

## **TERMS OF REFERENCE**

**CONSULTANCY SERVICES FOR DESIGN REVIEW AND SUPERVISION OF WORKS FOR UPGRADING OF BULAMATA - MSOMBWE - UVINZA ROAD (95.80 km) TO BITUMEN STANDARD INCLUDING DESIGN AND CONSTRUCTION OF MALAGARASI BRIDGE (250 m); LOT 1: UPGRADING OF BULAMATA - MSOMBWE ROAD SECTION (83.30 km); TENDER No. AE.001/2025-26/HQ/C/35**

### **1.0 INTRODUCTION**

The Government of the United Republic of Tanzania has applied to utilizing saving Funds of Transport Sector Support Program (TSSP) from the African Development Bank (AfDB) towards the cost of the Upgrading of Bulamata - Msombwe - Uvinza Road (95.80 km) to Bitumen Standard including Design and Construction of Malagarasi Bridge (250 m) and intends to apply part of the proceeds of this Credit to cover eligible payments under the Contract for supervision of the construction works. The Upgrading works to Bitumen Standard will be undertaken under two (2) lots, namely, Lot 1: Bulamata - Msombwe Road Section (83.30 km) and Lot 2: Design and Construction of Malagarasi Bridge including Approach Roads (12.5 km). The services described under these TOR are for Consultancy Services for Design Review and Construction Supervision of Works for Upgrading of Bulamata - Msombwe - Uvinza Road (95.80 km) to Bitumen Standard including Design and Construction of Malagarasi Bridge (250 m); Lot 1: Bulamata - Msombwe Road Section (83.30 km)

A qualified Consulting Engineering Firm (the Consultant) will be required to undertake Consultancy Services for Design Review and Construction Supervision for Upgrading to Bitumen Standard of Lot 1: Bulamata - Msombwe Road Section (83.30 km) pursuant to these Terms of Reference (TOR).

### **2.0 PROJECT DESCRIPTION**

The Road Project is in Katavi Region in the Western Zone of Tanzania. The implementation of the Project is intended to enhance economic growth around the region by reducing transport costs and travel time as well as stimulating Tourism, Agriculture, Forestry and Fishery along the Project area of influence. The existing road is built on a gravel standard. The current maintenance operations practice of the road is usually Routine/ Recurrent and Periodic Maintenance, involving road formation, gravelling, grading, vegetation control and de-silting of drainage structures. Detailed Engineering Design, Environmental and Social Impact Assessment, Economic Evaluation and Preparation of Bidding Documents for the Upgrading of Bulamata - Msombwe - Uvinza Road (95.80 km) to Bitumen Standard including Design and Construction of Malagarasi Bridge (250 m); Lot 1: Bulamata - Msombwe Road Section (83.30 km) were completed in 2009 by M/s Crown TECH-Consult Ltd (CTC). Due to obsolescence of the

Design, in November 2023, the East African Community solicited funds from the African Development Bank (AfDB) and procured a Consultancy Services for Design Review including repackaging and preparation of Bidding documents. This assignment was conducted by M/s Cheil Engineering in a joint venture with Inter-Consult Ltd in association with ENGTEC Tanzania Ltd.

The pavement is designed using the Ministry of Works Pavement and Materials Design Manual 1999 (PMDM) and the South African Mechanistic Pavement Design Method (SAMPDM). The design has resulted in the following pavement structure, including improved subgrade layers: -

- 50mm thick Asphalt Concrete Wearing Course Class SP 12.5 using PG 76-16 performance grade bitumen (maximum aggregate size 12.5 mm);
- Bitumen Emulsion C 55 Fast track Prime Material for priming of carriageways and shoulders;
- 150 mm Base Course (CRR);
- Stabilized layer, Material Class C2 (150 mm thick) for subbase;
- Stabilized layer, Material Class C1 (150 mm thick) for subbase; and
- Fill as Appropriate

## **2.1 Location**

The project road forms part of the Multinational Tanzania/Burundi: Uvinza – Kanyani & Uvinza – Mpanda / Gesture – Rusengo / Makebuko – Bugarama Roads. The road has a length of 371.5 km located in two countries of United Republic of Tanzania and Burundi. About 236.5 km of the project road is in Tanzania, while the remaining 135 km is in Burundi. The road has been identified as a strategic corridor in the Tanzania road network in the western parts of Tanzania. The Vikonge-Luhafwe 25 km and Luhafwe - Mishamo are two sections under construction using Government funding, leaving a missing link of 95.8 km to Uvinza town centre. The project starts at Bulamata, 70 km from Mpanda.

## **3.0 CONSULTANCY SERVICE CONTRACT**

To carry out this assignment, the Government of Tanzania represented by TANROADS (the Client) wishes to engage a qualified firm of Consulting Engineers (the Consultant) to undertake Construction Supervision Services under these Terms of Reference (TOR).

The prospective firms shall submit their proposals within the period defined in the Letter of Invitation and the successful tenderer shall enter into an Agreement for the services.

#### 4.0. OBJECTIVES OF THE ASSIGNMENT

The objective of the assignment is to undertake Consultancy Services on behalf of the Tanzania National Roads Agency (TANROADS), the Employer for the Design Review and Construction Supervision for **Upgrading of Bulamata - Msombwe - Uvinza Road (95.80 km) to Bitumen Standard including Design and Construction of Malagarasi Bridge (250 m); Lot 1: Bulamata - Msombwe Road Section (83.30 km)**

The specific objectives of the Consultancy services are to:

- a) Carry out Supervision of the works contract to ensure that the works comply with the approved design, drawings, specifications, conditions of contract and sound engineering practice;
- b) The design review aims at ensuring the correctness, completeness and compliance of the road design with internationally acceptable standards and latest available National Guidelines and update where necessary and as may be directed by the Client. The design review component is to be carried out and completed in **three (3) months**, and shall involve thorough scrutiny of the following documents;
  - (i) Detailed Engineering Design for the road section under consideration;
  - (ii) Detailed Engineering Design Review for the Shongwa Bridge located km 112+540;
  - (iii) Review and update the Environmental and Social Impact Assessment (ESIA) Report and related Environmental and Social Management Plan (ESMP) by considering any design changes, additional mitigation measures, recommendations of the Client, and in compliance with the National Environmental Management Council (NEMC) and AfDB Guidelines;
  - (iv) Incorporate the ESMP costs in the BOQ as necessary.
  - (v) Bills of Quantities (BOQ), as deemed necessary;
  - (vi) Survey data on the relevant site and eventually update the data and align with the road design, where necessary; and
  - (vii) Review of Engineer's offices and Buildings in consultation with the Employer
- c) To carry out **design for roadside infrastructure at Salanda village Centre**, including but not limited to **Passenger waiting shelters, Designated vending zone, Parking facilities, public sanitation units (toilets), Borehole water supply systems with elevated storage tanks and Rainwater harvesting system**. The Consultant shall closely work with the Mishamo Refugee Settlement Officer and the Tanganyika District Council during the design of the facility.
- d) To carry out Supervision of the Works Contract (including complimentary activities i.e., roadside infrastructure at Salanda

- village) to ensure that the works comply with the approved design, drawings, specifications, conditions of Contract and sound engineering practice during construction stage;
- e) Review of the proposed Traffic Management Plans during construction to ensure that the proposed traffic management results in minimal disruption as the road passes through the forest reserve areas;
  - f) Review the contractor's ESMP to ensure it adequately captures the project's environmental, social, and safety risks and their mitigation measures, and supervise its implementation on site in line with the requirements of the project;
  - g) Supervise the reforestation activities, including regular reporting to the Client;
  - h) Prepare **flash weekly and monthly progress report** for the Works Contract;
  - i) Provide Monthly and Quarterly Environmental, Social, Health and Safety (ESHS) reports of Project, which will include sensitization of local populations on HIV/AIDS, STI, TB, and Gender issues;
  - j) Provide Annual Environmental, Social, Health, and Safety (ESHS) Audit Reports;
  - k) Preparation of the Project Completion Report (PCR) both in conventional and AfDB format;
  - l) To carry out the supervision of repair activities as well as the implementation of activities included in the snag list of construction during the Defects Notification Period;
  - m) Review of the proposed traffic deviations during construction to ensure that the proposed traffic arrangement results in minimal disruption;
  - n) Prepare monthly progress report for the Works Contract in the format to be provided by Client;
  - o) Prepare Final Construction Report (FCR) and submit to the Client together with approved as-built drawings (one hardcopy and soft copy, the drawings shall be in both AutoCAD and Pdf format) not later than one month after the date of Taking Over;
  - p) Supervise maintenance activities during the DNP, prepare and submit draft Project Completion Report (PCR) as per the Bank's format one month before the end of DNP; and
  - q) Submit Final Project Completion Report (PCR) in the Bank's format (one hardcopy and softcopy) one month after the end of DNP.

## **5.0. CONSULTANTS' SERVICES**

### **5.1 Construction Supervision**

The Consultant shall be fully responsible for the supervision of the construction in accordance with the FIDIC Conditions of Contract. The Consultants 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 and efficiency and in

accordance with sound technical, administrative, socially responsive, environmentally sound, financial 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 addition, the Consultant shall conduct the supervision of complimentary activities construction i.e., roadside infrastructure at Salanda village).

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

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- (i) Locate camp sites in areas that minimize disruption to the local population, fauna and flora, and watercourses, and that provide adequate drainage facilities, sewage treatment, and waste disposal. The camp areas should be dismantled and rehabilitated once the construction project is completed;
- (ii) Receive, analyze and approve the Contractor's Resource-based Work program prior to the commencement of construction activities. The Consultant shall provide appropriate and timely input to the program where required to ensure that construction works are implemented using effective, realistic plans and schedules;
- (iii) Receive and review the contents and amounts of all relevant Insurance Certificates submitted by the Contractor as required by the Works Contract and advise the Client accordingly;
- (iv) Check and establish that the Contractor mobilizes staff and supplies to the contract, all plants, equipment and machinery that have been committed under the Works Contract and ensure that all such items of plants, equipment and machinery are calibrated, as required and remain on the construction site until their release has been authorized;
- (v) Receive and verify the Registration Cards of key equipment and plants mobilized on site by Contractor for execution of Works before submitting the same to the Client;
- (vi) Study/review the design, ESMP and contract documents, and other relevant documents prepared by the Contractor and advise the Client of any deficiencies or necessary improvements that are identified or deemed necessary for the successful implementation of the project including design modifications or specifications that may become necessary during construction. All design changes that affect the quality, scope, cost or completion period of the works are subject to prior consultation and approval of the Client;

- (vii) At all times take necessary measures and provide appropriate advice to Client to enable the construction contract to be completed in a timely and cost-effective manner, in conformity with the contract Conditions and Specification;
- (viii) The Consultant shall satisfy thoroughly of the nature and scope of the works, of all information and documents available, the materials and equipment to be used by the Contractor in executing the works as to enable him to perform his duties satisfactorily, study and check all documents associated with the projects, foresee possible problems and advise Client appropriately during the construction and repair (defects notification) period;
- (ix) Cooperating with contractors in identifying and marking all utilities with the help of competent Authorities and assisting the Client in effecting the removal/relocation (where necessary) of utilities within the Right of Way;
- (x) Liaise with the Client to ensure that the assessment and compensation of crops and buildings including temporary structures and fences, if any, within the Right of Way is done before the Contractor is given possession of site;
- (xi) Liaise with the relevant forest authorities to obtain necessary consents before allowing the execution of any activity in the forest reserve;
- (xii) Identify and locate all beacons and benchmarks, confirm their compatibility with the designs or/and to re-establish the missing ones where needed in accordance with the works requirements and agreed specifications and hand over to the Contractor before commencement of the works to enable the Contractor to set out and construct the works. This shall include primary and secondary control points along the entire section including the required documentation, GPS/GNSS and traverse coordination and benchmarks. In case of lost control points re-survey and re-establish;
- (xiii) Inspect, test and approve all materials and completed works to ensure compliance with the requirements of the technical specification;
- (xiv) Review and approve all road safety measures, including road detours/diversion, safety controls and signs, training, and monitoring; and should undertake inspections on adequacy of road safety measures and make recommendations for changes or improvements as needed;
- (xv) Undertake Construction-stage (during roadworks) Road Safety Audits (RSAs) at least four (4) times during the construction period. These RSAs shall be conducted randomly, however, mainly during major roadworks. There shall be a pre-opening stage RSA to identify any road features or deficiencies which may lead to hazardous situation. The RSAs must place special emphasis on the safety of vulnerable road-users (e.g., pedestrians, cyclists, people with disabilities, etc.) through roadwork sites. The consultant shall notify the Client in advance of conducting the RSAs so that the Client can

nominate staff to attend the same. The RSA report shall be prepared by the Consultant and shared with the Client within 15 working days of the completion of the RSA. The consultant shall organize a meeting with the Client and the Contractor to discuss the findings and recommendations of the RSA;

- (xvi) Keep all records updated including reports, works diaries, correspondence, instructions given to Contractor(s), test records, measurements and quantity calculations, payment records and all other relevant documents pertaining to the works operations and supervision contract;
- (xvii) Review and approve the Contractor's drawings and methodology for identifying and marking all utilities falling within the Right of Way. In addition, and in liaison with competent authorities and Client, review and approve the Contractor's methodology and cost for removal of utilities affected by the works and ensure that the relocation works is done in accordance with contract requirements;
- (xviii) Measure quantities of work satisfactorily carried out and certify monthly and final payment certificates for consideration by Client. Monthly certificates to be submitted to the Client for payment shall include the total cost of the works executed in foreign and local currency (net of taxes and duties);
- (xix) Record, examine and evaluate all claims submitted by the Contractor and submit timely recommendations thereof for consideration by Client;
- (xx) Prepare control charts of the main activities and a project master schedule, indicating both past performance and forecasts for completion including time involved in each case;
- (xxi) Negotiate with the contractor the unit rates for new items of works in the contract and submit to Client for review and approval;
- (xxii) Undertake 7 days classified traffic count once in every year during the Construction period;
- (xxiii) The Consultant shall prepare a Supervision Manual which will lay out procedures to be followed during the execution of the work. The Manual will also serve as a basis for on-the-job training of TANROADS staff and any students visiting during the implementation of the contract;
- (xxiv) Maintain a site diary daily with the contents and format to be agreed with Client;
- (xxv) The Consultant shall organize and undertake on-the-job training for qualified counterpart engineers. The Engineers will be seconded to the Consultant by TANROADS during execution of the works contract. The training will include, apart from others, all aspects of supervision of road works contracts, contract scheduling, quality control of completed works, setting out and measurement, including preparation of as-built drawings and final report;

- (xxvi) In the event of adjudication or arbitration, the Consultant shall provide the necessary personnel and expertise to advise and assist the Client in any such process and prepare any further analysis of the contractor's claims submissions as may be necessary to assist the Client in the proceedings;
- (xxvii) Carry out inspections, prepare a Defects list and draft the "Taking Over Certificate" before commencement of "DNP"
- (xxviii) At latest within one month following final inspection of the completed works, agree with the contractor the final measurements of the works, and prepare the final payment certificate for submission to the Client.
- (xxix) When the implementation of the civil works contract reaches a value of 80% of the initial construction contractor 80% of the physical progress of the original scope of Works (whichever comes first), 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, if such is needed to full completion of the project.
- (xxx) Ensure that the contractor organizes HIV/AIDS awareness and sensitization campaigns by providing health education to the work force and the local population and provides condoms. For this aspect of the supervision services, the Consultant should include a qualified Environmentalist/Social Expert as part of the supervision team.
- (xxxi) Prepare consolidated monthly reports including weekly flash report on physical and financial status, site meetings, contractual matters, etc., with recommendations for actions by Client and the Contractor. The reports shall be submitted in hard and soft copies;
- (xxxii) Review and approve Management Strategies and Implementation Plans (MSIP) to manage the (ESHS) risks and monitor their implementation. The MSIP shall include but not limited to:
  - (a) Traffic Management Plan to ensure safety of local communities from construction traffic;
  - (b) Water Resource Protection Plan to prevent contamination of drinking water and manage the extent of usage by the Contractor for construction purposes;
  - (c) Environmental and Social Management Plan (ESMP);
  - (d) Material source, borrow pit, and quarry management and reinstatement plan;
  - (e) Gender based violence, sexual exploitation and abuse, and sexual harassment

- (GBV/SEA/SH) prevention and response action plan;
- (f) Grievance Redress Mechanism;
- (g) Health and Safety Management Plan, to ensure the health and safety of workers; including use of protective clothing, HIV/AIDS and COVID-19 awareness and prevention, including sensitization and counselling; drug and substance abuse, and avoidance of child labour and child abuse;
- (xxxiii) Management of Labour Influx and use of local labour,
- (xxxiv) Perform routine and periodic comparison between the work' schedules and the actual progress of works, and cause the Contractor to review the program whenever the previous program is inconsistent with the actual work on site or with the Contractor's obligations,
- (xxxv) Prepare control charts of the main activities and a project master schedule, indicating both past performance and forecasts for completion including time involved in each case;
- (xxxvi) Cause the contractor to submit breakdown of all lumpsum items and review and advise the Client accordingly
- (xxxvii) Measure quantities of works satisfactorily carried out and certify monthly and final payment certificates for consideration by TANROADS. Monthly certificates to be submitted to the Client for payment shall include the total cost of the works executed in foreign and local currency;
- (xxxviii) Record, examine and evaluate all claims submitted by the Contractor and submit timely recommendations thereof for consideration by Client. The Consultant's claims report to the Client is expected to include at least the following information, Description of the claim, Source and reason of the claim, Consultant's opinion on the legitimacy and the scope of the claim, and Consultant's conclusions and recommendations on the claim.
- (xxxix) Determine the unit rates for new items of Works in the contract and submit them to Client for approval;
- (xl) Prepare and submit to the Client the Final Report at Substantial Completion and
- (xli) Final Completion Reports at the end of the defect's notification period
- (xlii) Prepare and submit to TANROADS the final account of executed works;
- (xliii) Review and approve the as-built drawings;
- (xliv) Provide appropriate instructions to Contractor to protect, store or secure a part of the completed or on-going works against any serious deterioration, loss or damage
- (xlv) 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.

- (xlvi) 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 are included but are not limited to: -
- (a) Review and approve the Contractor's Environment and Social Management Plan (C-ESMP) prior to any construction work, including all updates and revisions (within a reasonable time and prior to any significant work that would be covered by the proposed material changes) in consultation with the Environmental, HS or Social specialists of Client;
  - (b) Review and approve ESHS provisions of method statements, implementation plans, GBV/SEA prevention and response action plan, drawings, proposals, schedules and all relevant Contractor's documents;
  - (c) Review and consider the potential ESHS risks and impact 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;
  - (d) Undertake annual audits of the Contractor's compliance with ESHS requirements, including its Gender Based Violence (GBV)/ Sexual Exploitation and Abuse (SEA) obligations, and submit annual E&S audit reports,
  - (e) Develop and maintain ESHS checklists and supervision reports related to audits and inspections related to Contractor's ESHS compliance and performance,
  - (f) 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;
  - (g) 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;
  - (h) In the case of any significant or material ESHS incident (such as death or serious accident, lost time injury, significant spill, pandemics like COVID 19 etc.), report within 12 hours of knowledge of such event to TANROADS and work to define acceptable remedial actions to investigate, remediate, and prevent such

- events in the future (Develop Root Cause Analysis Report);
- (i) In relation to all significant material and service providers to the Contractor (such as sites/providers 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
  - (j) Undertake liaison, from time to time and as necessary, with project stakeholders such as forest management authorities, Mishamo Refugee Settlement Officer, local government offices etc to identify and discuss any actual or potential ESHS issues
  - (k) 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.
  - (l) Ensure any GBV/SEA instances and complaints that come to the attention of the Consultant are reported to Client within 12 hours, and an investigation as well as assistance to the survivor is provided.
  - (m) Prepare and submit to Client a separate monthly and quarterly ESHS progress report on ESHS project construction compliance and performance
  - (n) 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's compliance with ESHS requirements and whether there are any existing unmitigated ESHS impacts, and if issues are identified then promptly notify the Contractor and Client and work with such entities to define acceptable remedial actions to resolve all problems.

## **5.2 Design of Roadside infrastructure and Review of the existing Design**

The Consultant shall review all relevant and available documents, such as the Design report, maps, drawings, previous studies (if any), and update the Detailed Engineering Design, Environmental and Social Impact Assessment, including an Environmental Management Plan, by considering the recommendations of the Client, African Development Bank (AfDB), and ensuring compliance with the National Environmental Management Council (NEMC) Guidelines and the Land Acts No. 4 and No. 5 of 1999.

The purpose of this review is to ensure that the documents and data are correct, complete, and conform to internationally acceptable standards and to AfDB and National guidelines. The Consultant shall also review the following: -

- (a) Survey data on site to verify the correctness of the Survey data and where necessary correct the survey data and the design accordingly,

- (b) Carry out a thorough study/review of the terrain and traffic at the major centers and Pavement layers,
- (c) Drainage structures and their climate change adoption, Subsoil drains, Erosion checks for drains,
- (d) Geometrical design including Walkways, Bus bays and Truck lay bay areas along the route and Intersections type and design warranted based on, among other factors, the traffic volumes and turning movements at the intersections as provided in the Geometric Design Manual,
- (e) Service roads at the major centers to safeguard segregation of traffic, pedestrians and cyclists,
- (f) Signs and Road markings, Kerbs, Speed humps/rumble strips / raised pedestrian crossings and Guardrails
- (g) Illumination at major centers,
- (h) Climbing lanes and determining additional locations as appropriate
- (i) The Consultant is also required to incorporate in the design the RSSAT (Road Safety Screening Appraisal Tool) output which will be provided by TANROADS HQ and propose mitigation measures for incorporation in the reviewed design,
- (j) The Bills of Quantities (BOQ), if any;
- (k) Safeguards Compliance in line with AfDB ISS requirements,
- (l) Available data and climate change projections for the project area with regards to the hydrological and geological conditions to ensure adequacy of proposed drainage. Furthermore, the consultant shall evaluate the risks of failure prone to the proposed structures,
- (m) Study effects of climate change including effects of increased rainfall, unusual storms leading to flooding, higher temperature due to global warming etc. on the road profile, road pavement and cross drainage structures during their design life and propose appropriate remedy works. The Consultant is required to consider environmental aspects and the climate change aspects in finalizing the design review,
- (n) Vertical profile in consideration of climate change impacts particularly from the drainage aspects in terms of minimum longitudinal slope, minimum cross- slope, height of embankment, etc.,
- (o) Requirements of the longitudinal drainage system,
- (p) Review pertinent data and historic rainfall data to determine various risk scenarios based on pertinent aspects such as overall risk of failure for drainage structures. Flood Return periods for the design of culverts and bridges will be taken in accordance with the design standards with particular attention to sections prone to flooding or damage during rainy seasons,
- (q) Review the catchment area, adopted runoff coefficients based on topography, permeability of soil and vegetation cover, and
- (r) Review the analysis performed to compute design discharge, design HFL and various other hydraulic parameters, i.e. water way, scour depth, free board for bridges, size of roadside drains to guide the runoff to nearby culverts/bridges, etc. given in the detailed design

- report and compare with the data collected from site investigation and propose appropriate intervention measures.
- (s) Collect NMT data by having accurate data on pedestrians and non-motorized users to support more effective road safety and street function design interventions (including non-motorized transport facilities). The Consultant should also take into consideration counting the public transport traffic in the road project for purpose of improving provision of public transport facilities in the design.
  - (t) Review and update the Environmental and Social Impact Assessment (ESIA) Report and related Environmental and Social Management Plan (ESMP) by taking into account any design changes, additional mitigation measures, recommendations of the Client and stakeholders, and in compliance with the National Environmental Management Council (NEMC) and AfDB Guidelines;
  - (u) Determine, in consultation with forest authorities, along the road, areas to be reforested, tree species to be used, and their availability.

### **5.3 Defects Notification Period (DNP)**

The Consultant shall oversee the work during DNP through regular visits including maintenance work and administrative roles. Prior to expiry of the DNP, the Consultant shall inspect the works according to the Condition of Contract and issue instructions for rectifications of all defects, imperfections of faults, and supervise the remedial works. Following the Client's acceptance, the Defects Notification Certificate shall be issued.

To fulfill Consultant's obligations during the DNP, the Consultant is expected to carry out inspection of the work and subsequently prepare and issue the Final Certificate. During this period, the Consultant shall be expected to draw the Contractor's attention to any defects as soon as they are noticed and notified to supervise the subsequent remedial work. As the DNP for the works Contracts is 24 months, a total of four (8) inspections will be carried out in an interval of 3 months' time intervals during the 24 months (each inspection visit shall be extended for a maximum period of seven (7) calendar-days consecutively) after completion of the works and any deficiencies noted along the road and its remedial measures be proposed to the Contractor. Depending on the nature of deficiency, repair work will be carried out under the Consultant's supervision. The Consultant will be required to submit the inspection report to the Client. At the end of the 24-month notification period, the Consultant will conduct an inspection and confirm that the Contractor has completed the Works, ready for joint inspection and handover. A final inspection will be carried out under the supervision of the Resident Engineer, who will prepare and sign the Inspection Report and distribute it to the Contractor, TANROADS HQ, and the Regional Manager's Office - Katavi for joint verification.

#### **5.4 Project Completion Report (PCR)**

The Consultant shall prepare a PCR as per Bank's format, the Consultant is expected to:

- (a) Collect all documents and information concerning the projects;
- (b) Examine the organization and institutional capacity of the Executing and Management Agencies and determine their human and logistic means;
- (c) Discuss the loan conditions and assess the degree of fulfillment;
- (d) Compare and comment on the schedules, costs and disbursements established at appraisal and registered after project implementation;
- (e) Compare the rates of economic return of the projects before and after implementation.
- (f) Examine the financial and economic implementation of the contracts with the enterprise and discuss problems encountered and actions taken;
- (g) Assess the projects' impact on development, gender, poverty reduction, etc....
- (h) Draw lessons from the projects and make recommendations that will enable the Bank Group to improve its operations strategy in the sector;
- (i) Examine and evaluate the degree of success or failure of the projects against the objectives set at appraisal; and
- (j) Examine project sustainability.

Three (3) hard copies and soft copies of the report shall be submitted within two (2) months after the end of DNP to Client who will share with AfDB.

#### **6.0 TRAINING OF COUNTERPART STAFF**

The Consultant shall organize and undertake theoretical and on – the – job training for up to 3 qualified counterpart Engineers. The Engineers will be seconded to the Consultant by TANROADS during execution of the works contract. The training will include, apart from others, all aspects of supervision of road works contracts, contract works scheduling, quality assurance and control of completed works, setting out and measurement, including preparation of as-built drawings and final report. A provisional sum of TZS. 300.00 million shall be included in the financial proposal for allowances and training of the counterpart staff.

## 7.0 CONSULTANT'S PERSONNEL

The Consultant shall provide the following key professional staff to fulfil the objectives of the services and for which he/she will receive remuneration as specified in the contract document.

### 7.1 Back-up Staff

**Project Director** – The Project Director shall provide overall direction of the project, guide and support the site supervision staff and liaise with the Client for the duration of the project. He/She shall be based at the Consultant's head office and shall co-ordinate any specialist services that may be required by the Consultant.

### 7.2 Consultants Professional Key Staff: -

To fulfil his obligations under the Assignment, the Consultant shall provide qualified Key Professional Staff and appropriate Support Staff and shall prepare a detailed Work Programme and corresponding Manning Schedule indicating the timing of activities and the associated staff inputs required for the proper execution of the Services for forty four (44) months throughout the Construction Period including three (3) months design review and the Defects Notification Period (DNP) of **twenty-four (24) months**.

Based on the approved staffing schedule and level of effort, the total estimated staff inputs are as follows:

- **Key Professional Staff:** approximately **321 person-months**
- **Non-Key / Support Staff:** approximately **538 person-months**
- **Head Office Backstopping Support:** approximately **24 person-months**

Accordingly, the total estimated professional staff input for the Assignment is approximately **883 person-months**.

The above staff input includes full-time deployment of core supervision personnel during the Construction Period and intermittent but adequate staffing during the Defects Notification Period, including the assignment of at least one Key Expert (preferably the Resident Engineer) and an experienced Inspector during the DNP in accordance with Clause 7.4 of the Terms of Reference.

The Consultant shall ensure that all staff inputs are aligned with the approved Work Programme and shall adjust as necessary, subject to the approval of the Client, to ensure effective supervision, contract administration, quality assurance, environmental and social compliance, and timely completion of the Project.

The Consultant is required to employ only such key staff as those whose CVs have been approved by the Client. In addition to the expert personnel, the Consultant shall determine the support staff to assist with on-site supervision of the execution of work. The Consultant must provide in the proposal, CVs and copies of highest education certificates for all

professional and technical staff including the duration in person-month during which the staff will be deployed under the Contract.

### 7.3 Staff Requirement

The Construction Supervision shall be carried out by the following key professional staffs:

#### (i) Resident Engineer (K-1):

- a) She/he must be a registered Professional Engineer with a degree in Civil Engineering. Postgraduate qualification in Highway Engineering is an added advantage. She/he must have a minimum of twenty (20) years (**for Expatriate**) with cumulative experience related to road/bridge design and construction, working for the Client, Consultant or Contractor. Experience in contract administration under FIDIC Conditions of Contract in at least three (3) projects is a requirement. She/he must have served as a Resident Engineer in at least three (3) road construction projects of similar magnitude and complexity in the last 5 years. At least 5 years of experience in Sub-Saharan countries is required. She/he should be able to write and speak fluently in English. She/he shall be the head of site staff and responsible for all technical and administrative aspects of the project on site.
- b) She/he must be a registered Professional Engineer with a degree in Civil Engineering. A postgraduate qualification in Highway Engineering is an added advantage. She/he must have a minimum of ten (10) years (**Native Expert**) of cumulative experience related to road/bridge design and construction, working for the Client, Consultant or Contractor. Experience in contract administration under FIDIC Conditions of Contract in at least two (2) projects is a requirement. She/he must have served as a Resident Engineer in at least two (2) road construction projects of similar magnitude and complexity in the last 8 years. At least 3 years of experience in Sub-Saharan countries is required. She/he should be able to write and speak fluently in English. She/he shall be the head of site staff and responsible for all technical and administrative aspects on site.

#### (ii) Highway Engineer (K-2):

**Highway Engineer/Assistant Resident Engineer (K-2) qualifications can be two options as follows:**

- a) She/he must be a registered Professional Engineer with a degree in Civil Engineering. Postgraduate qualification in Highway Engineering is an added advantage. She/he must have a minimum of fifteen (15) years (**for Expatriate**) with cumulative experience related to road/bridge design and construction, working for the Client, Consultant or Contractor. Experience in contract administration under FIDIC Conditions of Contract in at least three (3) projects is a requirement. She/he must have served as Highway Engineer/Acting Resident Engineer in at least three (3) road construction projects of similar magnitude and complexity in the last 5 years. Working experience in Sub-Saharan countries of at least 5 years is required. She/he

- should be able to write and speak in English. She/he shall be the head of site staff and responsible for all technical and administrative aspects on site.
- b) She/he must be a registered Professional Engineer with a degree in Civil Engineering. Postgraduate qualification in Highway Engineering is an added advantage. She/he must have a minimum of ten (10) years (**Native Expert**) of cumulative experience related to road/bridge design and construction, working for the Client, Consultant or Contractor. Experience in contract administration under FIDIC Conditions of Contract in at least two (2) projects is a requirement. She/he must have served as Highway Engineer/Acting Resident Engineer in at least two (2) road construction projects of similar magnitude and complexity in the last 8 years. Working experience in Sub-Saharan countries of at least 3 years is required. She/he should be able to write and speak in English. She/he shall be the head of site staff and responsible for all technical and administrative aspects on site.

**(iii) Bridge/Structural Engineer (K-3):**

**Bridge/Structural Engineer (K-3): qualifications can be two options as follows:**

- a) She/he must be a registered Professional Engineer with a degree in Civil Engineering. A Postgraduate qualification in Bridge/Structural Engineering is an added advantage. She/he must have a minimum of fifteen (15) years (**for Expatriate**) cumulative experience in bridge design and construction. She/he must have served in similar capacity on at least three (3) bridge projects of similar magnitude and complexity in the last 5 years. At least 5 years of experience in Sub-Saharan countries is preferred. She/he should be able to write and speak English. She/he shall be responsible for ensuring the bridges and other drainage structures are constructed according to design and conform to the contract specifications.
- b) She/he must be a registered Professional Engineer with a degree in Civil Engineering. A Postgraduate qualification in Bridge/Structural Engineering is an added advantage. She/he must have a minimum of ten (10) years (**Native Expert**) cumulative experience in bridge design and construction. She/he must have served in similar capacity on at least two (2) bridge projects of similar magnitude and complexity in the last 8 years. At least 3 years of experience in Sub-Saharan countries is preferred. She/he should be able to write and speak in English. She/he shall be responsible for ensuring the bridges and other drainage structures are constructed according to design and conform to the contract specifications.

**(iv) Pavement/Materials Engineer (K-4):**

**Pavement/Materials Engineer (K-4) qualifications can be two options as follows**

- a) She/he must be a registered Civil Engineer with at least a BSc. in Civil Engineering, Pavement or Materials Engineering. A Postgraduate qualification in Pavement or Materials Engineering is an added advantage. She/he must have a minimum of Fifteen (15) years (**for Expatriate**) of

specific experience in Pavement/Materials related to road works. She/he must have served in at least five (5) road projects of similar magnitude and complexity in the last 5 years. She/he shall be responsible for ensuring the quality of all materials to be utilized in the works. In addition, She/he must make sure that the completed works conform to the contract specification. She/he must have at least 5 years of work experience in Sub-Saharan countries. Proficiency in written and spoken English is mandatory.

- b) She/he must be a registered Civil Engineer with at least BSc. in Civil Engineering, 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 **(Native Expert)** of specific experience in Pavement/Materials related to road construction works. She/he must have served in at least three (3) road projects of similar magnitude and complexity in the last 5 years. She/he shall be responsible for ensuring the quality of all materials to be utilized in the construction works. In addition, She/he must make sure that the completed works conform to the contract specification. She/he must have at least 3 years of work experience in Sub-Saharan countries. Proficiency in written and spoken English is mandatory.

#### **(v) Topographical Surveyor (K -5)**

##### **Topographical Surveyor (K-5): qualifications can be two options as follows**

- a) She/he must be a recognized Topographical Surveyor with a relevant professional body with a minimum of a diploma in Land Surveying. She/he must have at least twelve (12) years (expatriate) cumulative experience in road design and construction. She/he must have served in similar capacity on at least Five (5) road construction projects in the last 5 years of similar magnitude and complexity. At least 5 years of experience in Sub-Saharan countries is preferred. Fluency in written and spoken English is mandatory. The Topographical Surveyor shall be responsible for supervising the survey team in day-to-day surveying activities. He/she will be responsible for planning the fieldwork, selecting known survey reference points, and determining the precise location of important features in the survey area. He/she shall be responsible for searching legal records, looking for evidence of previous references survey points (geodetic reference points and national benchmarks) and analyzing the data to determine the location of boundary lines and record the results of the survey, verify the accuracy of data, and prepare plans, maps, and reports. The Surveyor must mark all properties affected by the road alignment.
- b) She/he must be a recognized Topographical Surveyor with a relevant professional body with a minimum of a diploma in Land Surveying. She/he must have at least ten (10) (Native Expert) cumulative experience in road design and construction. She/he must have served in similar capacity on at least three (3) road construction projects in the last 5 years of similar magnitude and complexity. At least 3 years of experience in Sub-Saharan

countries is preferred. Fluency in written and spoken English is mandatory. The Topographical Surveyor shall be responsible for supervising the survey team in day-to-day surveying activities. He/she will be responsible for planning the fieldwork, selecting known survey reference points, and determining the precise location of important features in the survey area. He/she shall be responsible for searching legal records, looking for evidence of previous references survey points (geodetic reference points and national benchmarks) and analyzing the data to determine the location of boundary lines and record the results of the survey, verify the accuracy of data, and prepare plans, maps, and reports. The Surveyor must mark all properties affected by the road alignment.

**(vi) Environmental/Social Expert (K-6)**

She/he must be a registered Environmental Expert with a degree in Environmental Management Studies. A Post graduate qualification in Environmental and Social Management is an added advantage. She/he must have sound knowledge of environmental and social issues, initiatives and implementation of mitigation measures related to civil engineering infrastructure projects. She/he must have served as an Environmental and Social Specialist on at least three (3) projects of similar magnitude and complexity. She/he should, ideally, have knowledge of GBV, SEA and labor influx 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 requirements of Occupational Health and Safety Authority (OSHA). She/he should be able to write and speak both in English and Swahili. Working experience in Sub-Sahara countries of at least 3 years is preferred. She/he shall be responsible for supervision of implementation of the project as per environmental and social Regulations, policies and guidelines; monitoring of the Social issues in the project in order to minimize any negative impacts from the project on the people in the project area; and monitor implementation of the Resettlement Action Plans (RAP) to address the resettlement impacts during project implementation.

**(vii) Health and Safety Officer (K-7):**

She/he must be a registered with relevant professional body for practicing the Health and Safety Mitigation measures in the workplace. She/he must be a holder of Degree in Health Science, Environmental Science, or Environmental Engineering. A postgraduate qualification in Health and safety-related disciplines is an added advantage. She/he must possess at least five (5) years of cumulative experience in monitoring Health and Safety issues in the workplace, initiatives and implementation of mitigation measures related to road infrastructure projects. She/he must have served as Health and Safety Expert on at least three (3) donor-funded projects of similar magnitude and complexity. She/he must have at least 3 years of work experience in developing countries and be proficient in written and spoken English.

**(Viii) Measurement Engineer/Quantity Surveyor (K-8):**

She/he must be a registered Professional Engineer with degree in Civil Engineering, Building Economics or Quantity Surveying. A Postgraduate qualification in those fields is an added advantage. She/he must have a minimum of (10) years of cumulative experience related to infrastructure design and/or construction. She/he must have served in similar capacity in at least three projects of similar magnitude and complexity within the last 10 years. Working experience in Sub-Sahara countries of at least 3 years is preferred. She/he should be able to write and speak in English. The Measurement Engineer/Quantity Surveyor shall be responsible for ensuring that all measurements and evaluation of designed works conform to specifications and actual quantities measured in from drawings and design layouts.

**(Ix ) Transport Economist (K-9)**

She/he must be a Transport Economist with at least an MSc degree in Transport Economics. She/he must have minimum of (10) years of cumulative experience in transport /highway engineering, and extensive experience in the roads sub-sector (national highways, rural /feeder roads). Experience of 'Cross-Cutting Issues' and projects financed by multilateral development institutions will be an advantage. She/he must have served in similar capacity on at least three (3) projects of similar magnitude and complexity in the last 10 years. **She/he must be conversant with HDM-4, Word and Excel software.** A working experience in Sub-Sahara countries of at least 3 years is preferred She/he must have a good working knowledge of English and the ability to present her/his views clearly, both orally and in written form. **She/he will prepare the Projects' Completion Reports (PCR) as per Bank's format, for presentation to both TANROADS and the Bank.**

**Head Office Backstopping Support Staff:**

Head Office Backstopping Support Staff:

Project Director: The Project Director shall provide overall direction for the project, coordinate design reviews, guide and support the site supervision staff, and liaise with the Client for the duration of the project. The Project Director shall be stationed at the Consultant's Head Office. He will be responsible for coordinating all specialist inputs and ensuring effective communication between the field teams and the Client.

**a) Support Staff: -**

In addition to the key personnel designated above, the Consultant shall determine the support and back-up staff deemed necessary to assist with on-site supervision of the upgrading Works. These staff shall include the Project Director, who shall provide overall technical leadership, administrative guidance, and strategic oversight to the site supervision team.

The support team shall include at least Road Inspectors - Road Works – (2Nos.), Road Inspectors – Drainage and Structures – (2Nos.), Materials Technicians - (3Nos), Assistant Topographical Surveyor - (2No), CAD Technicians (2 Nos), Building Technician (1 No), Electrical Technician (1 No), Secretary – (1No) except Office attendants and housekeepers who shall be provided under the works contract.

**Note: The Consultant's staff shall:**

- (i) Be available to move to the work site upon the commencement of the contract; and**
- (ii) Accord cooperation with officials from TANROADS, or as maybe directed by the Client, the opportunity to inspect the works and the related documentation.**

#### **7.4 Staff Requirement during Defects Notification Period (DNP)**

The Consultant shall assign at least two staff; one of his key personnel, preferably a Resident Engineer, to conduct the inspection during the DNP as described above and an experienced inspector who will supervise the outstanding works as per snag/punch list for at least 6 months after taking over of the project.

#### **KEY STAFF MAN-MONTH MATRIX**

<b>No.</b>	<b>Position</b>	<b>Construction Period (44 Months)</b>	<b>DNP (24 Months)</b>	<b>Total Man-Months</b>
K-1	Resident Engineer	44	6	<b>50</b>
K-2	Highway Engineer / ARE	44	0	<b>44</b>
K-3	Bridge / Structural Engineer	44	0	<b>44</b>
K-4	Pavement / Materials Engineer	44	0	<b>44</b>
K-5	Topographical Surveyor	44	0	<b>44</b>
K-6	Environmental / Social Expert	22	0	<b>22</b>
K-7	Health & Safety Officer	22	0	<b>22</b>
K-8	Measurement Engineer / QS	44	2	<b>46</b>
K-9	Transport Economist	3	2	<b>5</b>

#### **NON-KEY STAFF MAN-MONTH MATRIX**

No.	Position	No.	Construction (44 Months)	DNP (24 Months)	Total Man-Months
1	Road Inspector – Road Works	2	88	6	94
2	Road Inspector – Drainage & Structures	2	88	0	88
3	Materials Technicians	3	132	0	132
4	Assistant Topographical Surveyor	2	88	0	88
5	CAD Technicians	2	44	0	44
6	Building Technician	1	12	0	12
7	Electrical Technician	1	18	0	18
8	Secretary	1	44	6	50

### HEAD OFFICE BACKSTOPPING

Position	Construction	DNP	Total
Project Director	12 (intermittent)	4	16
Specialist Inputs (as required)	6	2	8

**7.5** The minimum required experience of key personnel will be as outlined in clause 7.2.

### 7.6 Additional Services

The Consultant shall provide any other additional services (an overarching “catch all” but “reasonable or minor design modifications”) if so, requested by the Client, at rates and under conditions to be mutually agreed which fall within the general ambit of these Terms of Reference.

## 8.0 SERVICES AND FACILITIES TO BE PROVIDED UNDER THE CONTRACT

### 8.1 Data, Services and Facilities to be provided by the Client

The Client will make available to the Supervision Consultant all available documents and relevant data necessary for the proper and timely execution of the Project and will:

- a) Provide one set of contract documents, design reports for the project road. Relevant study reports, including appendices and any other relevant data available, are necessary for the proper execution of the design review and supervision of the construction works.
- b) Assist the Consultant in obtaining formal consent from other authorities or persons having rights or power in connection with work or the site thereof; and

- c) Assist in obtaining licenses and permits in connection with the works including Customs and Tax Exemptions where applicable.

Under the Works Contract and during supervision of the Works Contract, the Consultant shall be provided with office and laboratory accommodation and equipment, housing for staff, transportation and airtime on mobile phones for Engineer's key personnel and Employer's Project Engineer. These facilities are included in the Works Contract and detailed in the Special Specification and bills of quantities. Note that these facilities will not be provided by the Client during design review and pre-contract services. The Consultant shall be deemed to have included the cost of providing these facilities in his Financial Proposal.

## **8.2 The Client will assist the Consultant to:**

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

## **8.3 The Consultant's Obligations**

The Consultant inputs are enumerated as follows:

- (a) The Consultant shall employ only such staff whose CVs have been approved by the Client. Replacement or temporary substitution shall not be permitted unless in emergency or under very exceptional circumstances;
- (b) The Consultant shall arrange and provide for supervision and monitor efficient performance of his staff;
- (c) The Consultant shall ensure that his design review and supervision staff provide organized training and instructions to counterpart personnel assigned to the Project, monitors their performance and submits a quarterly progress report on everyone. Training program and reporting should be defined in the Consultants proposal and agreed with TANROADS during pre-contract discussion;
- (d) 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 in Paragraph 8.1 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;
- (e) The Consultant shall ensure that all professional EHS and one Social Specialist providing services under this Supervision Contract have background training related to potential workers' health and

safety risks associated with this work, and provide 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 with basic training relating to Project ESHS requirements and potential significant ESHS related impacts and risks;

- (f) 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;
- (g) 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; and
- (h) The Consultant shall be responsible for arranging for his support staff who will not be accommodated in the multiple accommodation provided under the works contract.

## **9.0 REPORTING**

The required reports shall be submitted in three (3) copies to TANROADS Headquarters, and one (1) copy will be sent directly to the TANROADS Regional Manager's Office - Katavi Region both in hard copies (full color prints and perfect binding type) in four (4) copies together with soft copy through Electronics Documents Management System (EDMS) and Ms Word/Excel saved in USB Flash; the design drawings shall be in DXF or DWG formats. All reports and documents relevant to the services, including maps, field survey notes, and computer programs, shall become the property of Client. Note: The consultant will be registered in TANROADS' EDMS portal for easy e-correspondence

### **a) Design Review Report**

The Consultant shall prepare a Draft Design Review Report three (3) months after the commencement date of Consultancy Services. This report shall include results of the review of the design, drawings, and ESIA, including an Environmental Management Plan. The draft design review report shall be submitted for review and comments. The final design review report incorporating comments and approved design improvement should be submitted within two (2) weeks after receiving comments.

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 no later than the dates shown below:

<b>Signing/Effective Date of Contract</b>	<b>M</b>	
<b>Commencement of Services and Submission of acceptable Draft Design Improvement and Value Engineering Report</b>	<b>M</b>	<b>1</b>
<b>Comments on the Draft Design Improvement Report +Value Engineering</b>	<b>M</b>	<b>2</b>
<b>Submission of acceptable Final Design Improvement Report</b>	<b>M</b>	<b>3</b>

**Reporting During Construction.**

**b) 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 changes thereto, status of the consultant and Contractor's mobilization, ESHS Contractor requirements or other ESHS plans or documents and any other matter requiring the Client's action.

The Consultant shall prepare an Inception Report four (4) weeks after the commencement of works contract date. This report shall be prepared and submitted to TANROADS HQ, two (2) hard copies and soft copy through **TANROADS EDMS Portal** and one (1) hard copy to TANROADS Regional Manager- Katavi. TANROADS HQ will share the report with the Bank.

The required reports shall be full color prints and (perfect binding type) in four (4) copies together with soft copy through Electronics Documents Management System (EDMS) and Ms Word/Excel saved in USB Flash; the design drawings shall be in DXF or DWG formats. All reports and documents relevant to the services, including maps, field survey notes, and computer programs, shall become the property of Client. Note: The consultant will be registered in TANROADS' EDMS portal for easy e-correspondence

**c) ESHS Reports**

The Consultant shall provide immediate notification to the Client should any incident in the following categories occur during the performance of the Services. Full details of such incidents shall be provided to the Client within twelve (12) hours.

- (i) Immediately notify the Client of any failure by the Contractor to comply with its SEA and SH obligations;
  - (ii) Immediately inform the Client of any allegation, incident or accident, which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Client's Personnel, Contractor's Personnel or Experts. The Consultant shall provide full details of such incidents or accidents to the Client within the timeframe agreed with the Client;
  - (iii) Confirmed or likely violation of any law or international agreement;
  - (iv) Any fatality or serious (lost time) injury;
  - (v) Significant adverse effects or damage to private property (e.g., vehicle accident); or
  - (vi) 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 while maintaining confidentiality as appropriate, the type of allegation (sexual exploitation, sexual abuse or sexual harassment), gender and age of the person who experienced the alleged incident should be included in the information;
- (i) Ensure that Contractor immediate notifications on ESHS aspects are shared with the Client immediately;
  - (ii) 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
  - (iii) Monthly and Quarterly ESHS compliance progress report; and
  - (iv) Annual ESHS audit.

**d) Monthly Progress Report**

The Consultant shall prepare progress reports every month for the duration of the contract starting one month after submission of the inception report up to and including one month after substantial completion. These are to be submitted in two (2) hard copies and soft copies through **TANROADS EDMS Portal** and should reach TANROADS HQ not later than 15 days after the end of the month being reported on. The consultant shall also assist the Client (TANROADS) in the preparation of quarterly reports for transmission to the Bank, following the format instructed by TANROADS. Failure to submit reports whether at intermediate stages or overall, on specified time periods will result in imposition of liquidated damages equal to 1/100<sup>th</sup> (one hundredth) of the value of the part concerned payable per day of delay up to 15% (fifteen percent) of the said value. The format and the content of the monthly progress reports shall be as agreed with Client. They will include but are not limited to the following:

These are to be submitted not later than ten (10) days after the end of the month being reported on. In addition, the consultant shall be required to

submit the weekly flash reports describing plans and achievements, contents of flash reports to be agreed.

The format and the content of the monthly progress reports shall be as agreed with TANROADS. They will include but are not limited to the following:

- (i) Summary progress of the Works, both physical and financial;
- (ii) Mention of any changes to the original design;
- (iii) Major changes in quantities compared to contractual Bill of quantities;
- (iv) Record of working units (number of equipment and labour) used for the various types of works and the total number of working hours of every item of equipment and labour category;
- (v) Challenges and mitigated environmental, health, safety and social issues associated with the Project implementation;
- (vi) Suggestions for resolving any technical and other problems including ESHS metrics that occur and those affecting the progress of the works.
- (vii) The financial status of both work contract and Consultancy Service Contract;
- (viii) Progress charts including percentages of completion of individual main work items and overall project;
- (ix) Weather information and charts; and
- (x) Construction and supervision data.

**e) Detailed Progress Report**

When the implementation of the civil works contract reaches a value of 80% of the initial construction contract or physical progress of 80% of the original scope, 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, if such is needed to full completion of the project. Two (2) hard copies and one soft copy of the report shall be sent to TANROADS HQ (the soft copy shall be submitted through **TANROADS EDMS portal**), and one (1) hard copy to TANROADS Regional Manager-Katavi.

**Report after Construction Period (Final Report)**

**f) Project Completion Report**

The Consultant shall prepare and submit Project Completion Report within 30 days after the Substantial Completion of Construction Works. The report shall include, among other things, as-built drawings, the type, quality, and quantity of materials used for the construction of various sections and structures of the project road, and other relevant information that would enable Client to apply for 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 and physical contingencies sums, cumulative monthly payments to the Contractor designated by date and number of payment certificates 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 to the original cost shall be given in the Final Report.

**g) Final Construction Report (FCR) at Substantial Completion**

- (i) The Consultant shall submit FCR in five (3) hardcopies and soft copy to TANROADS Headquarters not later than one month after the substantial completion of construction works. The report should enable Client in the future to know the type, quality and quantity of materials used and all information which together with the as-built drawings (in both AutoCAD and pdf format) and specifications will help Client in the maintenance of the road.
- (ii) 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 and price variation and physical contingencies sums, cumulative monthly payments to the Contractor, 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 to the original shall be given in the final report.

**h) Final Completion Report**

The Consultant shall prepare and submit Final Completion Report and Final Account within three (3) months after the issuance of the Defects Notification and Final Payment Certificate. The Final Completion Report shall include a separate volume on maintenance proposals of the respective road sections.

**9.1 Liquidated Damages**

If the Consultant fails to deliver any or all of the Services within the period(s) specified in this Contract, the Client shall, without prejudice to its other remedies under the Contract and under the Applicable Law, deduct from the Contract Price, as liquidated damages, a sum equivalent to one-tenth of one percent of the price of the unperformed portion of the Services for each day of delay based on the approved contract schedule up to a maximum deduction of an amount equivalent to the Performance Guarantee. Where the sum of liquidated damages exceeds the equivalent to the Performance Guarantee, the Client may terminate the Contract, without prejudice to other courses of action and remedies open to it.

## 10.0 Duration of the Assignment

The timeframe for the execution of this assignment is **68 Months** apportioned as follows: (a) **3 months** for the Design review (should start concurrently during the Contractor's mobilization period), (b) **41 months** for Construction Supervision of road works and (c) **24 months** for the DNP. The engagement shall be deemed to have started one month after the execution of the Agreement for the Services and shall terminate upon completion of the final inspection of the works at the end of the DNP and the Consultant's fulfilment of all his obligations.

## 11.0 PAYMENT TERMS TO THE CONSULTANT

Payments will be made monthly 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:

- 11.1** The Consultant shall quote the cost of his Expatriate/Native staff, technical equipment and other costs as he deems to be required. He shall summarize his monthly and total costs and accompany the same with a schedule showing the Consultant involvement.
- 11.2** The Costs shall be quoted to cover the consultant's performance of his duties described under **these TOR** in accordance with the following:
- (a) Monthly costs, subsistence and allowances for expatriate personnel;
  - (b) Monthly costs, overtime and allowances for local personnel;
  - (c) Transportation for key personnel;
  - (d) Cost of producing and printing reports as described in item 9 including secretarial expenses;
  - (e) Local travel costs;
  - (f) Shipment of personal effects, reports, documents etc; and
  - (g) Other costs which must be specified by the Consultant.
- 11.3** Payments will be made monthly for undertaking the assignments described in these Terms of Reference to cover fees for approved personnel and approved reimbursable.
- 11.4** An advance of not more than 15% of the Contract Price less reimbursable may be provided for mobilization costs against an acceptable Bank Guarantee
- 11.5** An advance payment of **Fifteen Percent (15%)** 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 Client will set off the advance payment in ten (10)

- equal instalments against the statements, commencing with the 5<sup>th</sup> invoice for the services rendered, until the advance payment is fully recovered.
- 11.6** Reimbursable expenses, which cover all out-of-pocket costs and shall be made against contractual acceptable documentary evidence, as agreed with the Client.
- 11.7** Payment certificate will be subjected to 5% retention to a maximum of 5% of the contract sum, which will be released after the Consultant has furnished the Acceptable Project Completion Report and as-built drawings as in item 9 above.
- 11.8** No other payments will be made to the Consultant under this contract.

## **12 General Obligation**

The Consultant's remuneration shall be deemed to cover his liabilities, travel costs and support of his head office staff and all his obligations other than additional services not covered by these terms of reference.

## **13 Leave**

The Consultant's key Staff engaged in the Supervision of the Construction Works will be entitled to 28 days leave per calendar year. In connection with leave, the key Staff are entitled for one round trip international travel per year, for which the Consultant will be reimbursed. Person-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 approved by the Client.

## **14 Project Coordination**

The Consultant will be accountable to the **Chief Executive, TANROADS**, for all contractual issues and shall work closely with the **Director of Projects** at Headquarters for technical guidance to enable the successful accomplishment of specific contractual tasks. While executing the assignment, the Consultant's Resident Engineer shall report to the respective Project Engineer for the day-to-day site issues and in liaison with **TANROADS Regional Manager's office – Katavi** and obtain support liaison services in relation to the assignment. Simultaneously, the incumbent shall take charge of the operations and acceptable performance of duties and responsibilities of all Key and Support Staff as described in Section 7.0 above.