandatory.

4.3 Drainage/Structural Engineer

The Drainage Engineer must be a Registered Civil Engineer with a degree in Civil Engineering or Hydraulics or Hydrology. She/he must have a minimum of at least ten (10) years' cumulative experience in design and construction supervision of pavement drainage works in airports or roads projects. She/he must have served in similar capacity in at least two (2) airport projects of similar magnitude and complexity in the last 10 years. She/he must be conversant with the British and ICAO Standards. She/he must have a working experience of at least 3 years in Developing countries and Proficiency in written and spoken English is mandatory

4.4 Topographic/Land Surveyor

The Topographical/Land Surveyor must possess a minimum of a Diploma in Land Surveying. She/he must be a registered Land Surveyor. She/he must have at least ten (10) years cumulative experience in airports or roads design and/or construction. She/he must have served in similar capacity in at least one (1) airport construction projects in the last 10 years. In addition, He/she must have a working experience of at least 3 years in Developing countries Proficiency in written and spoken English is mandatory.

4.5 Electrical/ Aeronautical Engineer

The Electrical Engineer should be a Registered Engineer with a degree in Electrical Engineering. He/she must have at least 10 years of general experience in electrical works and at least five (5) years specific working experience as Airfield Ground Lighting (AGL) expert. She/he should demonstrate experience in the design and the supervision of AGL works in at least two (2) airport projects of similar nature and magnitude in the last ten (10) years. He/she must be conversant with British and ICAO Standards. Fluency in written and spoken English is mandatory. He/she must have a working experience of at least 3 years in Developing countries.

4.6 Navigational Aids Specialist

The NAVAids Specialist shall have at least a Diploma in Telecommunication, Electronics or related field. He/she must have at least 15 years of the general experience in monitoring, inspection and testing of

Navigational Aids facilities in particular DVOR/DME, Voice Communication Control System (VCCS), Digital Automated Terminal Information Service (DATIS) and related Air Traffic Control Tower facilities in airports of equivalent or higher category. He/she should demonstrate experience in the supervision of installation, testing and commissioning of NAV Aids in at least two projects of similar nature and magnitude in the last ten (10) years. He/she . conversant with British and ICAO Standards. He/she must be fluent in written and spoken English and must have a working experience of at least 3 years in Developing countries.

4.7 Electromechanical Engineer

The Electromechanical Engineer shall have a degree in Mechanical Engineering or related field and registered with the relevant professional body. He/she Must have least 10 years of general experience in mechanical installations in buildings of similar magnitude and complexity. She/he should demonstrate experience in the design and supervision of similar works in at least three (3) building projects of similar nature and magnitude in the last 10 years. He/she must be fluent in in written and spoken English and must have a working experience of at least 3 years in Developing countries.

4.8 Quantity Surveyor

The Quantity Surveyor shall have a degree in Quantity Surveying or Building Economics or related field from a recognized institution and must be registered with the relevant professional bodies. He/she Must have a cumulative experience of ten (10) years in similar works and must have held similar positions in at least two (2) buildings projects and one road or airport project. He/she must be fluent in in written and spoken English and must have a working experience of at least 3 years in Developing countries.

4.9 Environmentalist

She/he must be a registered Environmental Expert with relevant professional Body and holder of a degree in Environmental Management Studies, Environmental Engineering, Environmental science or related discipline. A Post graduate qualification in Environmental and Social Management is an added advantage. She/he must possess at least five (5) years cumulative experience in monitoring of environmental issues, initiatives and implementation of mitigation measures related to roads/airports infrastructure projects. She/he must have served as an Environmental Specialist/Expert on at least three (3) projects of similar magnitude and complexity within the last ten (10) years. A working experience in Developing countries of at least 3 years is preferred and Proficient in both written and spoken English are mandatory. Proficient in Swahili is an added advantage.

4.10 Sociologist

She/he must be a holder of Degree in Sociology, Social work, Community Development or related discipline. A Post graduate qualification in related disciplines is an added advantage. She/he must possess at least five (5) years of cumulative experience in monitoring of environmental and social issues, initiatives and implementation of mitigation measures related to roads/airports infrastructure projects. She/he must have served as Sociologist on at least three (3) projects of similar magnitude and complexity within the last ten (10) years. She/he should, ideally, have knowledge of GBV, SEA, handling of Grievance Redress Mechanism (GRM) and Resettlement issues in relation to linear infrastructure projects. She/he must have experience in undertaking social impact assessment and management of Health and Safety issues in accordance with the applicable laws and regulations. A working experience in Developing countries of at least 3 years is preferred and Proficient in both written and spoken English are mandatory. Proficient in Swahili is an added advantage.

4.11 Health and Safety Officer

She/he must be a registered with OSHA for practicing the Health and Safety Mitigation measures in work place and must be a holder of Degree or Advanced Diploma in Health Science, Social work, Community Development or related discipline. A Post graduate qualification in Health and Safety related disciplines is an added advantage. She/he must possess at least five (5) years of cumulative experiences in monitoring of Health and Safety issues in work place, initiatives and implementation of mitigation measures related to roads/airports infrastructure projects. She/he must have served as Health and Safety Expert on at least three (3) projects of similar magnitude and complexity within the last ten (10) years. She/he must have at least 3 years working experience in Sub-Saharan Africa; and Proficient in both written and spoken English are mandatory. Proficient in Swahili is an added advantage.

Note: The specific experience of all key staff listed above will be assessed based on their experience of supervising airport projects.

4.12 Support Staff

Project Director – The Project Director shall guide and support the site supervision staff for the duration of the project. She/he shall be based at the Consultant’s head office and co-ordinate any specialist services that may be required from the Consultant. In addition to the key personnel designated above, the Consultant shall provide the support and back-up staff to assist with on-site supervision of the works in the following categories:

- (i) Project Director– 1No
- (ii) Architect – 1No
- (iii) Electrical Technician – 1No
- (iv) Network/ICT Specialist – 1 No
- (v) Works Inspector – Works – 1No.
- (vi) Materials Technicians – 1No
- (vii) Assistant Surveyor – 1No;
- (viii) CAD Technician – 1 No.
- (ix) Structural Engineer – 1 No.

Note: CVs for Support Staff will not be evaluated, thus may not be submitted with the Proposals. However, evidence of professional registration and academic certificates for all Key staffs should be submitted and will be evaluated.

5.0 STAFF REQUIREMENT DURING DEFECTS LIABILITY PERIOD

The Resident Engineer shall be responsible for conducting the inspection during the defects liability period as described in Sub-section 3.4 above.

5.1 The Consultant’s Staff

The Consultant’s staff shall:

- (a) be available to move to the Works site upon the commencement of the contract; and
- (b) Accord officials from the Ministry of Works and the opportunity to inspect the works and the related documentation.
- (c) Inform and seek consent of the Client when traveling away from site.

Notwithstanding the above, the Consultant shall provide a suitable replacement with equivalent or higher qualifications approved by the Client in case of extended absence (more than 2 weeks) of any senior staff from site.

6.0 DATA, SERVICES AND FACILITIES PROVIDED BY THE CLIENT

TANROADS will provide liaison with the Government Ministries and Departments in order to introduce the Consultant to them. However, the Consultant shall be fully responsible for collecting data and information from various departments/agencies;

6.1 The Client will make available to the Consultant the following:

- (a) Previous Design reports, including appendices, etc. relevant to the assignment, that have been carried out by or for the Client, Contract Documents and any other relevant data available, which are necessary for the proper execution of the design review and supervision of the construction Works;
- (b) Fully furnished and equipped office space on the site for the members of the supervision team, including maintenance, water, electricity, office supplies and consumables;
- (c) Two (2) Brand New 4WD long wheel base Station Wagon Motor Vehicles, and two (2) Brand New Manual Transmission 4WD long wheel base double cabin for Resident Engineer and Supervision staff;
- (d) Fully furnished office accommodation;
- (e) Materials Testing and Surveying Equipment;
- (f) Airtime for seven (7) mobile phones for project communication purposes: 2Nos. for Client's engineers and 5Nos. for the Consultant's Supervising Staff.

6.2 The Client will assist the Consultant to:

- (a) Obtain formal consent from outside authorities or persons having rights or powers in connection with the works or the site thereof;
- (b) Obtain ministerial orders, sanctions, licenses and permits in connection with the works;
- (c) Register a non-Tanzanian firm and key staff with the Engineers Registration Board. Any associated cost will be borne by the Consultant.

6.3 The Consultant Responsibilities/Obligations

- (a) The Consultant shall ensure that his supervision staffs provide organized training and instructions to counterpart personnel assigned to the Project, monitors their performance and submits a quarterly progress report on each individual. Training program and reporting should be defined in the Consultants proposal and agreed with TANROADS during pre-contract discussion.
- (b) The Consultant shall ensure that all professional EHS and one Social Specialist providing services under this Supervision Contract have background training related to potential worker health and safety risks associated with this work, and provided all the necessary health and safety equipment, including applicable personnel protective equipment, to fulfill their duties. The Consultant shall also ensure that all non-ESHS personnel providing services under this Supervision contract are provided basic training relate the Project ESHS requirements and potential significant ESHS related impacts and risks.
- (c) In the conduct of this work, the Consultant shall cooperate fully with relevant Government Ministries and Departments. The Client will provide the Consultant with data and services outlined above. The Consultant shall be solely responsible however, for the analysis and interpretation of all data received and for the conclusions and recommendations based thereon.
- (d) The consultant shall comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Experts and any other person, in compliance with good international practices and the project’s Labour Management Procedures and the Gender Based Violence (GBV) Action Plan.
- (e) The Consultant shall be responsible for arranging for his support staff who will not be accommodated in the multiple accommodations provided under the works contract.

7.0 REPORTING

All reports shall be submitted both in soft and the hard copies.

7.1. Design Review Report

The Consultant shall prepare and submit the following deliverables during design review stage:

- (i) A Preliminary Design Review Report within 4 weeks after the effective date of the Contract. The report should provide at least the descriptions and recommendations on areas that need to be modified in line with the information provided in Section 3.2 of the Terms of Reference.
- (ii) Final Design Review Report within time indicated below after receiving the Client’s decisions on the recommendation of the Preliminary Report.

The following time frame/schedule (in months) shall be adhered to in carrying out the Design Review Services. As such the various deliverables shall be submitted not later than the dates shown below:

Signing/Effective Date of Contract	M	0
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Commencement of Services	M	1
Draft Design Review Report	M	2.5
Comments on the Draft Design Review Report +updated BoQ by Client	M	3.0
Final Design Review Report +updated BoQ	M	3.5

7.2 Reporting During Construction Period

7.2.1 ESHS Reports

- a) The Consultant shall provide immediate notification to the Client should any incident in the following categories occur while carrying out the Services. This is to be followed by full details of such incidents shall be provided to the Client within three (3) calendar days.
 - (i) confirmed or likely violation of any law or international agreement;
 - (ii) any fatality or serious (lost time) injury;
 - (iii) significant adverse effects or damage to private property (e.g. vehicle accident); or
 - (iv) any allegation of Gender Based Violence (GBV), Sexual Exploitation or Abuse (SEA), sexual harassment or sexual misbehavior, rape, sexual assault, child abuse or defilement, or other violations involving children.
- b) Ensure that contractor immediate notifications on ESHS aspects are shared with the Client immediately and ensure the Contractor reports promptly such incidents to their insurance company, where applicable;
- c) Immediately inform and share with the Client any immediate notification related to ESHS incidents provided to the Consultant by the Contractor, and as required of the Contractor as part of the Progress Reporting; and
- d) Share with the Client in a timely manner the Contractor’s ESHS metrics, as required of the Contractor as part of the Monthly Progress Reports.

7.2.2 Inception Report

This report shall include the results of study/review of the design and contract documents, any modification or improvements deemed necessary, results of the review of the contractor's work program, any modifications thereto, status of the consultant and contractor's mobilization, ESHS Contractor requirements or other ESHS pls or documents and any other matter requiring the Client's action. This report shall be submitted in 10 copies to TANROADS one month after commence of works contract. One copy will be sent to TANROADS Regional Manager Office – Arusha.

7.2.3 Progress Reports

- (a) The Consultant shall prepare progress reports every month for the duration of the contract. These are to be submitted in Four (4) hard copies and soft copy and both should reach TANROADS not later

than 10 days after the end of the month being reported. One copy will be sent direct to the TAA HQ and TANROADS Regional Manager's Office.

(b) The format and the content of the monthly progress reports shall be as agreed with TANROADS. The report shall include but not limited to the following:

- i. Summary of the implementation plans and schedules for key and critical activities for the reported month;
- ii. Progress of implementation of key and critical activities including percentages of completion work items and overall progress of the works;
- iii. Highlight any changes on the original working documents and the reasons;
- iv. Description of major changes on quality and quantities of Works;
- v. Descriptions of challenges encountered by the project and actions taken or suggestions on the way forward including charts representation of actual progress vs planned progress (both physical and financial);
- vi. Financial status including cash flow forecast of both Construction and Supervision Contracts;
- vii. General information on weather, breakdown of key construction equipment and plants, major accidents and other events that may or have affected the progress or performance of Works.
- viii. Identification of the working units (number of plant and labour used for the various types of works clearing earthworks, grading, etc.). The section should also include a record of the total number of working hours of every key equipment and plants;
- ix. Monthly records of days spent on the various types of works with indication of the nominal working days and the rainy days in the months
- x. Assessment of the Contractor's claims, if any
- xi. Selected Key correspondences on matters of Contractual importance
- xii. Type, quality, quantities and sources of material used in the construction works
- xiii. Any other technical, financial or administrative information that may provide a glimpse of the project implementation status of the respective month.

Each monthly report is also expected to highlight the status of the unsolved key site or administrative challenges encountered during the previous month(s), status of environmental and social aspects of the project and the vicinity of the project, including but not limited to progress on resettlement activities, complaints received/ addressed, environmental issues, contractors' compliance with national permits/ consents requirements, etc..

7.2.4 Detailed Progress Report

When the implementation of the civil works contract reaches a value of 50% and 80% of the initial construction cost, the consultant shall prepare and submit a detailed progress report with updated cost of the civil works contract, implementation schedules and substantiate any request related to additional funding, needed for full completion of the project. The report shall be submitted in soft copy and Five (5) hard copies to TANROADS, one copy to TAA HQ and Regional Manager TANROADS Manyara.

7.2.5 Final Report

i. Project Completion Report

The Consultant shall prepare and submit soft copies and Five (5) hard copies of Final Completion Report within 30 days after the Substantial Completion of Construction Works. One (1) copy of the report will be sent to the TANROADS Regional Manager's Office – Manyara and the remaining copies to TANROADS Headquarters. The report shall include among other things, as built drawings, type, quality and quantity of materials used for construction of various sections and structures of the project and other relevant information that would enable the end user to apply or refer on future maintenance or new construction works.

The report shall also include a summary of the principal difficulties encountered during construction and the means employed to overcome them, changes (if any) made in the original designs, modifications to specifications and conditions of contract, all variation orders, assessment of claims by the Contractor, utilization of provisional sum, price variations, physical contingencies sums, cumulative monthly payments to the Contractor designated by date and number of payment certificate and break down into foreign and local currencies and including a similar payment schedule for supervision services. The details of the overall project costs (construction and supervision) with justification for any significant differences with the original shall be given in the Final Report.

ii. Final Completion Report

The Consultant shall prepare and submit to TANROADS, soft copies and Five (5) hard copies of the Final Project Report and Final Account within three (3) months after the issuance of the Defects Liability and Final Payment Certificate. The Final Project Report shall include a separate volume on maintenance proposal of the respective road section.

8.0 PAYMENTS TO THE CONSULTANT

8.1 General

- (i) payments for undertaking the assignments as described in these Terms of Reference shall be made on monthly basis and cover remuneration for approved personnel and respective reimbursable expenses;
- (ii) the Consultant's remuneration shall be deemed to cover his statutory liabilities, travel costs and support of his Head Office including obligations other than additional services not covered by the Terms of Reference under consideration.

(iii) The costs shall be invoiced to cover the Consultant's performance of his duties described in the Terms of Reference including the following:

1. monthly remuneration and subsistence allowances for expatriate personnel;
2. monthly remuneration and subsistence allowances for local personnel;
3. transportation of foreign-based key personnel and local travel costs;
4. reimbursable expenses concerned with the design review, production and printing reports, including associated secretarial expenses as described on paragraph 7 above;
5. shipment of personal effects that are appropriate for the assignment; and
6. other relevant contractual costs which must be specified by the Consultant.

8.2 Payments to The Consultant During the Design Review Services

The Consultant shall build up the costs for carrying out the assignment using the forms provided in the Request for Proposal (RFP).

Payment (Lump-sum) under Design Review shall be claimed under reimbursable expenses and shall be subject to review and confirmation during the pre-contract negotiations.

8.3 Payments to the Consultant During Construction Supervision Services

Payments will be made monthly as per terms and conditions of time-based contracts for undertaking the assignments described in these Terms of Reference to cover fees for approved personnel and reimbursable.

The costs shall be quoted to cover the Consultant's performance of his duties described above in accordance with the following:

8.3.1 Advance Payment

An advance payment of 15% in foreign currency and 15% in local currency of the contract sum (excluding contingency allowance) shall be made within thirty (30) days after the Effective Date to cover initial mobilization costs against an equivalent amount of acceptable Unconditional Advance Payment Bank Guarantee; and

the advance payment will be set-off by the Client in ten (10) equal instalments against the statements starting from the 5th invoice for the rendered services, until an advance payment has been fully recovered.

8.3.2 Reimbursable Expenses

Reimbursable expenses, which cover all out of pocket expenses and shall be made against contractual acceptable documentary evidence, as agreed with the Client.

8.4 Other payments

No other payments will be made to the Consultant under this contract.

9.0 DURATION OF THE ASSIGNMENT

The duration of construction supervision; and defects notification period are 24 and 12 months respectively. The Contract shall be deemed to have started on the term expressed in the General Condition of the Contract and shall be terminated when the final inspection of the works at the completion of the Defects liability period has been done and the Consultant has fulfilled all of his obligations.

10.0 LEAVE

The Consultant's expatriate staff engaged in the supervision of the construction Works will be entitled to 30 days leave per calendar year. In connection with leave, the expatriate staffs are entitled for one round trip international travel per year, for which the Consultant will be reimbursed. Man-months during annual leave will not be paid. During the absence of leave the staff's duties shall be handed over to an appropriate staff, of equal or better qualifications approved by the Client.