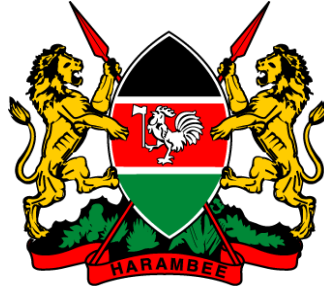


Republic of Kenya



**MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING, URBAN
DEVELOPMENT AND PUBLIC WORKS.**

State Department for Housing and Urban Development

Second Kenya Informal Settlements Improvement Project (KISIP 2)

Credit No: P6759 -KE

Project ID: P167814

**Terms of Reference
For**

**Consultancy Services for Infrastructure Upgrading Plans, Detailed Engineering
Designs and Preparation of Procurement Documents and Construction Supervision of
Infrastructure Improvement Works in Selected Informal Settlements in the Counties of
Nyeri, Meru, Tharaka-Nithi, and Wajir.**

Reference Number: KE-MOTI-298202-CS-QCBS

SEPTEMBER, 2022

1. Introduction

The Government of Kenya has received Credit facility from the International Development Association (IDA) towards the cost of the Second Kenya Informal Settlements Improvement Project (KISIP 2) and intends to apply part of the credit to procure Consultancy Services for Infrastructure Upgrading Plans, Detailed Engineering Designs and Preparation of Procurement Documents, Resettlement Action Plan (RAP) and Environmental and Social Impact Assessment (ESIA) Reports and Vulnerable and Marginalized Groups Plan (VMGP) where applicable, and Supervision of Construction of Infrastructure Works in Selected Informal Settlements in the Counties of **Nyeri, Meru, Tharaka-Nithi, and Wajir**.

The overall objective of KISIP 2 is to improve access to basic services and tenure security of residents in participating urban informal settlements and strengthen institutional capacity for slum upgrading in Kenya.

This Project, while concentrating on informal settlements, complements existing and past Urban operations in Kenya which address the Urban infrastructure deficit and Urban institutional challenges. It supports the Governments' affordable housing agenda as it seeks to complement the demand-side and supply-side operations to improve housing affordability. The project has the following four components:

Component 1: Integrated Settlement Upgrading. This component supports settlement upgrading through two main interventions classified under two sub-components:

Sub-component 1.1: Tenure regularization

Coordinates regularization of tenure for people living on uncontested public lands whose process includes;

- (i) Development of a local physical plan for the settlement which lays out land parcels and infrastructure (roads, drainage, walkways, etc.);
- (ii) Surveying with physical placement of beacons (pegging) to demarcate the parcels as per the plan;
- (iii) Preparation and issuance of letters of allotment based on the survey plan
- (iv) Issuance of titles.

Sub-component 1.2: Infrastructure Upgrading

Coordinates infrastructure investment portfolio whose menu includes: roads, bicycle paths, pedestrian walkways, street and security lighting, vending platforms, solid waste collection and settlement sorting, storm water drainage, water and sanitation systems, public parks, and green spaces. It further includes investments related to prevention of crime and violence, including but not limited to community centers.

Component 2: Socio-Economic Inclusion Planning

This component supports community development plans to enhance social and economic inclusion, identifies beneficiaries who fit the eligibility criteria of government programs but are excluded and connects them appropriately, supports participatory crime and violence mapping, monitors the employment of local labor, carries out community capacity building and awareness raising for various project interventions including community-based solid waste management.

Component 3: Institutional Capacity Development for Slum Upgrading

This component supports institutional and policy development at national and county levels; develops a capacity building plan for national and county levels to implement the Strategy and to develop understanding of slum upgrading processes; also supports technical assistance, training, workshops and learning events, experience sharing and peer-learning activities with other counties, and other capacity building activities.

Component 4: Program Management and Coordination

This component supports activities of the NPCT and the CPCTs related to national and county-level project management and coordination, including planning, surveying, engineering, fiduciary (financial management and procurement), safeguards compliance and monitoring, monitoring and evaluation (M&E), communication and community development.

2. Objective of the Consultancy Services

The main objective of the consultancy assignment is to prepare infrastructure Upgrading Plans, Detailed Engineering Designs, Procurement Documents, Resettlement Action Plan (RAP) and Environmental and Social Impact Assessment (ESIA) Reports and Supervision of Construction of Infrastructural works in Selected Informal Settlements.

3. Scope of services

3.1 General

The scope of services is limited to selected informal settlements in the counties. The assignment will be undertaken in two Stages:

Stage 1: Preparation of Settlement Upgrading Plan, Engineering Designs and Procurement Documents.

Stage 1.1: Preparation of Draft Settlement Upgrading Plans, Engineering Designs and Procurement Documents: For each settlement: (a) community sensitisation and consultation on the assignment, (b) draft settlement upgrading plan, including feasibility studies and preliminary designs for the proposed infrastructure investments, including screening for potential environment and social impacts, involuntary resettlement, and impacts on vulnerable and marginalized groups (indigenous persons) as per the screening checklists and guidance provided in the project's Environmental and Social Management Framework (ESMF), Resettlement Policy Framework (RPF), and Vulnerable and Marginalized Groups Framework (VMGF) (c) Environmental and Social Impact Assessment (ESIA), (d) Environmental Management Plans (ESMPs) and (e) preliminary cost estimates, (f) economic analysis of proposed investments; (g) Resettlement Action Plan (RAP) for the settlements; and Vulnerable and Marginalized Groups Plans, where applicable (h) Draft procurement documents for the each designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme.

Stage 1.2: Preparation of Final Settlement Upgrading Plans, Engineering Designs and Procurement Documents: For each settlement: (a) Detailed engineering design, (b) phasing plan for each county (c) operations and maintenance manuals for the proposed infrastructure

(d) estimates of the proposed investments and operating costs, and (e) Final procurement documents for the designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme. These procurement documents to be prepared shall be based on applicable World Bank's standard procurements and Procurement Regulations.

Stage 2: Construction Supervision: Includes activities for quality control / assurance, time control, cost control and safety control.

3.2 Specific Tasks:

The specific tasks to be carried out in each settlement include, but shall not be limited to the following:

Stage 1: Preparation of Settlement Upgrading Plans, Engineering Designs and Procurement Documents.

Stage 1.1 Preparation of Draft Settlement Upgrading Plans, Engineering Designs and Procurement Documents.

- a) **Project Inception:** The project inception activities are intended to familiarise the consultant with the prevailing situation and baseline regarding the project. The consultant is expected to review available documentation and undertake an initial visit to the project area before preparing a detailed Inception Report. The Inception Report shall be informed by the following activities and shall contain a detailed methodology for carrying out the assignment and the work plan for implementation of the subsequent phases of the consultancy services. The Inception Report shall also contain a detailed Stakeholder Engagement Plan as guided by the Project's Stakeholder Engagement Framework (SEF). The project inception activities are intended to:
- (i) Inform and sensitise the community on KISIP 2 activities and the consultancy assignments.
 - (ii) Assess and give an overview of the current status of existing water, sanitation, hygiene, drainage, energy and transportation infrastructure within the selected informal settlements.
 - (iii) Collect relevant information available with the Client (e.g. maps, reports, population, geological, climatic data, etc.) and assess the information gaps that need to be plugged by the proposed study.
 - (iv) Clearly define, in consultation with the stakeholders, the planning horizon for the proposed project clearly defining the base year as well as short-, medium- and long-term periods for the project. All subsequent analysis is to be based on the agreed planning horizon.
- b) **Literature Review:** The consultant shall review the available information obtained at inception stage and further collected from relevant authorities and other sources in order to compile the following information.
- (i) Description of the project area location
 - (ii) Historical and projected population of the project area, as necessary for estimation of current and future water demand, sanitation, hygiene, drainage, energy and transportation demands and security needs in the selected informal settlements.
 - (iii) The climatic conditions of the project area, providing details of: rainfall (a monthly distribution and intensity, including rain days per month); temperature (minimum, median, and monthly ranges throughout the year); other climatic

- features of importance (e.g., wind, erosion and effects of extreme temperatures on the alternative wearing course designs);
- (iv) Hydrological data and analyses - a complete description of the hydrological features of the area, including: information about soils drainage along the alignment of the various roads, such as sub-soil absorption, flooding of flat areas, etc.; hydrological basin affecting the roads; characteristics of required water crossings; indicative depth of water table; and investigations and detailed inspection of existing bridges and other drainage structures along the alignment to determine their adequacy and structural integrity.
 - (v) Topographical description of the terrain traversed by the potential infrastructure improvement project, including the effects of relief on the alignment. A highly accurate topographic survey is not warranted at this stage; nevertheless, the Consultant is expected to survey a corridor of 50 meters where possible, for all roads and drainages to be constructed. A detailed topographic survey is a requirement at the detailed engineering design stage.
 - (vi) Relevant geological features of the project area including a description of the soils and rocks encountered in the project area and their effect and influence on such factors as route location and design. The influence of geology and the availability of construction materials are of particular importance.
 - (vii) Description of the type and density of the land use both existing, potential and planned within the project area.
 - (viii) Existing water consumption patterns to establish current and projected future water demand for domestic, institutional, commercial and other uses; Available water supply sources; critical issue that must be considered and addressed in order to ensure availability, reliability and quality of the supply to meet the projected water demand. Assess water availability against projected demand estimates in relation to climate change and seasonal and diurnal variability scenarios clearly identifying the thresholds and timelines at which water availability becomes critical. Identify and suggest possible water saving and water demand management measures that can be applied to the settlement.
 - (ix) Current sanitation technologies in use and approximate coverage rate. Identify gaps, explore, evaluate and recommend options for improving sanitation in the settlement; including on-site sanitation and sewerage.
 - (x) Previous studies and planning related to the proposed infrastructure improvement projects.
 - (xi) Applicable design standards and design criteria for proposed infrastructure investment projects, which should be agreed with the Client and stakeholders. The project is responsive to adoptive design initiatives to suit the special circumstances in the settlement. These designs shall be discussed and agreed upon by the key stakeholders.
 - (xii) The legal and institutional arrangements for the urban infrastructure developments and how these may impact on the potential infrastructure improvement projects in the informal settlements.
 - (xiii) The existing institutional arrangements for the operation and maintenance of infrastructure facilities in the informal settlements, documenting the current practices and challenges encountered and proposing any solutions to mitigate such challenges where these exist. The Consultant shall determine:
 - The number, qualification and experience of existing staff for operation and maintenance of the infrastructures and assess whether the staff establishment can or cannot cope with a new project;

- Suggest the appropriate capacity building measures necessary to improve operation and maintenance of the infrastructural facilities;
 - Investigate available equipment and tools and its condition to operate and maintain the infrastructure services in the informal settlements;
 - Suggest and discuss with project partners suitable institutional arrangements for the project implementation, operation and maintenance, including the distribution of responsibilities among the stakeholders;
 - Identify and propose accompanying technical assistance measures for the project that are suitable and required to assist the project partners in implementing the infrastructure project as well as improving their services and performance and their relation with the served population;
 - Specify and elaborate on the necessary requirements and approvals that need to be complied with before and during project implementation.
- c) Carry out socio-economic surveys of the project area to establish economic and social characteristics of the settlements.
- d) In each settlement, conduct community level consultations to determine infrastructure investment priorities of residents. Due to budget limitation, the overall investment plan must be agreed upon with MTIHUD and the respective counties. Residents will have to be informed as to why and how design decisions are being made based on the budget limitations. The Consultant will work with residents to identify, for example, which road and paths will be upgraded, and with what materials (considering the cost implications of alternative materials and standards). The maps noted in section (c) will serve as input for this decision-making process. The respective counties and the settlements residents will have to agree with Consultant on the final choice of investments and on design decisions. The Consultant will undertake screening of the chosen investments for potential environmental and social impacts, involuntary resettlement, and impacts on vulnerable and marginalized groups (indigenous persons) using the Screening Checklists and guidance provided in the Project's ESMF, RPF, and VMGF respectively, to determine the scope and nature of impacts and the required level of assessments in accordance with the applicable GoK regulations, and World Bank Safeguard Policies, and ensure that communities are aware of these.
- e) Prepare preliminary settlement upgrading plans, including proposed infrastructure options. Examine feasibility of different infrastructure options, and recommend options that are more viable to the context, are cost-effective, sustainable, convenient to users and likely to be economically justifiable. Possible options should be those which serve the greatest possible number of people, have low operation and maintenance costs as well as minimal impacts on the environment. Estimate the required technical infrastructure for the different infrastructure options paying particular attention to:
- (i) Estimation of investment costs
 - (ii) Estimation of operation and maintenance costs;
 - (iii) Economic analysis (net present value, internal rate of return and key economic indicators as relevant),
 - (iv) For water supply and sanitation infrastructures, analyze the impact on the water tariff in the informal settlement considering and building on the findings of the socio-economic assessment [especially the willingness to pay and ability to pay (WTP & ATP)] in the informal settlement.

From the set of possible water supply options, and on the basis of agreed criteria with the stakeholders, select the option that best serves the informal settlement clearly elaborating how the decision has been reached. This option shall be used in all subsequent analysis.

In view of the fact that some indirect economic and social benefits arising from the infrastructure improvements are intangible or difficult to quantify accurately, the consultant shall undertake detailed qualitative analyses of these benefits. Only when such benefits can be firmly demonstrated in quantitative terms shall they be included in the economic analyses. In all other cases these benefits will not be included in the economic evaluation of the project but may be used as secondary justification for project implementation. A detailed write-up must be provided on the project benefit.

- f) Prepare Environmental and Social Impact Assessment (ESIA) project/study reports approved by NEMA. The report should contain (but not limited to):
 - (i) A concrete description of the project including location, activities, inputs and outputs;
 - (ii) Baseline environmental and socio-economic information of the project area and neighbourhood;
 - (iii) A description of applicable policy, legal and institutional framework as guided by the ESMF;
 - (iv) Potential environmental and social impacts together with an analysis of the magnitude and significance of the impacts;
 - (v) Analysis of the project alternatives;
 - (vi) Proposed mitigation measures to manage foreseeable negative impacts and options for enhancing positive impacts during construction and operation of the projects;
 - (vii) An Environmental and Social Management Plan (ESMP) and a monitoring plan;
 - (viii) Recommendations for including mitigation measures into detailed designs and contract documents; and
 - (ix) Stakeholder consultations on potential impacts and mitigation measures;
- g) Develop Environmental Management Plans (EMPs) and guidelines, where applicable, to manage identified impacts during implementation;
- h) Prepare in consultation with the respective county governments and Community, Resettlement Action Plans (RAPs) in accordance with the Resettlement Policy Framework (RPF). The final RAPs should inform and be informed by detailed engineering designs.
- i) If screening determines that the project will impact vulnerable and marginalized groups (indigenous persons), the consultant shall prepare in consultation with the Counties and communities, a Vulnerable and Marginalized Groups Plan (VMGP) to mitigate any negative impacts and enhance positive impacts while ensuring full participation and prior informed consent of the group.
- j) Prepare cost estimates, based on the preliminary designs and proposal for packaging of works contracts in consultation with the MTIHUD and respective counties.
- k) Using data from the preliminary settlement upgrading plan, prepare a report of the findings.
- l) Overall, this stage will result in the preparation of a draft settlement upgrading plan (SUP), in close consultation with the community and respective county officers. This document should include an assessment of: (a) the technical feasibility of the upgrading plan and the proposed infrastructure options including those intended to increase the sense of safety; (b) the socio-economic feasibility of upgrading in that settlement (for

example, whether the community is interested in the project; are there major land/tenure disputes; is the location acceptable, and the like); (c) the economic justification of investment; (d) nature and magnitude of environment and social issues pertaining to the identified activities, and proposed mitigation measures.

Stage 1.2: Preparation of Final Settlement Upgrading Plans, Engineering Designs and Procurement Documents.

- a) Detailed engineering surveys, investigations and analyses including geotechnical investigations and analyses, material investigations and analyses, topographical surveys, hydrological data analysis (e.g., design floods), traffic surveys, analyses and forecast (manual classified traffic counts, Annual Average Daily Traffic (AADT), CSAL, etc);
- b) Develop detailed engineering design of prioritized infrastructures based on approved survey plans/Registry Index Maps and satellite imagery maps; these need to include investment-specific mitigation measures contained in the ESMPs prepared as a result of the ESIA. The detailed designs should also be informed by the RAPs to minimize potential involuntary resettlement/displacement to the greatest extent possible.
- c) Prepare a phasing plan for implementation in each county and/or settlement.
- d) Prepare operations and maintenance manuals of the proposed infrastructures, including Community Environment Management Plans (CEMPs).
- e) Prepare engineers cost estimate /confidential cost estimates; the ESMP and RAP cost estimates.
- f) Final procurement documents for the designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme. The procurement documents need to include construction stage elements of the ESMP, specifying works to be carried out by the contractor. Guidelines to include ESMPs in procurement and contract documents as provided in the ESMF.
- g) Submit the detailed infrastructure engineering drawings for approval to the relevant authorities.
- h) Assist the counties in providing responses to clarifications sought by bidders during procurement process and participate in pre-bid meetings.
- i) Assist the County during bids evaluation and during contracts negotiations with the successful bidder or any other bidder who subsequently is invited to negotiate a contract on the request of the county's procurement officer;
- j) For each stage above, it is expected that some activities may be undertaken concurrently.

Stage 2: Construction Supervision

Stage 2.1 General

The consultant will assist the respective counties in the role of the Engineer's Representative (ER). The Engineer shall be appointed by the County pursuant to Clause 3 of the General Conditions of Contract (FIDIC Red Book 2017).

Contract Effectiveness for Stage 2:

Both the Stage 1 contract (lump-sum) and Stage 2 contract (time-based) will be awarded and signed at the beginning of the services at the same time. However, the effectiveness of the Stage 2 Contract shall be contingent upon satisfactory completion of Stage 1. It is expected

that when the Consultant submits a satisfactory final design report and procurement documents, that are expected 12 months after beginning of Stage 1, then the Client will issue the Client's notification to the Consultant of the Client's satisfaction of the performance of the Consultant under Stage 1 Contract. This statement on contract effectiveness will form part of the special conditions of contract.

Should the Client not be able to issue a written notice of the Client's satisfaction of the performance of the Consultant under Stage 1 Contract by 12 months after beginning Stage 1, then the Stage 2 contract would be terminated.

Stage 2.2- Scope of Services

- (a) Assist the County Project Coordinating Team (CPCT) in the preparation and issuance of right of access to and possession of all parts of site to the successful Contractor within the specified time frame;
- (b) Ensure (in conjunction with CPCT) that environmental protection measures and social measures in the project's ESMP are implemented to mitigate any negative impact of construction;
- (c) Carry out the engineer's representative duties and exercise authority as delegated by the Engineer, until completion of the works, including defects notification period;
- (d) Review designs; prepare detailed construction quality control plan and setting out data ready for issuance to the Contractors;
- (e) During the construction period, the consultant will prepare final construction designs and data and issue the Contractor with any design information and/or drawing required by the Contractor(s) subject to Engineer's approval. The task shall include any designs and/or tests, major and/or minor; to be undertaken by the supervision consultant before commencement and/or during implementation of works.
- (f) Assist / advise the Engineer on issuance to the Contractors the order to commence works in accordance with the provisions of the works contract;
- (g) Organizing and directing execution of the works, by defining compliance with programmes and relations between stakeholders like Contractors, Suppliers and third parties amongst others. Coordination will be ensured mainly by holding regular meetings on site and monthly site meetings, with managers of the Contractors and the Engineer and/or Employer or their representatives;
- (h) Maintaining a Site Diary and detailed record of the Contractor's manpower, materials, plant and equipment on site, together with analysis of its adequacy, deployment, availability and utilization, while also recording the weather and any other pertinent factors that relate to the implementation of the works and the progress thereof;
- (i) Monitor progress of the Works, identify causes, or potential causes, of any delay and advise the Engineer of suitable corrective actions in a timely manner;
- (j) Review and approve Contractor(s) proposed personnel for positions nominated in the Contract; this should include a Community Liaison Officer.
- (k) Advise and assist the Engineer with respect to the consultations, agreement, determination, avoidance of disputes, adjudication, amicable settlement, arbitration, the appeal of arbitration or litigation relating to the works, whenever required. In the event of any Dispute Avoidance/Adjudication Board Arbitral proceedings, the ER will be one of the witnesses in chief;
- (l) Ensure that the construction methods as proposed by the Contractor for carrying out the works are compliant, with particular reference to the technical requirements of sound environmental standards, inspection of Contractor's construction equipment, safety of the works, property, personnel, and general public.

- (m) Review, comment and submit to the Engineer (with a copy to the NPCT) for approval Contractor ESMPs (C-ESMPs), Stakeholder Engagement Plan (SEP), Incident Management Plan, and any other plans that may be required to ensure the safeguard requirements are made.
- (n) Review and approve contractor demobilization checklist which will among others ensure that all complaints and grievances submitted against/to the contractor have been addressed and closed, opened borrow pits and quarries have been rehabilitated and approved by NEMA, and all the ESMP actions have been fulfilled.
- (o) Review and collate, as part of the quarterly reports, grievance logs from contractors.
- (p) Review, comment and submit to the Engineer (with a copy to the NPCT) significant incidences reports, notifications and reports on Root Cause Analysis (RCA), and Safeguards Corrective Action Plan (SCAP).

Stage 2.3 Construction supervision

- (a) Assist/advise Engineer on actions required to be taken for handing over of site and in achieving various milestones for completion of works within schedule;
- (b) Assist Engineer in proper monitoring and tracking of progress of works. The Consultant will develop contract performance plan (system);
- (c) Assess the minimum construction equipment, plant and machinery requirements by type, specification and issue instructions to the Contractor to fulfil the resources required whenever there is need.
- (d) Monitor regularly to ensure the adequacy of deployment of the Contractors equipment, plant and machinery. Approve and monitor the contractor's resources mobilization program.
- (e) Review and recommend for Engineer's approval or otherwise, resourced Contractor's Work Program including activity scheduling and resource programming with cash flow schedule. Review and recommend for Engineer's approval or otherwise the updated resource-based work program of the contractor whenever there is shortfall of progress against time elapsed of 10% and above.
- (f) Verify and approve working drawings of the contractors and approve the setting out of the works by the contractor. Check Contractor(s) setting out for compliance with the approved drawings;
- (g) Check and approve, or otherwise, Contractor(s) proposed designs/drawings for temporary works;
- (h) Inspect at regular intervals, the Contractor(s) plant and facilities, for both construction work and workers accommodation, to ensure that they conform to both the conditions of contract contained in the FIDIC Conditions of Contract and all government regulations;
- (i) Inspect all the Contractor(s) safety measures, including labour welfare and notify immediately both the Engineer and the Contractor of any infringement or violation of Kenyan labour laws;
- (j) Maintain records such as test data, details of variations, correspondences and diaries in the formats approved/specified by the Engineer;
- (k) Inspect the Works or any part of the Works, on Substantial Completion and advise the Engineer of any outstanding work, including defects to be remedied, to be completed during the Defects Notification Period. This inspection is to be performed before any part of the Works is accepted as Substantially Complete;
- (l) Inspect the works at appropriate intervals during the Defect Notification Period;

- (m) At the completion of the contract verify the “as-built drawings” as true record of the works as constructed;
- (n) Assist Engineer in coordination work with different agencies responsible for the implementation of the proposed infrastructures and hold meetings for proper and timely implementation of the Project;
- (o) Liaise and coordinate with relevant authorities e.g. Kenya Power, Local Water Companies among others to remove all obstacles and encumbrances from the project site, including utility relocation and tree cutting, as required;
- (p) When required or as advised by the Engineer, liaise with the Consultant retained by the Client for Implementation Support;
- (q) Review any Variations and advise the Engineer accordingly;
- (r) Review with recommendations to the Engineer, any request for extension of time by the Contractor(s);
- (s) Review any Contractor’s financial claims and advise the Engineer on the admissibility and veracity of the claims;
- (t) Without relieving the Contractors of their obligations under the contract, review and approve the work areas (including work site, plant site and contractor operated quarry locations) safety plan and ensure compliance;
- (u) Closely coordinate with the Safety Officers of the Contractors and Formulate site safety guidelines & prepare checklist for safety auditing by field supervision team on day-to-day basis and; carryout routine safety audit during the construction period;
- (v) Mobilise the site supervision team prior to commencement of works in order to monitor mobilization activities of the Contractor and set up contract administration systems;
- (w) Review and recommend for Engineer’s approval or otherwise Contractor’s Environmental Management Plan and ensure it is in compliance with EIA report and World Bank’s Environmental and Safety Management Plan Guidelines (ESMP).
- (x) Monitor and report on the performance of the implementation of the ESMP by the contractor and promptly initiate corrective action in case of non-compliance of new issues not anticipated arise.

Stage 2.4 Quality Control:

- (a) Review the Quality Management System (QSM) for Quality Control and Assurance for works submitted by the contractor, including, but not limited to establishing material testing, testing frequencies and acceptance criteria for all construction activities based on best international codes and practice. Under this role, the consultant shall carryout confirmatory tests necessary for quality of permanent works and; where corrective actions are required, issue to the Contractors with the appropriate instructions. The Consultant shall keep and submit to the Engineer, all materials test records at the end of the consultancy assignment.
- (b) Inspect the performance of the work with regard to workmanship, compliance with the specifications, approved drawings, standards, agreed programme, and good engineering practice and all necessary testing required for acceptance of any part of work;
- (c) Review and approve drawings, materials and proposed construction methods statement submitted by the Contractor to ensure compliance with the contract requirements. The Consultant will review and verify any proposed construction methodology by the Contractor(s), giving particular attention to the compliance with specifications and design criteria;

- (d) Assess and check the laboratory and field tests carried out by the Contractors, and carry out independent confirmatory tests;
- (e) Issue instructions to the Contractor(s) to remove or make good any work which is found to be:
 - (i) Not in accordance with the drawings;
 - (ii) Not in accordance with the specifications in terms of either work method or materials specification;
 - (iii) Covered work which has not been inspected for acceptance or rejected as unacceptable;
- (f) Maintain records of all testing work, including cross referencing to items of work to which each test refers and location from which any samples were obtained for testing. The material tests records shall be submitted to the Engineer at the end of the consultancy assignment.

Stage 2.5 Project Cost Control

- (a) Develop a works contract specific plan for project cost control on the basis of the billed quantities vis-a-vis remeasured quantities of work accomplished by the Contractor;
- (b) Carryout comprehensive quarterly project financial appraisal and advice, with recommendations, to the Engineer accordingly.
- (c) Review each application for interim/final payment and associated valuation of the Works and supporting documents submitted by the Contractor and; after making any necessary corrections, prepare Interim Payment Certificate and sign as a recommendation for payment and submit to the Engineer for determination and certification for payment by the Employer. All such Payment Certificates shall include contractual and statutory deductions where and when applicable;
- (d) Where design alterations resulting into variation is proposed, prior concurrence of the Engineer and written approval of the Employer shall be obtained.
- (e) Where, in the opinion of the Consultant, an emergency affecting the safety of life or the works or of adjoining property occurs, the Consultant may without relieving the Contractor of any of his obligations under the contract, instruct the Contractor to execute all such work or to do all such thing as may, in the opinion of the Consultant, be necessary to abate or reduce the risk. The Consultant shall thereafter inform the Engineer, within 24 hours, of such instruction issued without the prior approval, which would result in additional cost to the Client and shall provide the Engineer with fully substantiated justification for the instruction(s) with the associated costs, and the reason for not requesting the prior approval of the Engineer.
- (f) Evaluation of claims including making recommendation to the Engineer and other matters concerning the contract and assistance in the settlement of disputes. The Consultant's recommendations on the claim shall not constitute approval of the same. Such approvals shall be the prerogative of the Engineer in consultation with Employer following Engineer's determination.

Stage 2.6 Occupational Safety and Environmental and Social Management

- a) Review and approve Contractor's Environmental and Social Management Plan (C-ESMP) and ensure it is compliant with EIA report and World Bank's Environmental and Safety Management Plan Guidelines (ESMP). The consultant will monitor and enforce implementation of the C-ESMP and recommend remedial measures to be implemented by the contractor.

- b) Make periodic reports to the Engineer/ Employer on status of implementation and compliance with the Contractor's environmental and social management plan.
- c) Ensure that the construction methods proposed by the Contractor for carrying out the works are of sound environmental standards,
- d) Inspect at regular intervals, the Contractor(s) plant and facilities, to ensure that they conform to both the conditions of contract and all government regulations. The consultant shall also review the Contractor's occupational health and safety measures, including labour welfare and notify immediately both the Engineer and the Contractor of any infringement or violation of Kenyan labour laws.
- e) Open and maintain complaints and grievances logs for recording of complaints and grievances including regular updating, as necessary. The consultant will be expected to review and collate, as part of the quarterly reports, grievance logs from contractors.
- f) Closely coordinate with the contractor's Safety Officers and formulate site safety guidelines & prepare checklist for safety auditing by field supervision team on day-to-day basis and carryout routine safety audit during the construction period
- g) Review, comment and submit significant incidences reports, notifications, and reports on Safeguards Corrective Action Plan (SCAP).

Stage 2.7 Works commissioning

The Consultant will implement works commissioning including:

- (a) Supervising the acceptance tests and preparing the **Draft Certificate of Completion (Taking Over and Performance Certificates)**.
- (b) Preparing the **completion report for the works** which will be based on the records maintained during construction design and work supervision phases. It will include the environmental completion report which will be submitted to NEMA for compliance with initial recommendations for environmental mitigation measures.
- (c) **Prepare 'as-built drawings'**: The Consultant will ensure the preparation of 'as-built drawings' by the Contractor during construction of works. On completion of the Works, the Consultant will check, approve and submit to the Engineer for the Client's custody, five (5) complete sets of all detailed drawings and two (2) electronic CD-ROM copy and computations in accordance with revisions made during the construction.
- (d) **Prepare Operation and Maintenance manuals**: The Consultant will ensure preparation and submission of the Operation and Maintenance Manuals by the Contractor based on the information and booklets received from the Contractors, Manufacturers, Suppliers and his own experience. He will ensure the manuals are complete with the O&M recommendations identified during construction. Operation and maintenance manuals will be submitted in four (4) printed copies and two (2) electronic CD-ROM.

Stage 2.8 Performance Control during the Defects Liability Period

The Consultant will carry out quarterly inspections during the Defects Notification Period and instruct the Contractor with regard to outstanding works and defects. The Consultant will ensure preparation of the Final Statement (Account) by the Contractor as per the works contract and submit to the Engineer for final determination and certification.

Stage 2.9 Other Services

- (a) Prepare and submit Monthly and Quarterly Progress Reports based on actual situation on site and data submitted by the Contractor in accordance with the contract indicating any outstanding issues that require the actions of the Engineer and the Employer. A copy of the report shall be shared DIRECTLY with the National Project Coordination Team
- (b) Hand over to the Engineer complete set of As-Built drawings (both hard copies and in electronic form), a complete set of contemporaneous records, reports, photographs of construction and correspondences after the closure of consultancy services.
- (c) Assist the Engineer in providing responses to observations made in respect of works, from time to time, by the Auditor General, authorised Government of Kenya Officials and the World Bank up to and until end of Defects Liability.
- (d) Assist the Engineer in preparation of presentations required in relation to the works.
- (e) Assist the Client and Engineer during Dispute Avoidance/Adjudication Board Meetings, Arbitration Proceedings and any other hearings held by statutory and legal body by providing required information and/or site documents and as a witness in chief.

4. Coverage

The KISIP 2 has prioritized infrastructure investment activities in informal settlements in the counties where processes are underway to facilitate infrastructure improvements. These processes include: (i) mobilization and organization of communities (with the support of local NGOs and CBOs); (ii) planning and survey processes completed; and/or (iii) clarification and/or regularization of land tenure of the settlements completed. The details of the settlements to be covered in this assignment are presented in section 4 of this ToR. The populations and the corresponding areas are estimates only and the successful Consultant is required to establish the actual population and areas of the settlements.

The scope of services for this assignment is limited to the selected informal settlements as per the table 1 below;

Table 1: List of Selected Informal Settlements

| County | Settlements | Population | Area (HA) | Planning status | Remarks |
|---------------|-------------|------------|-----------|-----------------|---------------------|
| Nyeri | Kiawara | 6,011 | 6.0 | Planned | Areas are estimates |
| | Mweiga | 1642 | 21.5 | | |
| | Ihwagi | 542 | 5.48 | | |
| | Chorongi | 412 | 2.4 | | |
| | Kiamwathi | 360 | 4.86 | | |
| Meru | Majengo | 2,410 | 5 | Planned | Areas are estimates |
| | Salama | 945 | 3 | | |
| | Mjini | 708 | 4.63 | | |
| Tharaka Nithi | Marimanti | 1,532 | 30 | Planned | Areas are estimates |
| | Kathwana | 265 | 8 | | |
| Wajir | Halane | 5,509 | 30 | Planned | Areas are |

| County | Settlements | Population | Area (HA) | Planning status | Remarks |
|--------|-------------|------------|-----------|-----------------|-----------|
| | Wagberi | 3,823 | 26.5 | | estimates |
| | Jogoo | 3,776 | 27 | | |
| | Barwaqo | 2,242 | 29 | | |
| | Hodhan | 867 | 24 | | |
| | Shallantey | 3702 | 23 | | |

NOTE: The settlement areas and populations are estimates and the Consultant will be required to establish the actual areas and populations.

5. Output

Stage 1: Preparation of Settlement Upgrading Plan, Engineering Designs and Procurement Documents.

Stage 1.1: Draft Settlement Upgrading Plan, Engineering Designs and Procurement Documents which will include the following for each settlement:

- a) Report on Community sensitisation and consultation (minutes of all consultation meetings will be attached)
- b) Participatory GIS maps on crime and violence and focus groups reports
- c) Inputs from the Consultancy Services for Development of Strategies, Guidelines and Tools to Mainstream Climate Resilience and Low Carbon Development in the Second Kenya Informal Settlement Improvement Program (KISIP2). The Consultant will demonstrate the extent to which the proposed designs are Climate Change and Climate Resilience compliant.
- d) Input from the Consultancy Services for a Gender Mainstreaming Action Plan for Second Kenya Informal Settlement Improvement Program (KISIP2). The consultant will demonstrate the extent to which the proposed designs are Gender and Disability Mainstreaming compliant.
- e) Where applicable, input from the separate Consultancy Services for Development of Settlement Level Community Development Plans Including Sub-Action Plans on Socio-Economic Inclusion, Investment Selection, Crime and Violence Prevention, Disaster Management and Solid Waste Management in selected Informal Settlements.
- f) The consultant will demonstrate the extent to which the findings and recommendation of the above three consultancies have been incorporated into the proposed designs.
- g) Report on socioeconomic survey.
- h) Report on priorities identified by the community and design decisions taken as a result of consultations with the stakeholders in the identified Counties and Settlements. The Report will include a section on outcomes of consultations per guidelines provided in the ESMF. This will include participatory violence mapping using GIS techniques.
- i) Preliminary design and cost estimate for the prioritized infrastructure improvement options.
- j) Draft procurement documents for each designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of

- quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme.
- k) Report and presentation on proposal for design criteria and packaging of works contract; in consultation with MTIHUD and the respective county governments.
 - l) Environment and Social Screening Report; Environmental and Social Impact Assessment (ESIA) reports approved by NEMA;
 - m) Environmental Management Plans (EMPs); (inclusive of contract clauses to be included in the procurement documents).
 - n) Resettlement Action Plans for settlements.
 - o) Vulnerable and Marginalized Groups Plans (VMGP) where applicable.

Stage 1.2: Final Settlement Upgrading Plan, Detailed Engineering Designs and Preparation of Procurement Documents for each settlement, which will include a final geo-referenced detailed design of prioritized infrastructure. The following should be included as annexes to the main report:

- a) Design Report comprising properly serialized and referenced design calculations and assumptions for all facilities. At the minimum these shall include coordinates of control points and setting out data for all the proposed infrastructures; traffic survey report, materials investigation report, alignments soil condition survey findings and recommendations, cross-sections for road infrastructure as well as what is relevant for street and security lighting; water and sanitation infrastructure and any other data and information relating to the planning and design of infrastructural facilities and as shall be specified by the client.
- b) Proposed phasing of works. All proposed infrastructures must be connected to the existing trunk at most 0.6km from the settlement or the cost of connection to a nearby trunk not greater than 0.6km is not greater than 15% of the estimated cost of the particular infrastructure.
- c) Operations and Maintenance Manual (s) of the proposed infrastructures.
- d) Final procurement documents for the designed infrastructure incorporating at minimum appropriate qualification requirements {technical and financial qualifications, personnel, financial resources, and equipment}, bills of quantities/scope of works, specification, environmental and social requirements, drawings, conditions of contract and draft construction works programme. These procurement documents to be prepared shall be based on applicable World Bank's standard procurements and Procurement Regulations.
- e) Engineer's estimate /confidential cost estimates.

All the outputs shall be for every settlement and must be approved at the respective counties prior to submission for approval by the KISIP 2 National Team.

Stage 2: Construction Supervision Stage

- a) Monthly and quarterly progress reports,
- b) Signed minutes of monthly progress meetings,
- c) Quarterly project financial/cost appraisal reports,
- d) Reviewed and approved As-Built drawings prepared by the Contractors,
- e) Operations and maintenance manuals,
- f) Final project implementation (completion) reports and,
- g) Any other reports as would be required from time to time.

6. Team Composition and Qualification Requirements for the Key Experts

The Consulting firms should have significant experience to carry out and prepare preliminary upgrading plans and feasibility studies for proposed infrastructure investments, prepare safeguards instruments and, subsequently, prepare detailed designs and procurement documentation for the agreed infrastructure investment and supervise the construction of the same.

The key professionals to be provided by the firm for the assignment are as follows:

- a) Team Leader
- b) Resident Engineer (RE)
- c) Assistant Resident Engineer (ARE)
- d) Roads Engineer
- e) Materials Engineer
- f) Water & Sanitation Engineer
- g) Electrical Engineer
- h) Surveyor Engineer
- i) Environmental Expert
- j) Sociologist/ Community/ Resettlement Expert
- k) Socio-Economist
- l) Procurement and contract management expert.

Team Leader will be in charge of reporting and coordination of all activities, and will also be the main contact person in the team vis-à-vis the Client.

Key professional staff qualifications and competence for the assignment:

Team Leader

- BSc./B.Tech in Civil & Structural Engineering or Water Engineering from a university recognized in Kenya,
- Must be a registered Professional Engineer with the Engineers Board of Kenya (EBK) or its equivalent, with a valid practicing license,
- Post-graduate training in Contract Management, Construction Claims Management or equivalent. Experience in handling construction contract claims will be an added advantage,
- Must be versed with computer aided contract/project management software (Ms Project).
- At least 15 years general experience in handling construction contracts, and be conversant with conditions of Informal Settlements,
- At least 5 years' experience as a team leader working in Government and Donor Funded projects of similar nature and conditions. Experience in World Bank Funded Projects will be an added advantage,

Resident Engineer

- BSc./B.Tech in Civil, Roads or Water and Sanitation Engineering as appropriate from a university recognized in Kenya,
- Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
- At least 10 years general experience in Civil, Roads or Water and Sanitation Engineering Designs and Supervision, including 3 years in the design and supervision of urban Roads or Water and Sanitation infrastructure as appropriate
- At least 5 years' experience as a resident engineer in Roads or Water Sanitation construction projects as appropriate of similar nature and conversant with conditions of Informal Settlements,
- Experience in Project Management/Contract Administration and handling of Construction Claims,
- Have experience in construction site management,
- Must be versed with computer aided contract/project management software (Ms Project).

Assistant Resident Engineer:

- BSc./B.Tech in Civil, Roads or Water and Sanitation Engineering as appropriate from a university recognized in Kenya,
- Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
- At least 7 years general experience in Civil, Roads or Water and Sanitation Engineering Designs and Supervision, including 3 years in the design and supervision of urban Roads or Water and Sanitation infrastructure as appropriate
- At least 3 years' experience as an assistant resident engineer in Roads or Water Sanitation construction projects as appropriate of similar nature and conversant with conditions of Informal Settlements,
- Experience in Project Management/Contract Administration and handling of Construction Claims,
- Have experience in construction site management.
- Must be versed with computer aided contract/project management software (Ms Project).

Roads Engineer

- BSc./B.Tech in Civil and Structural Engineering from a university recognized in Kenya,
- Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
- At least 10 years general experience in Roads designs and supervision, including 5 years in the design and supervision of Urban Roads projects, and be conversant with conditions of Informal Settlements
- Experience in Project Management/Contract Administration and handling of Construction Claims,
- Have experience in construction site management,
- Must be versed with computer aided contract/project management software (Ms Project).

Water & Sanitation Engineer

- BSc./B.Tech in Civil or Water Engineering from a university recognized in Kenya,
- Registered Engineer in the category of Professional Engineer with Engineers Board of Kenya (EBK) or its equivalent; with a valid practicing license,
- At least 10 years general experience in Water and Sanitation projects Designs and Supervision, including 5 years in the design and supervision of Urban Water and Sanitation projects, and be conversant with conditions of Informal Settlements
- Experience in Project Management/Contract Administration and handling of Construction Claims,
- Have experience in construction site management,
- Must be versed with computer aided contract/project management software (Ms Project).

Materials Engineer

- BSc./B.Tech in Civil & Structural or Material Engineering from a university recognized in Kenya,
- Registered Professional Engineer with EBK or equivalent with a valid practicing license.
- At least 10 years general experience in Civil and Roads/Highway Engineering projects,
- At least 5 years as Materials Engineer in Civil and Roads/Highway Engineering projects.

Electrical Engineer

- BSc./B.Tech in Electrical Engineering from a university recognized in Kenya,
- Registered Professional Engineer with EBK or equivalent with a valid practicing license.
- At least 10 years general experience in Electrical Engineering projects,
- At least 5 years' experience in Design & supervision of Electrical Engineering projects, preferably projects involving installation of high mast flood lights.

Surveyor

- BSc. Surveying or Geomatic/Geospatial Engineering from a university recognized in Kenya,
- Must be registered with a recognized Board(s) of Surveyors
- At least 10 years general experience in Surveying works,
- At least 5 years field experience in Engineering Surveying, and be conversant with conditions of Informal Settlements.

Environmental Expert

- BSc. Environmental Science or equivalent from a university recognized in Kenya,
- At least 10 years general experience in Environmental Assessment,
- At least 8 years field experience in conducting ESIA and SEA in construction projects and donor funded projects of similar nature and conversant with conditions of Informal Settlements,
- Must be registered with the relevant professional body with a valid practicing license.

Sociologist/Community/Resettlement Expert

- BA. Sociology or equivalent from a university recognized in Kenya,

| |
|---|
| <ul style="list-style-type: none"> • At least 10 years general experience as a Sociologist, • At least 8 years field experience in conducting ESIA, SEA, RAPs and Gender Based Violence (GBV) in construction projects and donor funded projects of similar nature and conversant with conditions of Informal Settlements, • Must be registered with the relevant professional body with a valid practicing license. |
| Socio Economist |
| <ul style="list-style-type: none"> • Degree in business and management, economics or similar relevant areas from a university recognized in Kenya, • At least 8 years field experience in conducting socioeconomic surveys and be conversant with conditions of Informal Settlements. • Have participated in in one similar assignment in the last five years. |
| Procurement and Contract Management Expert |
| <ul style="list-style-type: none"> • Bachelor’s degree in Engineering, Procurement/Supply Chain Management, Commerce, Business Administration or equivalent from a university recognized in Kenya. • At least 10 years general experience in procurement and contract management, • At least 5 years specific experience in public procurement management and contract administration including preparation of procurement documents, bid evaluation, preparation of contracts, reviewing contract variations, claims and contractual disputes resolution, • Must be registered with the relevant professional body, Kenya Institute of Supplies Management or equivalent, with a valid practicing license. |

In addition to the proposed Key Staff, the Consultant is expected to provide non-key staff including works inspectors to supervise construction works during the construction period. The Consultant will be responsible for their office support staff on site and head office. The cost of any support staff not highlighted in the list but which the consultant considers necessary will be deemed to have been included in the Consultant’s Financial Proposal.

6.1 Staff Estimated Time Input

The number of key staff and the estimated time input for each key staff for Stage 1 and Stage 2 are provided in the Table 2 below. These are for guidance.

Table 2: Staff Estimated Time Input

| S/No | Key and Support Staff | No. | Input (staff months) |
|--|--|-----|----------------------|
| Stage 1 (Lumpsum) – Preparation of Settlement Upgrading Plan, Engineering Designs and Procurement Documents | | | |
| 1 | Team Leader | 1 | 4 |
| 2 | Roads Engineer | 1 | 9 |
| 3 | Water and Sanitation Engineer | 1 | 4 |
| 4 | Materials Engineer | 1 | 4 |
| 5 | Electrical Engineer | 1 | 2 |
| 6 | Surveyor | 2 | 12 |
| 7 | Environmental Expert | 1 | 4 |
| 8 | Sociologist/ Community/Resettlement Expert | 1 | 4 |
| 9 | Socio-Economist | 1 | 4 |
| 10 | Procurement and Contract Management Expert | 1 | 0.5 |

| S/No | Key and Support Staff | No. | Input (staff months) |
|------|--|-----|----------------------|
| | Subtotal for key staff | | 47.5 |
| | Sub-total Stage 1 | | 47.5 |
| | Stage 2 (Time Based) – Construction Supervision and Defects Notification Period | | |
| 1 | Team Leader | 1 | 6 |
| 2 | Resident Engineer | 2 | 36 |
| 3 | Assistant Resident Engineer | 4 | 72 |
| 4 | Roads Engineer | 1 | 8 |
| 5 | Water and Sanitation Engineer | 1 | 4 |
| 6 | Materials Engineer | 1 | 6 |
| 7 | Electrical Engineer | 1 | 3 |
| 8 | Surveyor | 1 | 9 |
| 9 | Environmental Expert | 1 | 9 |
| 10 | Sociologist/ Community/Resettlement Expert | 1 | 6 |
| 11. | Procurement and Contract Management Specialist | 1 | 0.5 |
| | Subtotal for key staff | | 159.5 |
| | NON-KEY STAFF | | |
| 12 | Works Inspector | 4 | 36 |
| 13 | CAD Technician | 1 | 2 |
| 14 | Laboratory Technicians | 2 | 12 |
| 15 | Office Administrator | 4 | 48 |
| 16 | Chainmen | 1 | 9 |
| | Sub-total for Non-Key Staff | | 107 |
| | Sub-total Stage 2 | | 266.5 |
| | Total Stage 1 and Stage 2 | | 314 |

7. Duration of the Assignment

The assignment shall be performed in two phases; **Stage 1 will involve the preparation of Settlement Upgrading Plans Detailed Engineering Designs and Preparation of Procurement Documents** and is proposed to be completed within a period of **12 months** from contract commencement date; **Stage 2 is the construction supervision phase** and is estimated to take **12 months** for completion of the construction works and a further **12 months** for Defects Notification Period. The contract shall be discharged on submission of Final Completion Report at the end of Defects Liability Period.

8. Reporting Requirements and Time Schedule for Deliverables

The consultant shall submit the following reports. Specified copies of each of the listed reports shall be sent to the MTIHUD in accordance with the schedule in table 3 below:

Table 3: Reporting Schedule and Requirements

| Deliverable / Reports | Submission Date after Contract Commencement Date | No of Copies |
|---|--|-------------------|
| Stage 1: Preparation of Settlement Upgrading Plans | | |
| Stage 1.1 | | |
| Inception Report Summarizing the consultant's state | 1 st month | 3 hard copy and 2 |

| Deliverable / Reports | Submission Date after Contract Commencement Date | No of Copies |
|--|---|--|
| of mobilization, stakeholder's engagement plan, and preliminary site visits. | | CDs |
| Participatory GIS maps on crime and violence and focus groups; and community sensitisation Report. | 2 nd month | 3 hard copy and 2 CDs |
| Environmental screening baseline & community consultation on priority infrastructures | 2 nd month | 3 hard copy and 2 CDs |
| Draft conceptual design based on consultations and costing report Environment and Social Screening Report. | 3 rd month | 3 hard copy and 2 CDs |
| Draft Settlements Upgrading Plan containing proposal for design Criteria, proposal for packaging of works Contract. Environmental and Social Impact Assessment, Resettlement Action Plan, and Vulnerable and Marginalized Groups Plan where applicable. | 4 th month | 3 hard copy and 2 CDs 5 hard copies and 2 CDs |
| Stage 1.2: | | |
| Final Detailed design report, procurement documents including technical specifications, geo-referenced detailed engineering drawings, Bills of Quantities. This should include topographical survey data and detailed engineering design assumptions, calculations necessary for setting out and checking designs as detailed under Phase 2 scope of services. | 8 th months | 3 hard copy and 2 CDs |
| Final Settlement Upgrading Plans Containing: General layout of the settlements in relation to existing infrastructures, Signed engineering drawings, Procurement documents complete with BoQ per settlement, Technical specifications, Engineers cost estimate, NEMA approved ESIA/ESMPs. | 10 th month | 3 hard copy and 2 CDs |
| Procurement of works contracts (Report on process) | 12 th month | 3 hard copy and 2 CDs |
| Stage 2: Construction Supervision and Defects Notification Period | | |
| Monthly site meetings | Once every month | 3 sets of attendance list and signed minutes |
| Monthly Progress Reports | Within 7 days after the end of the reporting month | 3 hard copy and 2 CDs |
| Quarterly Progress and Financial Appraisal Reports | Within 7 days after end of the reporting Quarter | 3 hard copy and 2 CDs |
| As – built drawings | Within 4 weeks of substantial completion and Taking-Over of the Works or Sections | 3 hard copy and 2 CDs |
| Operations and Maintenance Manuals – inclusive of CEMPs | Within 4 weeks of substantial completion and Taking-Over of the | 3 hard copy and 2 CDs |

| Deliverable / Reports | Submission Date after Contract Commencement Date | No of Copies |
|--|---|-----------------------|
| | Works or Sections. | |
| Substantial Construction Completion Report including draft Taking Over Certificate | Within 4 weeks of Substantial Completion and Taking Over of the whole of the works | 3 hard copy and 2 CDs |
| Quarterly Defects Notification Report | Within two weeks of the reporting quarter | 3 hard copy and 2 CDs |
| Final Completion Report at End of Defects Notification Period | Within 28 days after the latest of the expiry of the Defects Notification Period, or as soon thereafter as the contractor has: (a) Supplied all the contractors' documents; and (b) Completed and tested all the works (including remedying any defects) in accordance with the contract. | 3 hard copy and 2 CDs |

NOTE: All engineering drawing will be geo-referenced and printed on A1 paper.

The soft copies must be delivered in CD-ROM in Microsoft Word and PDF file for text document and in Auto CAD file for all drawings.

- a. The **Inception Report** shall include: full details of the Consultant's mobilization status. Details shall also be recorded of the date of payment of the advance payment, (if any), and thereby the Date of Effectiveness and commencement of the consultancy contract; the situation on-Site/in-country as compared to that envisaged in the Consultant's proposal and any changes proposed to the Terms of Reference as a result of the Consultant's findings; an updated work plan (including actual dates for submission of deliverables). In addition, the inception report shall contain a detailed Stakeholder Engagement Plan (SEP) during the consultancy as guided by the Project's Stakeholder Engagement Framework (SEF).
- b. The **Draft and Final Settlement Upgrading Reports** with the content as described in Section 5.
- c. **The Monthly Progress Reports** shall contain all the data necessary to serve as a formal record document of the monthly status of the works and Consultant's contract, including but not limited to: the contract base data; the detailed status of all aspects of the works; progress against/compared to agreed program; color progress photographs with detailed captions; typical test results against the specification criteria, plus all test results which do not meet specification and the action taken by the Consultant; details of the Site record keeping system established and available for audit; equipment mobilization/demobilization data against the agreed equipment list; equipment

availability records; key professional staffing bar chart for the Contractor, by position, name and duration/days of deployment; interim valuation of the works; payment status of both the Contractor and the Consultant; and full details of all claims, delays, requests for Extensions of Time and any other information the Consultants may consider necessary to include in the report.

- d. The **Quarterly Report** shall be a combination of the monthly reports, including an overall financial appraisal of the project and a risk management section.
- e. **The Final Completion Report (FCR)**: The FCR shall be submitted to the Engineer within one month following substantial completion and Taking Over of the construction works.

The FCR will form a comprehensive record of the Construction Work including:

- Details of the handing over of all the ER's Facilities and Resources to the Engineer
- Details of the handing over to the Engineer of all Contractor's Records, as specified in the works contracts, with a detailed text on how each of the records have been catalogued and referenced, and to whom they were handed over, to facilitate future use of the record data.

The Consultant shall submit the above-mentioned Reports to the Engineer duly bound in sequential manner with table of contents upfront and cover titles on the front cover. The As-Built drawings should be prepared in A-1 size hard copy as well as in Computer - aided design (CAD) files specified by the Client. Specification of CAD shall be agreed with Client.

8.1 Reporting Format

All the reports shall be ORIGINAL submitted in A4 format, except only the Detailed Engineering Drawings which shall be presented in both A3 and A1 bound sets plus originals. Two electronic CD-R copies (plus one for the Funding Agency) shall also be provided along with hard copies of Schedule of Deliverables. All the deliverables shall be suitable for monochrome photocopying, i.e. figures and charts should not use color alone for identification purposes. All reports shall include a signed and dated Submission Letter, a Table of Contents and an Executive Summary, in addition to the report text.

9. Institutional Arrangements

The Principal Secretary, State Department for Housing and Urban Development; Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works is the Client. The Principal Secretary has appointed the KISIP National Coordinator as the authorized representative, to whom the Consultant will report to on contractual and technical matters. The KISIP National Coordinator will also be responsible for all payments to the consultants once the deliverables are accepted and cleared for payment by the KISIP Head of Sub-Component 1.2.

The Consultants will report on technical matters to the Component Head for Sub-Component 1.2, for the Design phase and to the Engineer appointed by the respective counties during the construction phase. The Consultant shall work with county KISIP Teams to resolve any field related issues relating to the selected settlements and the prioritized infrastructure designs.

The Consultant will work with County KISIP Coordinators in the participating Counties from the commencement of the services to completion. In particular, the consultant will involve the Counties in the identification of the facilities, selection of priorities, adoption of the final designs and preparation of the Operations and Maintenance manuals. Final reports will be

shared with the County teams for their input before submission to KISIP coordinator. The Consultant will obtain concurrence from the respective counties on all the deliverables prior to submission for approval by the KISIP National Team.

10. Obligations of the Consultant

The Consultant shall be responsible for the provision of all the necessary resources to carry out the services including appropriate qualified staff and shall make arrangements for the establishment of office, supporting office equipment and furniture, vehicles, accommodation, utilities, communications, insurance and any other required resources and procurement of all maps required for the designs in stage 1. In stage 2, the construction contract will have provisions of a vehicle for the Resident Engineer and fully furnished site office. The consultant is therefore expected to meet all other cost, where applicable, as in stage 1.

11. Client's Inputs

The Client will:

- (a) Provide the Consultant with available data, maps and reports relevant to the project and collaborate in obtaining additional required information
- (b) Facilitate the Consultant's access to Government entities and respective County Governments
- (c) Services to be provided under the works contracts during works execution (stage 2).
 - i. Fully furnished and serviced site office
 - ii. Fully furnished Laboratory or alternative from an approved materials laboratory service provider approved by the Resident Engineer