

## Terms of Reference

### RURAL ACCESS & AGRICULTURAL MARKETING PROJECT (RAAMP)

#### CONSULTANCY SERVICES FOR THE PREPARATION OF PRELIMINARY ENGINEERING DESIGN, EMPLOYER REQUIREMENTS AND BIDDING DOCUMENTS FOR OGUN RAAMP

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##### I. Background and Context

The Federal Government of Nigeria (FGN) has initiated the preparation of the Rural Access and Agricultural Marketing Project (RAAMP), the successor of the Second Rural Access and Mobility Project (RAMP-2). The project will be supported with financing from the World Bank and the French Development Agency (AFD) and will be guided by the Government's Rural Travel and Transport Policy (RTTP). The lead agency for the Federal Government is the Federal Department of Rural Development (FDRD) of the Federal Ministry of Agriculture and Rural Development (FMARD). The Federal Project Management Unit (FPMU) is overseeing the project on behalf of FDRD, while the respective state governments of thirteen (13) participating states will implement it. The overall objective of RAAMP is to improve rural access and agricultural marketing in selected participating States whilst enhancing sustainability of the rural and state road networks. The participating states are: six northern states (Kano, Katsina, Sokoto, Kebbi, Bauchi and Plateau) and seven southern states (Abia, AkwaIbom, Kogi, Ogun, Oyo, Kwara, and Ondo).

The Nigeria road network is relatively dense consisting of about 194,000 km of roads. This includes 34,000 km of federal roads, 30,000 km of state roads and 130,000 km of registered rural roads. The road density is about 0.21 km of roads per square kilometre. In spite of the relatively high road density, the rural accessibility index for Nigeria (defined as the proportion of the rural population living within 2 kilometres away from an all-weather road) is low, at only 25.5 percent, leaving about 92 million rural dwellers unconnected. Rural access is limited where the poor population is concentrated. These considerations demand the expansion and improvement of rural road network, and, also, conservation of rural road/transport assets.

Furthermore, an improved rural access will enhance the agricultural potentials and marketing opportunities for the agrarian rural communities in Nigeria and, by extension, help in the improvement of livelihoods of the rural population.

The development objective of the proposed Nigeria Rural Access and Agricultural Marketing Project (RAAMP) is to improve rural access and agricultural marketing in selected participating states while strengthening the financing and institutional base for sustainable management of the rural and state roads network.

The *Ogun* State, as per these terms of reference (TOR), seek to procure the services of highly qualified and experienced Consultant to prepare Design and Build Bidding Documents for selected rural roads, including preparation of the preliminary Design and procurement support. The consultant is expected to undertake full assessment of the road conditions, pavement design option analysis to determine the best option of approximately 500km of selected prioritized roads.

RAAMP has four components but the focus of this consultancy will be on;

(a) **Component 1: Rehabilitation and maintenance of rural access and state roads.**

##### II. Objectives of the Assignment

The objectives of the assignment are:

- (i) To prepare conceptual engineering design and report of approximately 500km of rural and state roads in Ogun State;

- (ii) To prepare employer requirements for design – build contracts for approximately 500km of rural and state roads in Ogun State; and
- (iii) To prepare the bidding documents and to provide procurement support for approximately 200km of rural and state roads in Ogun State.

### **III. Scope of Works**

#### **1. Preliminary Engineering Drawings and Report**

The core tasks for the consultancy assignment shall include, but not limited to, the following:

- Establish permanent setting out reference stations along each of the selected roads and the video of the entire length of each road embedded with geo reference information
- Survey the selected roads to establish the horizontal and vertical alignment, the line and level, cross sections, the 30m wide Rights of Way, drainage channels and the extent of rivers and flood-plains, including recommended realignment sections.
- To prepare the geometric design of the roads, which will include but not less than the recommended carriage way, right-of-way and super elevation.
- Carry out a full topographic survey of the road using Total Station and GPS over a width of at least 15m on either side of the centerline. In addition to the data required for preparation of plan and profile drawings of the road, the topographic survey shall provide information on the presence of housing units, commercial and administrative buildings, bus and lorry parking areas, trees, entrances to roadside properties, watercourses, bridges and drainage and any other features that will affect the design of the rehabilitation works.
- Conduct traffic counts for three consecutive days and 18-hour count for additional three consecutive days as well as 12-hour count on the seventh day (preferably at peak traffic/harvest times) and review supporting data for traffic and growth projections to establish design traffic levels for each road.
- The consultant shall estimate the generated traffic that will occur as result of the intervention works based on the reduction on travels time and transportation cost.
- Conduct an inventory and condition survey of the roads, together with all drainage structures, including: culverts, side drains, bridges, drifts and river crossings etc., plus associated scour protection and river training works.
- Establish and review all available hydrological data, to serve as a basis for design of the rehabilitation and upgrading of the hydrological structures, including new hydrological structures and short-span bridges.
- Carry out a hydrological survey of all the drainage structures to establish their existing capacity and operational status.
- Establish the need for additional drainage structures and what is required for the rehabilitation, and for enhancing the capacity of the existing drainage structures as necessary.
- Carry out preliminary soil investigations.
- Prepare the cost estimated for the roads and structures along the investigated roadsBill of Engineering Measurements and Evaluation (BEME).
- Share the preliminary design report with the Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) consultants; and
- Finalize preliminary design report based on the Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) report inputs.

## **2. Setting Out Employer's Requirements**

The core tasks for the consultant shall include, but not limited to the following:

- To document a detailed project plan setting out the Ogun State time, budget, resource (equipment) and quality related requirements;
- To prepare employer's requirements for Design & Build Contract, including a project brief that describes the project and final design and construction works to be performed by the Design & Build Contractor ("Project Brief");
- To conduct a global review of the general conditions and the employer's requirements, in the following, but not necessarily limited to, following areas:
  - Specifications for final design and construction
  - Social and Environmental Safeguard compliance
    - Environmental and Social Management Plan
    - Traffic management
    - Air quality
    - Water quality
  - Occupational health and safety
  - Gender-based Violence
  - Key performance indicators
    - Road Roughness
    - Road and lane width
    - Rutting
    - Skid resistance
    - Vegetation control
    - Visibility of road signs and markings
    - Availability of each lane-km for use by traffic
    - Response times to rectify defects that compromise the safety of road users
    - Attendance at road accidents
    - Drainage off the pavement (standing water is dangerous for road users)
  - Maintenance Strategies (2-year after Expiration of 1-year Defect Liability Period).

## **3. Preparation of Bidding Documents and Procurement Support**

The core tasks for the consultant shall include, but not limited to the following:

- Assist the State Project Implementation Units (SPIUs) to produce the draft bidding documents, based on the current World Bank's standard template for the Design and Build Bidding Document for Works, based on the Ministry of Works standard specifications, strengthened as necessary by the Consultant.
- Assist the SPIUs in production of the Specific Procurement Notice for RAAMP based on the World Bank's standard procurement documents format and advertise it in 2 national newspapers, 1 international newspaper and the UN Development Business.
- Assist the SPIUs in production of the Invitation for Initial Selection based on the World Bank's standard format.
- Assist the SPIUs in production of the Initial Selection Document (ISD) based on the World Bank's standard format. The ISD shall be based on the criteria encapsulated in the adverts issued by the Employer. The Employer is responsible for issuing the advert for Invitation for Initial selection in 2 national newspapers, 1 international newspaper and the UN Development Business.

- Assist the SPIU and participate in the analysis of the Expressions of Interest (EoI) received and produce a report, listing the highest ranked applicants identified, which should ideally identify not less than 3 and not more than 6 suitable applicants for submission of proposals.
- Assist the SPIU in requesting proposals from the highest ranked applicants, using the World Bank standard format.
- Assist the SPIUs to organize and participate in the Formal Site Inspection for the applicants requested to submit proposals and report on matters arising and formally respond to any questions raised by the applicants during the inspection proceedings and subsequently, up to 10 days prior to the submittal of proposals.
- Assist the SPIUs in the Bid Opening and participate in the vetting of the final engineering designs and report, the establishment of the Evaluation Committees and the evaluation of proposals, including the design proposals of the applicants, and produce a Technical Evaluation Report supporting the Evaluation Committee’s findings and note recommendations for clarification in the event of contract award, complete with points to be clarified during contract negotiations.
- Assist the SPIUs in production of the Financial Evaluation of the proposals and production of a Financial Evaluation and a Final Technical and Financial Evaluation Report supporting the Evaluation Committee’s findings and note recommendations for clarification in the event of contract award, complete with points to be clarified during contract negotiations.
- Assist the SPIUs to invite each preferred applicant for Contract Negotiations.
- Advise the SPIUs on any issues arising during Contract Negotiations.

#### IV. Staff Requirements

This assignment is expected to be delivered over a 6 months period. Min. staff requirement details are provided below, but not limited to them.

No	Key Expert	Minimum qualification and experience
1	Team Leader (4 months)	The candidate should have not less than a Bachelor of Science degree (BSc) in civil engineering and shall be Professionally Registered with at least 15 years post graduate engineering experience, including at least 10 years on the design of road construction/rehabilitation works. The candidate shall also have been a Team Leader on at least 5 rural road Design Assignments in Nigeria or similar regions and shall be fully experienced and familiar with all the types of Works to be designed.
2	Structural Engineer (2 nos.; total 2 months)	The candidate should have not less than a Bachelor of Science degree (BSc) in civil engineering and shall be Professionally Registered with at least 15 years post graduate engineering experience, including at least 10 years on structural design of road structures and the related construction, rehabilitation and maintenance works. The candidate shall also have held similar positions on at least 5 rural road design, construction and maintenance assignments in Nigeria or similar regions and shall be fully experienced and familiar with all the types of structural Works to be designed, constructed and maintained.
3	Road Engineer (2 nos.;total 2 months)	The candidate should have not less than a Bachelor of Science degree (BSc) in civil engineering and shall be Professionally Registered with at least 5 years post graduate engineering experience, including at least 5 years on road construction, rehabilitation and maintenance works. The candidate shall also have worked on at least 2 rural road construction and maintenance Assignments in Nigeria or similar regions and shall be fully experienced and familiar with the majority of the types of Works to be

		constructed and maintained.
4	Surveyors (2 nos.;total 1 months)	The candidate should be Professionally Registered with at least 10 years surveying experience, including at least 5 years on road works. The candidate shall also have held similar positions on at least 3 rural road assignments in Nigeria or similar regions.
5	Geotechnical Engineer (2 nos.;total 1 months)	The candidate should have not less than a Bachelor of Science degree (BSc) in civil engineering and shall be Professionally Registered with at least 15 years post graduate engineering experience, including at least 10 years on soil mechanic. The candidate shall also have held similar positions on at least 5 rural road design, construction and maintenance assignments in Nigeria or similar regions and shall be fully experienced.
6	Hydraulic Engineer (1 months)	The candidate should have not less than a Bachelor of Science degree (BSc) in civil engineering and shall be Professionally Registered with at least 15 years post graduate engineering experience, including at least 10 years on the design, construction, rehabilitation and maintenance of hydraulic works. The candidate shall also have held similar positions on at least 5 rural road design, construction and maintenance assignments in Nigeria or similar regions and shall be fully experienced and familiar with all the types of hydraulic Works to be designed, constructed and maintained.
7	Procurement/ Contract Specialist (3 months)	The candidate should be Professionally Registered with at least 10 years work experience, including at least 3 years on road works using the World Bank's Design and Build Procurement Documents, plus the World Bank's Procurement Procedures. The candidate shall also have held similar positions on at least 3 rural road assignments in Nigeria or similar regions. The candidate shall also be computer literate and fluent in the written, spoken and reading use of the Contract language which is English.

The expertise and months mentioned in the above table are only notional. The Consultant's proposal should clearly indicate the type of technical staff requirements and the duration of consultant inputs. The Consultant is expected to make full use, where possible, of appropriately qualified local staff, and work closely with and transfer knowledge to the Client staff. The Consultant team will be required to provide its own computers, printers, and office supplies. The responsibility for the correctness of using such data shall rest with the Consultant. All such information, data and reports shall be treated as confidential.

#### V. Deliverables and Timing:

Deliverables	Timing	Minimum Expectations
Inception Report	2 weeks	<ul style="list-style-type: none"> <li>• A detailed status of the Consultant's staff and resource mobilization (Further staff and resource mobilization planned)</li> <li>• Full contact information</li> <li>• Methodology Statement defining the proposed limits of the design</li> </ul>

		<ul style="list-style-type: none"> <li>• Detailed work program</li> </ul>	
Interim Design Draft Condition	Conceptual Report and Boundary Condition	12 weeks	<ul style="list-style-type: none"> <li>• Detailed road inventory and road condition data</li> <li>• Traffic Count Data</li> <li>• Draft Topographical Surveys</li> <li>• Draft Geotechnical and Material Surveys</li> <li>• Draft Bills of Engineering Measurements and Evaluations</li> </ul>
Final Design Technical Boundary Document Documents	Conceptual Report, Drawings, Condition and Bidding Documents	20 weeks	<ul style="list-style-type: none"> <li>• Draft Report Text with Sections on each element of the design</li> <li>• Typical Cross Sections of the Road</li> <li>• Results of the geotechnical and material surveys</li> <li>• Detailed Drawings of Drainage and hydraulic structures</li> <li>• Horizontal and Vertical Alignments of the Road</li> <li>• Typical Drawings of Road Structure</li> <li>• Bill of Engineering Measurements and Evaluations</li> <li>• Bidding Documents</li> <li>• Detailed Boundary Conditions</li> </ul>