

REQUEST FOR PROPOSAL

Issue Date:	January 31, 2023
Questions Due Date:	February 8, 2023
Response Due Date:	March 17, 2023

Subject: MCC Philippines Secondary National Roads Development Project (SNRDP)
Economic Analysis and Performance Evaluation
Engineering Study Services

To All Prospective Offerors:

International Development Group Advisory Services, LLC (International Development Group LLC or IDG) is evaluating the Millennium Challenge Corporation (MCC) Secondary National Roads Development Project (SNRDP) in the Philippines. IDG is soliciting proposals from qualified consulting firms interested in conducting a road roughness study for the evaluation. This procurement will require a formal technical and cost proposal submission as outlined by the Request for Proposals (RFP). This procurement will be conducted through a full and open competition process under which any type of organization is eligible to compete.

Any questions regarding this solicitation must be submitted no later than **17:00 Eastern Daylight Time (EDT) on February 8, 2023**. These submissions must be made by email only to procurement@internationaldevelopmentgroup.com. In the subject line reference: **Questions – Philippines Road Evaluation Engineering Study Services**.

This solicitation, amendments to this solicitation, and announcement of contract award will be sent from procurement@internationaldevelopmentgroup.com. Issuance of this solicitation and the submittal of a proposal do not constitute a commitment on the part of IDG make an award; neither does it constitute an obligation for any costs incurred in the preparation and submission of a proposal.

Thank you for your interest in working with IDG.

Sincerely,

IDG Procurement Team

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SECTION A. INTRODUCTION AND BACKGROUND

A.1. OBJECTIVE

International Development Group LLC (IDG) intends to engage a firm of relevant expertise to conduct road engineering studies on the Millennium Challenge Millennium (MCC)-funded road. IDG seeks a firm to conduct the following two types of engineering studies: road roughness study and travel time study. The selected firm(s) may perform one or both of the studies. The selected firm will be responsible for preparing for and managing all aspects of data collection under direct supervision of IDG.

A.2. BRIEF DESCRIPTION OF EVALUATION

MCC and the Government of the Philippines (GOP) signed a Compact in September 2010. The Compact came into force on May 25, 2011 and was in effect for five years until September 2016. The goal of the Compact was to increase the Philippines' economic growth and reduce poverty. The Secondary National Roads Development Project (SNRDP) aimed to save time and lower vehicle operating costs for Filipinos living near the road in the provinces of Samar and Eastern Samar.

In September 2019, IDG was contracted by MCC to conduct an economic analysis and a performance evaluation of the SNRDP. The evaluation of the MCC Philippines SNRDP is mainly two-fold: 1) an economic analysis (Research Area 1) to understand the costs and benefits of the MCC-funded road, and 2) performance evaluations of road maintenance, road usage patterns, and transportation market structure to complement and enhance knowledge gained through the economic analysis (Research Area 2, 3, and 4).

The *economic analysis* consists of one research area as follows:

Research Area 1 tests the economic viability of the SNRDP by conducting a cost-benefit analysis (CBA) to estimate the economic rate of return (ERR) and the net present value (NPV) of the road. The CBA will employ the Highway Development and Management (HDM-4) model, an analytical tool used to conduct CBA for roads. Data collected for Research Area 2 and Research Area 3 will inform the HDM-4 model.

The *performance evaluations* are centered around three thematic areas as below:

Research Area 2 evaluates the road maintenance regime within the GOP to test the sustainability of improvement in road infrastructure. This analysis will improve MCCs assumption on post-Compact maintenance and project-life assumptions about its infrastructure investments. HDM-4 model's assumptions on road maintenance will be informed based on the road maintenance analysis.

Research Area 3 is a study of road users, based on origin-destination (O-D) surveys on segments of the MCC-funded roads. The data collected from the O-D surveys will inform the HDM-4 model. Other than the information required for Research Area 1, the evaluation will also analyze additional qualitative information on the road users to understand the characteristics of the road users and their travel patterns. Information such as change in the cost and duration of the trips and value of the goods being transported will be analyzed.

Research Area 4 is a study on the transportation market structure of the Philippines. While transportation service is an area MCC did not directly work in, analysis of the formal and informal instructions of the transportation market will inform whether vehicle operating cost savings were passed on to road users who do not own their own vehicle. In particular, costs for transport service users will be analyzed to understand whether cost savings were transferred in the form of lower fares for transporting people and goods.

The engineering studies will be inputs to the HDM-4 model under Research Area 1. The HDM-4 model will be updated with the engineering data to calculate the ERR of MCC's road investments. will inform whether

vehicle operating cost savings were passed on to road users who do not own their own vehicle, such as fisherman and farmers transporting their goods to market and public transportation users.

The four research areas, collectively, will inform MCC on its future project design, monitoring, and implementation of roads project and/or other large infrastructure projects.

SECTION B. STATEMENT OF WORK

B.1. GUIDANCE ON METHODOLOGY

B.1.1. Road Roughness Study

General Method: International Roughness Index (IRI) will be following ASTM (American Society for Testing Materials) or European standards and World Bank Technical Paper 46 (Sayers et al). IRI will be measured using a Class 3 (a Bump Integrator or equivalent) or better IRI measuring device. Class 1 laser profilers are strongly preferred, if available. Roughness measurements will be collected continuously at a constant speed along the Samar road and will be reported for every 10-meter section.

Sample/Data collection location: IRI will be measured on the MCC-funded Samar road, totaling 222 km in each direction. A map of the Samar road can be found in **Appendix A**. GPS information must be recorded during data collection. Roughness will be measured continuously at a constant speed in both wheel paths of the project road and will be reported at intervals of 10 meters.

Calibration: In general, the calibration must consider the equipment manufacturer's recommendations. The calibration procedure will consist of the calibration of the equipment, as well as establishment of calibration equation based on survey of reference sections. This will be verified by the IDG evaluation team.

The calibration procedure will include calibration of Distance Measuring Instrument (DMI) on a straight section, at least 1,000-m long. In addition, six reference (or calibration) sections, 300-m long each, with different levels of roughness (covering at least the IRI range anticipated on the Samar road) will be selected to provide appropriate precision and bias to the IRI measures. Each reference section will have its longitudinal profile measured in both wheel tracks using a topographic survey (total station, dipstick or equivalent) method (Class 1). The reference sections will be used to establish a calibration equation (or calibration equations for different measuring speeds, as needed) for the road roughness measuring device being used. On each reference section, this same test will be run five (5) times in both directions and at least at two speeds within the standard range of vehicle speed on the project road to test repeatability.

Following the roughness study of the project road, the roughness measurement equipment will measure the six reference sections again and the IRI results will be compared with the results obtained during the calibration exercise. The six section-average roughness measurements (before and after) should not differ by more than 5% and any reference-section measure should not differ more than 10%. If the measurements differ beyond such limits, a new calibration should be performed, and the same process should be repeated until compliance.

Rounds/Timing: IDG proposed to collect data in February 2023. This will include a one-week-long topographical survey¹ and roughness measurements of at least six calibration/reference sections, which will be used to prepare the calibration report. Once the calibration report has been accepted by MCC, the roughness survey of MCC Compact road will take place.

Staffing: The consulting firm may staff the data collection with two total staff members, one driver and one technician for the IRI survey. The topographic survey for the calibration will be performed by

¹ ASTM - Test Method for Measuring Road Roughness by Static Level Method. Designation: E1364-95 (Reapproved 2017); ASTM E1926-08(2021), Standard Practice for Computing International Roughness Index of Roads from Longitudinal Profile Measurements, ASTM International, West Conshohocken, PA, 2021.
<https://www.astm.org/Standards/E1926>

two or three survey teams of three or four persons each. However, offerors are encouraged to propose a staffing plan that would maximize data collection accuracy while also being cost effective.

Safety Procedures: All personnel will wear seatbelts while the vehicle used to conduct the Road roughness study is being operated. The driver should obey all traffic laws.

Data Quality: IDG will provide a draft of quality control/quality assurance (QC/QA) measures in the Data Collection Protocol based off of appropriate ASTM or EN standards or the World Bank Technical Paper 46. Upon award, the consulting firm will review and revise the protocol’s QC/QA measures with IDG as appropriate. The final data collection protocol will be reviewed by MCC for approval. Overall, the consulting firm will be responsible for adhering to and institutionalizing layers of QC/QA measures as described in the Data Collection Protocol. To ensure high-quality data collection, it is essential that the instrument is properly calibrated and regularly checked and that proper testing procedures are followed. During data collection, the consulting firm must also maintain the study speed within a certain range. The IDG evaluation team will closely monitor the data collection process and conduct random checks to ensure the data is collected correctly and quickly rectify for any anomalies.

Data Processing: The average of IRI values obtained using a topographic survey will be plotted against the measuring device roughness values for each of the test sections. The calibration equation will be derived by calculating the best fit line for the points. The calibration equation can then be used to convert data from measuring device output into IRI units. The roads will then be sectioned into homogeneous sections which will also be illustrated in graphical format.

Analysis: The selected firm will provide all raw and treated data including calibration results.

B.1.2. Travel Time Study

General Method: The team will employ a test vehicle technique consisting of a vehicle dispatched to drive alongside the traffic under certain traffic scenarios for the purpose of data collection. A passenger in the test vehicle will record travel times at designated checkpoints or intervals using a clipboard and stopwatch and record vehicle speed, travel times, and distances.² The passenger will also record the length of time the vehicle was stopped at a traffic signal, a cross walk, or for any other reason. The guidelines for this survey provided by the US Department of Transportation will be followed.

Sample/Data collection location: Travel time will be measured on the MCC-funded Samar road, totaling 222 km, in each direction. A map of the Samar road can be found in Appendix A. GPS information must be recorded during data collection.

Rounds/Timing: There will be one round of data collection which includes six (6) one-way trips. The trip details are broken down in the table below. The round of data collection should take on weekday(s), preferably Wednesday, Thursday, and/or Friday.

Travel Time Study Timing

#	Departing	Arriving	Departure Time
T1	Wright	Guiuan	8:00 AM
T2	Guiuan	Wright	8:00 AM
T3	Wright	Guiuan	1:00 PM
T4	Guiuan	Wright	1:00 PM
T5	Wright	Guiuan	5:00 PM
T6	Guiuan	Wright	5:00 PM

² FHWA, Travel Time Data Collection Handbook, 1998

Staffing: The surveying team will consist of a driver and a trained technician that will record the travel time.

Safety Procedures: Travel time needs to be measured under certain traffic conditions based on the scenario assumptions, therefore it does not require traffic to be diverted. Staffs conducting the survey will remain in the vehicle at all times. All personnel will wear seatbelts while the vehicle used to conduct the Travel Time Study is being operated. The driver should obey all traffic laws.

Data Quality: The consulting firm should record video of all rounds of data collection using either a cell phone or GoPro camera attached to the windshield (professional video is not expected). The consulting firm will be responsible for providing this equipment. The recorded data using the paper forms will be compared with the recordings.

Data Processing: Data will be entered using a double entry method, where the data entry operators will enter the data twice to identify mismatches. The mismatches will be corrected based on the original copy of the form. All raw data collected will be entered using data entry software with built-in quality checks for data entry.

B.2. TASKS

B.2.1. Preparation for Data Collection

- *Acquisition of clearance and insurance to conduct the studies:* The selected firm is responsible for adhering to local formalities and obtaining any required permits related to data collection.
- *Documentation of equipment ownership and calibration certificates:* The consulting firm is responsible for providing proof of ownership and calibration certificates of the equipment.
- *Review data collection protocols:* The selected firm will be provided with draft data collection protocols detailing how to conduct the studies. In consultation with IDG, the selected firm will review and adapt the protocol to the local context as appropriate. Based on the consultation, IDG will finalize the data collection protocols. The final data collection protocols and instruments will be reviewed by MCC for approval.
- *Data Collection Plan:* The selected firm is responsible for drafting a data collection plan, which outlines all aspects of the field work to be conducted. The data collection plan should contain the following:
 - Composition of team, expected profiles, tasks and responsibilities of each member of the team;
 - Detailed calendar of activities/workplan;
 - Allocation plan for teams;
 - Travel logistics (transportation, hotel, per diem, telephone cards, Internet access, fuel for generators, etc.);
 - Samples of testing firms and testing reports;
 - Anticipated challenges and contingency plans; and
 - Outline of progress report to be shared with IDG on a daily basis.
- *Recruit of data collection teams:* The selected firm will be responsible for recruiting and hiring qualified engineers and supervisors for the study. The team composition should be designed for effective data collection. Whenever possible, the selected firm should put in place a balanced team in terms of gender and local languages.

B.2.2. Launch of Data Collection

- *Data collection:* The selected firm will be responsible for all logistics to successfully implement the study. During data collection, the selected firm will be responsible for the following:
 - Provide the field staff with the necessary equipment and materials for data collection (e.g., data collection equipment, safety instruments, PPE, etc.);
 - Manage and provide technical support to the field staff team to conduct the study based on the specific methodology requirements described in the data collection protocol in coordination with IDG;
 - Ensure safe transportation of field staff for all field activities as well as their safety and security in the field, as well as provide and adhere to strict COVID-19 safety protocols;
 - Ensure internal quality control protocols are followed with regular supervision;
 - Conduct random quality control by supervisors to verify accuracy;
 - Facilitate inspection of the field work by IDG and the representatives from the Government of the Philippines; and
 - Record photo evidence of relevant standards application and all equipment used; and
 - Submit daily progress reports to IDG.

B.2.3. Data Entry and Processing

- *Data review and validation:* The selected firm will be responsible for high-quality data. When data is entered, validated, and reviewed, the selected firm should consolidate the data in an organized manner and transfer the data to IDG.
- *Drafting final report:* The selected firm will be responsible for drafting a detailed summary of the data collected and present the data analyzed. The final report should include photo evidence of ASTM application in the field for the Road Roughness Study and all equipment used for the Travel Time Study, copies of the field books, and description of all checks/verifications made.

B.3. ROLES AND RESPONSIBILITIES

B.3.1 MCC: MCC will provide the following support to IDG and the consulting firm:

- Build buy-in and ownership of the research and analysis from local stakeholders;
- Provide oversight of IDG's contract;
- Review and provide consent to subcontract for IDG; and
- Provide technical review of key deliverables (final data collection instruments, summary of pilot test, and data collection report).

B.3.2. IDG: IDG will provide the following support to the consulting firm:

- Provide a letter introducing the firm to the Department of Public Works and Highways (DPWH);
- Provide draft and final data collection protocol, instrument, and training manual;
- Provide background documents to the consulting firm to successfully complete the tasks above;
- Collaborate with the consulting firm to provide training to the drivers and technicians;
- Oversee the field work and provide recommendations to ensure high quality data; and
- Supervise the overall data collection and provide feedback to the consulting firm as necessary.

B.3.3. Consulting Firm: The consulting firm will be responsible for the following:

- Prepare for all aspects of data collection including recruitment, training, and piloting;
- Provide feedback and recommendations to ensure high quality data;
- Closely follow the data collection protocol and manage the fieldwork;
- Ensure high quality data; and
- Produce clean dataset and final data collection summary and analysis report.

SECTION C. DELIVERIES AND PERFORMANCE

C.1. PERIOD OF PERFORMANCE

The period of performance will start on the date of award and end by **August 2023**. Data collection must be conducted within the period of performance and in accordance with the timelines indicate in this RFP. The details of the data collection timing for the study will be finalized between IDG and the selected firm.

C.2. LIST OF DELIVERABLES

The selected firm is responsible for the following deliverables for the Road Roughness Survey:

Output	Estimated Due Date
Deliverable 1: Evidence of permits for implementing all data collection	1 weeks upon signing contract
Deliverable 2: Summary of suggested revisions to the data collection protocol	2 weeks upon signing contract
Deliverable 3: Data Collection Plan	4 weeks upon signing contract
Deliverable 4: Weekly Data Collection Progress Reports (4)	7, 8, 9, 10 weeks upon signing contract
Deliverable 5: Draft report	13 weeks upon signing contract
Deliverable 6: Final report including the finalized dataset and analysis	16 weeks upon signing contract

The selected firm is responsible for the following deliverables for the Travel Time Study.

Output	Estimated Due Date
Deliverable 1: Evidence of permits for implementing all data collection	1 week upon signing contract
Deliverable 2: Summary of suggested revisions to the data collection protocol	2 weeks upon signing contract
Deliverable 3: Data Collection Plan	4 weeks upon signing contract
Deliverable 4: Daily Data Collection Progress Reports (4)	5 weeks upon signing contract
Deliverable 5: Draft report	8 weeks upon signing contract
Deliverable 6: Final report including the finalized dataset and analysis	11 weeks upon signing contract

**Actual dates will be identified during contract negotiations with IDG.*

Unless specifically instructed otherwise, all reports shall be submitted electronically in MS Office Word, Excel, or PDF. All deliverables are to be submitted in English. Final due dates for all deliverables will be discussed with IDG and then included in the contract.

SECTION D. PAYMENT

D.1. PAYMENT SCHEDULE

The selected firm will be paid based on submission of deliverables as below for the Road Roughness Study:

Output	Contract Amount for the Road Roughness Study (%)
Deliverable 1: Contract Signature	5%
Deliverable 2: Draft Data Collection Plan	10%
Deliverable 3: Calibration Report	15%
Deliverable 4: Completion of all data collection evidenced by receipt of the Draft Report	35%
Deliverable 5: Upon transmission and acceptance of the Final Report	35%

The selected firm will be paid based on submission of deliverables as below for the Travel Time Study:

Output	Contract Amount for the Travel Time Study
Deliverable 1: Evidence of permits for implementing all data collection	5%
Deliverable 2: Summary of suggested revisions to the data collection protocol	10%
Deliverable 3: Data Collection Plan	15%
Deliverable 4: Draft Report	35%
Deliverable 5: Final report including the finalized dataset	35%

D.2. PAYMENT DETAILS

The consulting firm will be responsible for any correspondent bank fees associated with transfers. The payment will be sent by IDG (US based) with funding provided by MCC.

SECTION E. PROPOSAL INSTRUCTIONS

E.1. QUESTIONS CONCERNING THE RFP

For further information, please contact procurement@internationaldevelopmentgroup.com. All questions must be submitted in writing by **the date noted on the cover page of this RFP**. IDG will provide responses to the questions or comments received. These submissions must be made by email only to procurement@internationaldevelopmentgroup.com. In the subject line reference: **Questions - Philippines Road Evaluation Engineering Study Services**.

E.2. PROPOSAL DUE DATE

Proposals should be submitted in electronic format to procurement@internationaldevelopmentgroup.com by **the date noted on the cover page of this RFP**. The subject line of the email should reference: **Proposal – Philippines Road Evaluation Engineering Study Services**.

E.3. PROPOSAL SUBMISSION INSTRUCTIONS

Details on the proposal instructions are as below:

- *Volumes*: Each offeror's proposal shall be prepared as two (2) separate electronic volumes:
 - Volume 1 – Technical Proposal (limited to a maximum of 20 pages)
 - Institutional capacity (5 pages)
 - Staffing (3 pages)
 - Understanding of evaluation methodology for the Road Roughness study including a workplan with a Gantt chart/timeline (5 pages – if relevant)
 - Understanding of evaluation methodology for the Time Travel study including a workplan with a Gantt chart/timeline (5 pages – if relevant)
 - Annex: CVs for key personnel (limited to a maximum of 2 pages per person and not included in the maximum page count)
 - Annex: Professional References of the firm – at least one but no more than 3 with email addresses and phone numbers (limited to a maximum of 1 page and not included in the maximum page count)
 - Volume 2 – Cost Proposal (no page limit)
- *Format*: Technical proposals must be submitted in either PDF or Microsoft Word. Cost proposals must be submitted with 1) a detailed budget in Excel with clear quantities and unit costs and 2) a detailed budget narrative with a corresponding PDF or Microsoft Word narrative describing the basis of the costs proposed.
- *Language*: Technical proposals shall be submitted in English. Cost proposals shall be submitted in English.
- *Validity*: Proposal submissions must remain valid for 60 days from the date of submission.

E.4. PREPARATION OF TECHNICAL PROPOSAL

The technical proposal shall include the following:

- *Institutional capacity*: Describe past and current projects of similar scope and their relevance to the road roughness study/time travel study described under Section B.
- *Staffing*: Describe the staffing including who will be managing and supporting the data collection. The offeror shall retain a highly qualified staff of engineers, supervisors, and administrative staff to perform the assignment.

- *Understanding of evaluation methodology:* Describe the methodology and data collection procedure for the study (or for each study if submitting a proposal for both studies). This must include a discussion on proposed methodology alternatives, if different from Section B, and the rationale behind final decision reached. The proposal should include the proposed timing of data collection to yield best results.

E.5. PREPARATION OF COST PROPOSAL

The cost proposal shall include the following:

- A detailed budget in Excel with clear quantities and unit costs in Filipino Peso to enable the evaluator to determine price reasonableness. The final total cost should be presented in both Filipino Peso and US Dollars with a clearly documented exchange rate. For offerors that propose undertaking two surveys, the firm must submit one file with each survey budgeted on a separate tab within the same Excel workbook. Offerors are **encouraged** to use the template provided. Where there are shared costs between surveys, the firm should split those between the relevant survey budgets pro-rata and label the line item as a shared cost.
- A detailed budget narrative in Microsoft Word or PDF outlining the justification for each line item.

SECTION F. EVALUATION CRITERIA FOR AWARD

F.1. QUALIFICATIONS AND EXPERIENCE OF THE FIRM

The selected consulting firm shall possess the following qualifications:

- Official registration in the country of company origin;
- Demonstrated experience in conducting road roughness study and/or time travel study of a scale and complexity similar to those envisaged by the SOW in the past five years;
- Strong capacity and experience in planning and organizing logistics;
- Strong capacity in data management; and
- Demonstrated experience of key personnel.

F.2. EVALUATION CRITERIA

Proposals will be equally evaluated according to the following criteria:

- Organizational experience in conducting road roughness or similar studies, particularly in Philippines or in the region;
- Demonstrated understanding of the requirements set forth in the RFP;
- Relevance and quality of proposed protocol and methodology;
- Qualifications and experience of key personnel responsible for managing the data collection; and
- Reasonableness of the proposed costs.

APPENDIX A. MAP OF MCC-FUNDED SECTION OF THE ROAD

