

DPWH-CONSL-TPF 1. TECHNICAL PROPOSAL SUBMISSION FORM

[Letterhead of Bidder]

[Date]

[Name of Chairperson of BAC]

[Designation]

[Name of DPWH Procuring Entity]

[Office Address]

Dear Sir / Madame:

Subject: Technical Proposal Submission

We, the undersigned, offer to provide the consulting services for *[insert Name of Project]* in accordance with your Bidding Documents dated *[insert date]* and our Bid. We are hereby submitting our Bid, which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelope.

We confirm that the information contained in the Eligibility Documents submitted earlier together with the Expression of Interest remain correct as of the date of bid submission.

If negotiations are held during the period of bid validity, i.e., before *[insert date]*, we undertake to negotiate on the basis of the proposed staff. Our Bid is binding upon us and subject to the modifications resulting from contract negotiations.

In accordance with Clause 51 of the General Conditions of Contract (GCC) which is part of the Bidding Documents for this Project, we acknowledge and accept the Procuring Entity's right to inspect and audit all records relating to our Bid irrespective of whether we enter into a contract with the Procuring Entity as a result of this Bid or not.

We understand you are not bound to accept any Bid received for the selection of a consultant for the Project.

We acknowledge that failure of our authorized representative to sign this Technical Proposal Submission Form and the abovementioned Financial Proposal Submission Form shall be a ground for the rejection of our Bid.

Very truly yours,

Authorized Signature:
Name and Title of Signatory:
Name of Firm:
Address:

Bid Securing Declaration Form

[shall be submitted with the Bid if bidder opts to provide this form of bid security]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID SECURING DECLARATION Project Identification No.: *[Insert number]*

To: *[Insert name and address of the Procuring Entity]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f), of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
 - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
 - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
 - c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of *[month]* *[year]* at *[place of execution]*.

*[Insert NAME OF BIDDER OR ITS AUTHORIZED
REPRESENTATIVE]*

[Insert signatory's legal capacity]

Affiant

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

DPWH-CONSL-22(TPF3). COMMENTS AND SUGGESTIONS OF CONSULTANT ON THE
TERMS OF REFERENCE AND ON DATA, SERVICES, AND FACILITIES TO BE PROVIDED BY THE
PROCURING ENTITY

On the Terms of Reference:

- 1.
- 2.
- 3.
- 4.
- 5.

On the data, services, and facilities to be provided by the Procuring Entity:

- 1.
- 2.
- 3.
- 4.
- 5.

DPWH-CONSL-24(TPF 4). DESCRIPTION OF THE **APPROACH,** METHODOLOGY AND
WORK PLAN FOR PERFORMING THE PROJECT

DPWH-CONSL-25(TPF 5). ORGANIZATIONAL CHART, TEAM COMPOSITION AND TASKS FOR THE PROJECT

Insert Organizational Chart for the Project.

1. Technical Support Staff		
Name	Position	Task

1. Technical Support Staff to report directly to		
Name	Position	Task

TPF 6. CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

Proposed Position: _____

Name of Firm: _____

Name of Staff: _____

Profession: _____

Date of Birth: _____

Years with Firm/Entity: _____ Nationality: _____

Membership in Professional Societies: _____

Detailed Tasks Assigned: _____

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on project. Describe degree of responsibility held by staff member on relevant previous projects and give dates and locations. Use about half a page.]

Education:

[Summarize college/university and other specialized education of staff members, giving names of schools, dates attended, and degrees obtained. Use about one quarter of a page.]

Degree Courses:

Degree	Major/Specialization	Institution	Dates Attended

Training:

Course	Conducted by	Start Date	End Date	No.of hours

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of projects. For experience in last ten years, also give types of activities performed and client references, where appropriate. Use about two pages.]

Service record

Start Date	End Date	Organization	Position

Projects:

Project Name and location	Project Cost	Designation	Services rendered	Start Date	End Date	Client

Languages:

[For each language, indicate proficiency: excellent, good, fair, or poor in speaking, reading, and writing.]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Commitment:

I also commit to work for the Project in accordance with the time schedule as indicated in the contract once the firm is awarded the Project.

[Signature of staff member and authorized representative of the firm] Date: _____
Day/Month/Year

Full name of staff member: _____

Full name of authorized representative: _____

DPWH-CONSL-27(TPF 7). TIME SCHEDULE OF PROFESSIONAL PERSONNEL

			Months (in the Form of a Bar Chart)												
Name	Position	Reports Due/Activities	1	2	3	4	5	6	7	8	9	10	11	12	Number of Months
															Subtotal (1)
															Subtotal (2)
															Subtotal (3)
															Subtotal (4)

Full-time: _____
 Reports Due: _____
 Activities Duration: _____
 Location: _____

Part-time: _____

Signature: _____
 (Authorized representative)

Full Name: _____
 Title: _____
 Address: _____

DPWH-CONSL-28(TPF 8). ACTIVITY (WORK) SCHEDULE

A. Field Investigation and Study Items

	<i>[1st, 2nd, etc. are months from the start of project.]</i>												
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	
Activity (Work)													

—													

—													

—													

—													

B. Completion and Submission of Deliverables/Reports

Deliverables/Report	Date
Inception Report	
Monthly Progress Report	
Quarterly Progress Report	
Final Report	
Inception Report	

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. *[Select one, delete the other:]*

[If a sole proprietorship:] I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];

[If a partnership, corporation, cooperative, or joint venture:] I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. *[Select one, delete the other:]*

[If a sole proprietorship:] As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney;

[If a partnership, corporation, cooperative, or joint venture:] I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting:**

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. *[Select one, delete the rest:]*

[If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical

Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a partnership or cooperative:] None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a corporation or joint venture:] None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and
8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
 - a. Carefully examining all of the Bidding Documents;
 - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
 - c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
10. **In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.**

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of __, 20__ at _____, Philippines.

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]
Affiant

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

DPWH-CONSL-30(FPF 1). FINANCIAL PROPOSAL SUBMISSION FORM

[[Letterhead of Bidder]

[Date]

[Name of Chairperson of BAC]

[Designation]

[Name of DPWH Procuring Entity]

[Office Address]

Dear Sir / Madame:

Subject: Financial Proposal Submission

We, the undersigned, offer to provide the consulting services for *[insert Name of Consultancy Project]* in accordance with your Bidding Documents dated *[insert date]* and our Bid (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of *[amount in words and figures]*.

Our Financial Proposal shall be binding upon us up to expiration of the bid validity period, i.e., *[insert date]*.

In accordance with Clause 51 of the General Conditions of Contract (GCC) which is part of the Bidding Documents for this Project, we acknowledge and accept the Procuring Entity's right to inspect and audit all records relating to our Bid irrespective of whether we enter into a contract with the Procuring Entity as a result of this Bid.

We confirm that we have read and we understand and accept the contents of the Instructions to Bidders (ITB), Bid Data Sheet (BDS), General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Terms of Reference (TOR), the provisions relating to the eligibility of Consultant, the applicable guidelines for the procurement rules of the Funding Source, and all Supplemental/Bid Bulletins issued and other attachments and inclusions included in the Bidding Documents sent to us.

We understand you are not bound to accept any Bid you receive.

We remain,

Yours sincerely,

Authorized Signature:

Name and Title of Signatory:

Name of Firm:

Address:

DPWH-CONSL-31(FPF 2). SUMMARY OF COSTS

Item	Cost (PhP)
I. REMUNERATION	
II. REIMBURSABLE COST	
III. GEOTECHNICAL SURVEYS AND INVESTIGATION	
IV. SUBTOTAL (I+II+III)	
V. VAT (12% OF I)	
VI. CONTINGENCY (5% OF IV)	
VII. GRAND TOTAL (IV+V+VI)	

DPWH-CONSL-32(FPF 3). BREAKDOWN OF PRICE FOR THE PROJECT

Item	Amount (PhP)
<u>Remuneration:</u> <u>KEY PERSONNEL</u> 1. TEAM LEADER (Civil Engineer) 2. Laboratory Technician <u>Support Technical Staff:</u> 3. Senior Driller 4. Junior Driller 5. Field Driver <u>Reimbursable:</u> 1. Per diem 2. Vehicle rental (with driver) 3. Office supplies and printing reproduction of documents and reports <u>Survey Equipment</u> 1. Geotechnical surveys and investigation	

DPWH-CONSL-33(FPF 4). BREAKDOWN OF REMUNERATIONS FOR THE PROJECT

I.Breakdown of Remuneration Costs		No.	Days	Person-days	DAILY RATE	AMOUNT
KEY STAFF						
1	Team Leader (Civil Engineer)	1	3 days	1 person-days		
2	Laboratory technician	1	3 days	1 person-days		
SUPPORT TECHNICAL STAFF						
3	Senior driller	1	3 days	1 person-days		
4	Junior driller	3	3 days	3 person-days		
5	Field Driver	1	3 days	1 person-days		

DPWH-CONSL-34(FPF 5). REIMBURSABLES PER ACTIVITY

II.BREAKDOWN OF REIMBURSABLE COST	QUANTITY	UNIT	UNIT COST	TOTAL COST
1. Per diem	6	Man-days		
2. Vehicle rental (with driver)	3	Vehicle-days		
3. Office supplies and printing reproduction of documents and reports	1	Lump-sum		

DPWH-CONSL-34(FPF 5). SURVEYS AND INVESTIGATION

III.BREAKDOWN OF SURVEY EQUIPMENTS	QUANTITY	UNIT	UNIT COST	TOTAL COST
Geotechnical Surveys and Investigation	1	l.s.		



TERMS OF REFERENCE

CONTRACT ID: 24CSJI0008

Geotechnical Exploration for the Construction of Flood Control Structure (Revetment Wall) along Sibuguey River (Upstream), Barangay Concepcion, Alicia, Zamboanga Sibugay

I. INTRODUCTION

The Department of Public Works and Highways (DPWH) is responsible primarily for National Roads and Bridges and Road Network Development project but other component infrastructure projects like Flood Control structures seeking to develop, mitigate, protect and maintain further the road networks that interconnect other provinces from Zamboanga Sibugay to Zamboanga Del Norte, Zamboanga Del Sur, Zamboanga City and other nearby regions for the safety and comfort of its user.

II. OBJECTIVES

1. To explore the sub-surface conditions of the area to provide general data relating to the project
2. To give an outline of the surface and subsoil geology
3. To analyse the data obtained and give engineering consideration and recommendation on the selection and design of foundation.
4. To prepare the detailed geotechnical and geological investigation of the flood control structure for the preparation of the foundation.
5. To be able to provide a detailed sub-soil technical report.

III. PROJECT SCOPE

BORING REQUIREMENTS FOR EACH PROJECT SITE		
Name of Project	Spacing	Depth
CONSULTING SERVICES FOR Geotechnical Exploration for the Construction of Flood Control Structure (Revetment Wall) along Sibuguey River (Upstream), Barangay Concepcion, Alicia, Zamboanga Sibugay	- 2 boreholes spaced at one (1) meter each near both ends of the project	- 15meters depth or until three (3) consecutive SPT N Value>4 is obtained, whichever is greater (per borehole)

IV. SCOPE OF CONSULTING SERVICES

The Consultant shall provide all the labor, instrument/equipment materials, and supplies, vehicles, bunkhouses, etc., necessary to perform satisfactorily the geotechnical exploration herein required, viz:

- A. Field Works
- B. Laboratory Testing
- C. Soil Investigation and Preparation of Report
- D. Geotechnical Evaluation Report

The Consultant shall be held solely responsible for the result of this boring/drilling exploration and other activities under this Terms of Reference (TOR).

I. DETAILED EXPLORATION REQUIREMENTS/SPECIFICATIONS

A. FIELDWORKS

1. Borehole Location

The geotechnical investigation shall also include a geotechnical assessment of the site with at least two (2) boreholes spaced at one (1) meter each near both ends of the proposed location of each flood control project.

Additional intermediate boreholes shall be conducted for every 500-meter increment or at identified critical section/s. This shall be made upon the instruction of the Geotechnical Engineer.

In case the centerline of the proposed flood control structure is realigned after boring activities were done along the original alignment, confirmatory boreholes should be conducted, the locations and numbers of which shall be determined by the geotechnical Engineer.

2. Borehole Depth

The depth of the borehole below the riverbed shall be 2.0 times the height of the structure or until three (3) consecutive SPT N-Value > 40 is obtained, whichever is greater.

3. Procedure

- a. Deep drilling with Standard Penetration Test (SPT) shall be conducted at least two (2) boreholes spaced at one (1) meter each near both ends of the proposed location of each flood control project.

Additional intermediate boreholes shall be conducted for every 500-meter increment or at identified critical section/s. This shall be made upon the instruction of the Geotechnical Engineer.

The depth of the borehole below the riverbed shall be 2.0 times the height of the structure or until three (3) consecutive SPT N-Value > 40 is obtained, whichever is greater.

- b. The Consultant shall perform analysis and testing on disturbed and undisturbed soil samples. These analyses and testing shall be performed in accordance with AASHTO and ASTM standards.
- c. The soil samples for foundation design shall be tested for the determination of the main characteristics (grain size distribution and classification, moisture content, Waterberg limits, etc.)
- d. Submit design recommendations, foundation condition scheme, bearing capacity and settlement, groundwater table, hydrological influences, excavation stability, seismic design consideration, and liquefaction potential
- e. Geological structure, especially active faults which might traverse the area, should be delineated and potential mass movement areas should be identified. Analysis of liquefaction potential during earthquakes and consolidation due to soft ground should be included.

4. Handling and Core Samples

The contractor shall provide all the materials, equipment, and labor necessary for preserving samples.

B. LABORATORY TESTING

The preparation of samples for testing shall be made in accordance with AASHTO. The following tests shall be made on samples obtained from boring and drilling.

Standard Penetration Test

SPT shall be carried out through ordinary soil encountered to the depths specified above. The Split-barrel sampler to be used shall be 685.50 mm long and 50.80 mm wide with an inside diameter of 34.90 mm. The coupling head shall have four 12.70 mm (minimum diameter) vent ports and contain a check valve. The Drive weight assembly shall consist of a 63.50 kg weight, a driving head, and a guide permitting a free fall of 0.762 m. The consultant shall conduct this procedure according to AASHTO T 206.

Mechanical Sieve Analysis

Mechanical Sieve Analysis determines the percentage of various grain sizes. The grain size distribution is used to determine the textural classification of soils (i.e., gravel, sand, silty clay, etc.) which in turn is useful in evaluating the engineering characteristics such as permeability, strength, swelling potential, and susceptibility to frost action. The consultant shall conduct this procedure according to AASHTO T 88.

Hydrometer Analysis

Hydrometer Analysis determines the distribution (percentage) of particle sizes smaller than the No. 200 sieve (<0.075 mm) and identifies the silt, clay, and colloid percentages in the soil. The consultant shall conduct this procedure according to AASHTO T 88.

Specific Gravity

This test determines the specific gravity of the soil grains. This can indicate the mineralogy of the material which may affect its engineering properties. The consultant shall conduct this procedure according to AASHTO T 100.

Atterberg Limits

This test describes the relation between the consistency and plasticity of fine-grained soils and the moisture content. The consultant shall conduct this procedure according to AASHTO T 90.

Natural Moisture Content

This test determines the amount of water present in a quantity of soil in terms of its dry weight to be used to provide general correlations with strength, settlement, workability, and other properties. The consultant shall conduct this procedure according to AASHTO T 265.

Soil Strength Test

The design and analysis of shallow and deep foundations, excavations, earth retention structures, and fills and slopes require a thorough understanding of soil strength parameters.

The selection of strength parameters needed and the corresponding types of tests to be performed vary depending on the type of construction, the foundation design, the intensity, type, and duration of loads to be imposed, and soil materials existing at the site.

Consolidation Test

This test determines the compressibility parameters (C_c , C_s , C_r), stiffness in terms of constrained modulus ($D_r = 1/m_v$), pre-consolidation stress, rate of consolidation (c_v), creep rate (C'), and approximate value of permeability (k). The consultant shall conduct this procedure according to AASHTO T 216.

Permeability Test

This test determines the potential flow of fluids through soils. The consultant shall conduct this procedure according to AASHTO T 215.

Moisture-Density Relation Test (Compaction Test)

This test determines the maximum dry density attainable under a specified nominal compaction energy for a given soil and the (optimum) moisture content corresponding to this density. The consultant shall conduct this procedure according to AASHTO T 99 (Standard Proctor), and AASHTO T 180 (Modified Proctor).

Swell Index Test

This test determines the swell potential of possibly expansive soils. The consultant shall conduct this procedure according to AASHTO T 256.

V. IMPLEMENTATION

A. OUTPUTS/DELIVERABLES

1. Inception Report

The Consultant is required to submit one (1) month after the commencement of services. It shall outline a detailed work program and briefly describe the methodology and project schedule (GANTT and S-Curve) proposed to meet the terms of reference. The report shall include the initial findings as well as the preliminary layout of the forms to be used for various investigations and calculations. Inception Reports shall be submitted in soft-bound copy with the title of the report written at the spine.

2. Final report

The Consultant shall prepare the final report in 2 bound copies to be submitted after the completion of consulting services/works. It shall include, but not be limited to the following:

- I. Introduction
 - A. Project Background
 - B. Project Location and Site Description
- II. Objectives and Scope of Work
- III. Geology and Seismicity
 - A. Regional Geology
 - B. Site Geology
 - C. Seismicity
- IV. Field and Laboratory Tests
 - A. In-situ Tests (w/ description of test conducted)
 - B. Laboratory Tests (w/ description of test conducted)
- V. Results of Field Investigation and Laboratory Testing
 - A. Subsurface Soil Condition
 - B. Geotechnical Parameters based on Test Results
- VI. Evaluation and Findings
- VII. Conclusions and Recommendations
- VIII. Reference

List of Figures
List of Tables
Appendix

- Location Map
- Geologic Map
- Borehole Location Plan
- Geologic Cross-Sections & Soil Profiles
- Borehole Logs
- Geophysical Data (if conducted)
- In-situ Test Data
- Laboratory Test Data
- Detailed Calculations
- Additional Photographs

B. DURATION OF CONSULTANCY SERVICES

The Consultant's contract period for undertaking the geological and geotechnical investigation is **30 calendar days** and the Consultant shall commence work upon receipt of the Notice to Proceed (NTP).

C. SCHEDULES

Indicative schedule of activities and key personnel per project.

Item no.	Description	MONTH			
		WEEK 1	WEEK 2	WEEK 3	WEEK 4
I.	Mobilization/ Demobilization				
II.	Drilling Works				
III.	Laboratory Testing				
IV.	Final Report				

Item no.	Description	MONTH			
		WEEK 1	WEEK 2	WEEK 3	WEEK 4
I.	Team Leader				
II.	Foreman				
III.	Driller				
IV.	Laboratory Technician				
V.	Encoder				

VI. MANPOWER REQUIREMENTS

The Consultants shall be composed of qualified staff with experience in the conduct of geological and geotechnical investigations.

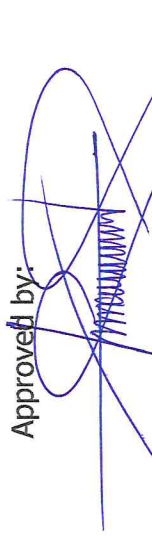
Position/Key Staff	No. of Staff	Detailed Tasks/ Responsibilities	Required Qualifications
Team Leader	1	<ul style="list-style-type: none"> Overall guidance, direction, supervision, and coordination of members of the Team. Collection and evaluation of geological information on the project sites. Study and determination of items and method of soil investigation and laboratory test. Perform necessary subsoil investigations on representative sections of the road with samples to be taken at suitable intervals. Investigate the physical properties of materials to facilitate the design of structures. 	<ul style="list-style-type: none"> Licensed/Registered Civil Engineer. Must be a holder of a Master's Degree in Geotechnical Engineering; and Must have at least five (5) years of related work or research experience.
Laboratory Technician	1	<ul style="list-style-type: none"> Investigate the physical properties of materials to facilitate the design of structures. Assists the Team Leader in the collection of necessary data and information, in carrying out detailed soil investigations along the road alignment. 	<ul style="list-style-type: none"> BS in Civil Engineering; Doctoral or MS in related field is an added advantage; Duly licensed/registered civil engineer; At least 5-year experience on soil, sub-surface and geotechnical survey and study of roads, bridges and related structures.

VII. ASSISTANCE TO BE PROVIDED BY THE DPWH

The DPWH shall ensure that the Consultant has access to all relevant information necessary for the performance of the above services. The Consultant is expected to provide office space and equipment and all other resources for completing the services.

Prepared by:


ELLAINÉ R. DE LOS REYES
Engineer II

Approved by:

MELVAR B. BAROY
Chief, Maintenance Section
BAC Chairperson