



**DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**  
**Regional Office No. XII**

**TERMS OF REFERENCE**

**Consulting Services for the Feasibility Study of the  
Proposed Datu Paglas-Cumbio-Matanao Road, Sultan Kudarat and Davao del Sur**

**1 INTRODUCTION**

The proposed Datu Paglas-Cumbio-Matanao Road has an approximate length of 58.085 kms and traverses the municipalities of Cumbio and Lutayan in Sultan Kudarat, Datu Paglas in Maguindanao del Sur, and Magsaysay and Matanao in Davao del Sur. The road will start from the Kidapawan-Allah Junction Road (Datu Paglas – Buluan Section). The road will start from Kidapawan-Allah Junction Road (Datu Paglas – Buluan Section).

The DPWH shall select, by way of a Quality Based Evaluation/System, (QBE/QBS) and open local competitive bidding (LCB), a Consultant with experience, knowledge, and expertise in similar projects to deliver the required services pursuant to the provisions of Republic Act 9184 otherwise known as the "Government Procurement Reform Act" and its revised Implementing Rules and Regulations (IRR) and the latest Government Procurement Policy Board (GPPB) Issuances for Consulting Services.

**2 OBJECTIVES**

The main objective of the proposal under this TOR is to determine the viability of the proposed Datu Paglas-Cumbio-Matanao Road considering the technical, economic, social, and environmental aspects, among others. Additionally, the Feasibility Study (F/S) shall ensure that value engineering/value analysis (VE/VA) is undertaken with regards to the selection of the best possible alignment/structural configuration. This is to ensure that the best scheme for providing the project's intended outputs will be selected that would yield the highest value-for-money (VfM).

By the end of the consulting period, the Consultant is expected to produce a comprehensive F/S based on updated information with a definite and realistic implementation plan of the recommended scheme based on the alternatives/configurations considered, among others, including the preliminary engineering concept/design and economic evaluation. Specifically, it aims to achieve the following undertakings:

- 2.1 Determine the Annual Average Daily Traffic (AADT) in major and adjoining road sections including that of the converging traffic at the intersections relevant to the project influence area, and assess the existing and future conditions of the relevant road network based on capacity and safety measurements such as Level of Service and other network performance parameters or factors;
- 2.2 Establish trip patterns based on zones<sup>1</sup> and/or existing and future land use in the study area and identify volume distribution in major and adjoining road sections during peak and non-peak hours;

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<sup>1</sup> A zone is an area, especially one that has different characteristics from the ones around it or is used for different purposes. (Cambridge Dictionary)

- 2.3 Establish Traffic Growth Rates (TGR) based on ecological factors such as population distribution, average income per family and product consumption per capita;

### 3 SCOPE OF CONSULTING SERVICES

The scope of works of the Consultant under this TOR shall include, but not necessarily be limited to, technical and economic to establish the overall viability of the investment in coordination/consultation with beneficiaries and other stakeholders as necessary. The consulting services will include the following major activities:

#### 3.1 Traffic Survey<sup>2</sup>

- 3.1.1 Conduct 12-hour manual classified volume count on the midblock and intersections and 12-hour for intersections for two (2) consecutive days during the midweek (survey form template is provided in Annex B1);
- 3.1.2 Collect and review previous traffic data on road sections within the study area from the Department of Public Works and Highways Traffic Database and/or other credible sources and develop traffic daily factors and seasonal factors. The consultant shall officially request for the appropriate RTIA database to utilize the obtained adjustment factors together with the results of the required surveys in item 3.3.1 to determine the Annual Average Daily Traffic on major and adjoining road sections relevant to the project;
- 3.1.3 Characterize the future supply of transport facilities in the study area in order to establish the links among the available modes such as mass transit systems, sea transport, etc.;
- 3.1.4 Identify major traffic generating sources and subdivide the study area into 'zones' based on the existing land use and future land use. The zoning shall conform but not necessarily limited to the existing codes of Department of Interior and Local Government;
- 3.1.5 Conduct Origin – Destination (OD) Survey on selected stations as identified in Annex C and establish trip patterns based on vehicle type, trip purpose, vehicle occupancy, etc. (survey form template is provided in Annex B2). The Consultant must provide details of the results of the OD Survey in the report together with a concise description of vehicular movement based on the established zones as in item 3.3.4 which includes but not limited to: (i) relationship between the generation and attraction of traffic indicators by the established zones; (ii) the competitive and complimentary characteristics in relation to the existing and proposed modes of transport such as rail and air transport routes; and (iii) traffic assignment of volume in the network considering the current and future layout of the network;
- 3.1.6 Conduct travel time and delay survey during peak and off-peak hours along significant segments in the study area as identified in Annex D and determine the average travel time required using the existing routes or current road network configuration. The summary of information shall adopt but not necessarily be limited to the minimum information set by Project Preparation Division of Planning Service, Department of Public Works and Highways (survey form template is provided in Annex B4);
- 3.1.7 Use any appropriate traffic forecasting/ network analysis models such as the JICA – STRADA, VISSIM, VISUM or its equivalent in the traffic demand forecasting and network analysis which can be exported to the existing software of the Department. The Consultant shall prepare the necessary data inputs and comprehensively

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<sup>2</sup> In proper coordination with the Implementing Office. See Annex A for the Traffic Survey Methodologies.

provide all the information required to run the model and clearly illustrate the output needed to evaluate the project. The Consultant shall provide a detailed report showing all the inputs and assumptions used in the model; and

- 3.1.8 Based on the selected model, compare implementation alternatives and illustrate the resulting volume accumulation, queuing, delay and other technical indicators that can be harnessed from said model such as vehicle-kilometers, vehicle-hours, congestion level, and transport cost which will serve as basis for the subsequent economic comparison and evaluation.

## 4 REPORTING AND DELIVERABLES

- 4.1 Final results will be presented to the Implementing Office and the reviewing offices.
- 4.2 During the contract period, coordination meetings with the District Engineering Office and Regional Offices concerned must be conducted to: (a) initiate agreements, (b) discuss the progress of the work and preliminary output; (c) make comments and suggestions on a timely basis; and (d) resolve problems and issues that may be encountered. All meeting highlights and discussions shall be recorded and presented as Annex in the succeeding report to be submitted.
- 4.3 Further, aside from the specified scope of works mentioned above, the Consultant may propose additional works to enhance the study.
- 4.4 The Consultant shall report the progress of all activities in the course of the contract implementation. The Consultant shall submit the following but not limited to:
  - 4.4.1 **Inception Report.** which shall contain the detailed work program for the undertaking, methodologies, dates of report submissions and schedule of activities proposed to meet the requirements set in this Terms of Reference. The MCA (Multi-Criteria Analysis) and its evaluation will be done by the consultant and should be based on available data and shall be included in this report. A total of three (3) copies of the report shall be submitted to the implementing office in one (1) week after the commencement of the consulting service. The Inception Report shall also be presented to the implementing and reviewing offices prior to finalization.
  - 4.4.2 **DRAFT FINAL REPORT** which shall contain the details of the consultant's findings and recommendation based on the scope of work outlined in this Terms of Reference. The report shall summarize the undertaking fully describing the methods used and findings. The report shall include all relevant information which support the conclusions in sufficient detail to enable calculations to be verified and allow re-calculation with modification of the key assumption without the need of supplementary data. A total of five (5) copies of the report shall be submitted to the implementing office at least two (2) weeks prior to contract expiration. The reports shall be submitted in soft-bound copy with title of the report written at the spine together with traceable e-copies of all analyses and simulations made. The implementing Office shall issue to the Consultant a Suspension Order as a time consideration for the Implementing Office and related reviewing Offices to have ample time to transmit, circulate, review and consolidate all comments to the said reports. Once the reports are sent back to the Implementing Office, the Implementing Office shall issue a Resumption Order upon return of the report for correction and revision.
  - 4.4.3 **FINAL REPORT** which shall incorporate all appropriate revisions and clarifications on the Draft Final Report. A total of five (5) copies of the report shall be submitted to the implementing office in printed and e-copy format together with all the requirements set forth in this TOR on or before the contract expiration. The Final

Reports shall be submitted in soft-bound copy with title of the report written at the spine.

- 4.5 The major deliverables of the Study will be:
  - 4.5.1 Inception Report
  - 4.5.2 Overall Summary of Accomplishment Report
  - 4.5.3 Traffic Survey and Initial Analysis Report
  - 4.5.4 Other data/documents to be submitted shall include but not limited to:
    - 4.5.4.1 Geo-tagged Photographs
    - 4.5.4.2 Raw and Processed Data of Traffic Survey (Manual Count, Origin-Destination, Intersection Traffic Count and Travel Time Survey)
    - 4.5.4.3 Map of the alignment (including shape file format), plot in/convert to WGS 84
- 4.6 All outputs shall be presented in a Traffic Survey and Analysis Report in English language. The Cover Page shall contain at least the following: Project Title, Name of Document, Version or Revision Number, Date Published (Month and Year) and the Name of Consultant/Author. The following shall be put either in the header or footer of all documents submitted: Page Number, Project Title, Name of Document, Version or Revision Number, Date Published (Month and Year) and the Name of Consultant/Author
- 4.7 Electronic file formats (i.e. Microsoft Office, Adobe PDF, AutoCAD, transport model input and output files, etc.) of all reports and documents systematically organized in traceable and auditable formats shall be prepared in DVD and/or CD, 3 copies each.
- 4.8 All Draft Final Outputs shall be submitted at least two weeks prior to the contract expiration and be subjected to review and evaluation of the Implementing Office and reviewing offices.
- 4.9 In compliance with the ISO 9001:2015 requirement which necessitates traceability and proof of correction, a matrix of correction and comments with corresponding actions taken shall be reflected in each re-submitted report/deliverable of the project as part of its Annexes. An approval page shall also be included in the printed Final Report. (see Annex H)

## **5 PROCUREMENT OF CONSULTING SERVICES**

- 5.1 The Implementing Office shall select, by way of a Quality-Cost Based Evaluation (QCBE), a Consultant (sole proprietorship, partnership or joint venture) with experience, knowledge, and expertise in conducting feasibility, environmental and social studies for road, bridge, road slope protection, and sediment and water related projects both in urban and rural areas to deliver the required services pursuant to the provisions of Republic Act 9184, otherwise known as the "Government Procurement Reform Act" and its revised Implementing Rules and Regulations (IRR) and the Procurement for Consulting Services, GPPB.
- 5.2 The Approved Budget for the Contract (ABC) is based on an estimated number of person-months for specific staff positions, and time-based and dimension-based reimbursable items.
- 5.3 The ABC shall be the upper limit or ceiling for acceptable bid prices. If any of the bid prices is higher than the ABC, the bidder submitting the same shall be automatically disqualified. There shall be no lower limit or floor on the amount of the award.
- 5.1 A contract will be awarded to the Bidder whose offer is the most advantageous to the Government. The selection factors and sub-factors for this project are listed below in descending order of importance:
  - 5.1.1 Professional qualifications (key personnel) necessary for satisfactory performance of required services;
  - 5.1.2 Specialized experience and technical competence for work required;

- 5.1.3 Capacity to mobilize required and qualified personnel and accomplish the work in the required time; and
- 5.1.4 Past performance on contracts with Government agencies and private industry in terms of cost control, quality of work, and compliance with performance standards.

**Professional Qualifications (Key Personnel)**

- 5.2 Bidders should identify personnel who will be responsible for implementing and managing contract activities and provide information on personnel proposed for the subject contract.
- 5.3 Bidders should demonstrate their total strength of key disciplines and availability of such resources (i.e., current workload, etc.)
- 5.4 Firms may subcontract and/or associate to enhance their qualifications.
- 5.5 Following are the key positions/areas of expertise anticipated to be required under the contract:

KEY STAFF	Min. No. of Years of Experience in Proposed Position	Required Qualification
1. Traffic Engineer/ Modeler	5	Registered/Licensed Civil Engineering, or equivalent, with specialization in transportation planning/engineering. He/she must have extensive experience with traffic planning, traffic growth analysis and modeling, and optimal route planning. He/she must be equipped with traffic/transport modeling software.

- 5.6 For each key position proposed, responses should include a description of the professional and technical qualifications and licenses necessary for satisfactory performance of required services under this task order; on-going and completed projects, specialized experience and technical competence in the type of work outlined in the Scope of Services.
- 5.7 Replacement of Consultant's Key Personnel is subject to the provision of Department Order No. 21 series of 2015 and RA 9184 and Its IRR.

**Firm's Experience and Technical Competence**

- 5.8 Bidders should provide information on firm's competence in the areas as required in the Scope of Services. The information should clearly summarize the nature of the services offered and the types of tasks performed.

**Capacity to Mobilize Required Personnel and Accomplish Work in the Required Time**

- 5.9 Bidders should note capacity to mobilize the appropriate skills needed and accomplish the work in the required time, citing previous contracting experiences and availability of proposed staff, among other appropriate evidence.

**Past Performance**

- 5.10 Bidder has completed work assignments similar in nature, or directly related to, the technical requirements of the Scope of Services

## **6 CONTRACT IMPLEMENTATION**

### **Study Schedule**

- 6.1 The Study shall be completed within a period of 30 calendar days commencing from the date of receipt of the Notice to Proceed (NTP).

### **Participation the Consultant**

- 6.2 Conduct the study and deliver ON TIME the results/outputs as indicated in this TOR;
- 6.3 Provide the necessary office equipment (i.e., computer, printers, office supplies, etc.) for the conduct of the study. All equipment procured for the development of the project shall be transferred to the Government by the end of the project;
- 6.4 Carry out the services in accordance with the accepted theories and practices to ensure that the final works will provide the most economical and feasible development for the study;
- 6.5 Accept full responsibility for the consulting services to be performed under this TOR for which the Consultant is liable to DPWH;
- 6.6 Perform the work in an efficient and diligent manner and shall adhere to the agreed schedule and deliverables; and
- 6.7 shall also facilitate regular meetings to ensure that the deadlines and outputs of the project are completed on schedule.

## 7 OWNERSHIP OF THE OUTPUTS/REPORTS/DOCUMENTS

All submitted outputs/reports/documents under this contract, including but not limited to tracings, as-built drawings, estimates, digital information, computer model and data, specifications, investigations and studies completed or partially completed, inspection logs, and photographs, shall be the property of DPWH and the use of these data for other purposes shall require written consent from the Department. Copyrights will be governed by existing laws, rules and regulations.

In case of a difference of professional opinion between DPWH and the Consultant on any matter involving technical or engineering judgment, which might affect proper evaluation of the Project or performance under the consultancy contract, the DPWH shall allow the Consultant to submit a written report. However, in urgent cases, the Consultant shall request DPWH for an immediate discussion.

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