

EXPRESSION OF INTEREST (EOI)

**Title of Consulting Service:
MoPID/BAG/ICB/CS/01/2077/78**

Method of Consulting Service: International

**Project Name : Procurement of Consulting Service for the Construction
Supervision of Posta Bahadur Bogati Tunnel Project (Bhimphedi Kulekhani),
Makawanpur**

EOI : MoPID/BAG/ICB/CS/01/2077/78

**Office Name: Ministry of Physical Infrastructure Development Province No-3
Rural Road Division**

Office Address: Makawanpur, Hetauda Hetauda Hetauda Makwanpur

Funding agency : Government Budget

Abbreviations

ARE	-	Assistant Resident Engineer
BCF	-	Budget and Cost Forecast
CPM	-	Critical Path Method
CV	-	Curriculum Vitae
DLP	-	Defect Liability Period
DTL	-	Deputy Team Leader
DO	-	Development Partner
EA	-	Executive Agency
EMP	-	Environmental Management Plan
EOI	-	Expression of Interest
EoT	-	Extension of Time
GBR	-	Geotechnical Baseline Report
GDR	-	Geotechnical Data Report
GON	-	Government of Nepal
IoW	-	Inspector of Works
IPC	-	Interim Payment Certificate
IPS	-	Interim Payment Statement
MIS	-	Management Information System
MoPID	-	Ministry of Physical Infrastructure Development
MPR	-	Monthly Progress Report
OHSP	-	Occupational Health and Safety Plan
O&M	-	Operation and Maintenance
PAN	-	Permanent Account Number
PPA	-	Public Procurement Act
PPR	-	Public Procurement Regulation
RAP	-	Resettlement Action Plan
RE	-	Resident Engineer
SEMP	-	Site Specific Environmental Management Plan
SIoW	-	Senior Inspector of Works
TL	-	Team Leader
TOR	-	Terms of Reference
VAT	-	Value Added Tax
VO	-	Variation Order
QA/QC	-	Quality Assurance/Quality Control

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A. Request for Expression of Interest

Request for Expression of Interest

Government of Nepal (GoN)

Name of Employer: Ministry of Physical Infrastructure Development Province No-3 Rural Road Division

Date: 18-08-2020 10:00

Name of Project: Procurement of Consulting Service for the Construction Supervision of Posta Bahadur Bogati Tunnel Project (Bhimphedi Kulekhani), Makawanpur

1. Government of Nepal (GoN) has allocated fund toward the cost of Procurement of Consulting Service for the Construction Supervision of Posta Bahadur Bogati Tunnel Project (Bhimphedi Kulekhani), Makawanpur and intend to apply portion of this fund to eligible payments under the Contract for which this Expression of Interest is invited for International consulting service
2. The Ministry of Physical Infrastructure Development Province No-3 Rural Road Division now invites Expression of Interest (EOI) from eligible consulting firms (“consultant”) to provide the following consulting services: Procurement of Consulting Service for the Construction Supervision of Posta Bahadur Bogati Tunnel Project (Bhimphedi Kulekhani), Makawanpur
3. Interested eligible consultants may obtain further information and EOI document free of cost at the address Ministry of Physical Infrastructure Development Province No-3 Rural Road Division, Ministry of Physical Infrastructure Development Province No-3 Rural Road Division
Makawanpur, Hetauda
Hetauda, Makawanpur
Province Three
Hetauda
Nepal during office hours on or before 17-09-2020 12:00 or visit e-GP system www.bolpatra.gov.np/egp or visit the client’s website www.mopid.bagamati.gov.np
4. Consultants may associate with other consultants to enhance their qualifications.
5. Expressions of interest shall be delivered online through e-GP system www.bolpatra.gov.np/egp s3mopid@gmail.com on or before 17-09-2020 12:00
6. In case the last date of obtaining and submission of the EOI documents happens to be a holiday, the next working day will be deemed as the due date but the time will be the same as stipulated.
7. EOI will be assessed based on Qualification 40.0 %, Experience 50.0 %, and Capacity 10.0 % of consulting firm and key personnel. Based on evaluation of EOI, only shortlisted firms will be invited to submit technical and financial proposal through a request for proposal.
8. Minimum score to pass the EOI is 60.00

B. Instructions for Submission of Expression of

Instructions for Submission of Expression of Interest

1. Expression of Interest may be submitted by a sole firm or a joint venture of consulting firms.
2. Interested consultants must provide information indicating that they are qualified to perform the services (descriptions, organization and employee and of the firm or company, description of assignments of similar nature completed in the last 7 years and their location, experience in similar conditions, general qualifications and the key personnel to be involved in the proposed assignment).
3. This expression of interest is open to all eligible Consulting Firm/ Company/ Organization.
4. In case, the applicant is individual consultant, details of similar assignment experience, their location in the previous 4 years and audited balance sheet and bio data shall be considered for evaluation.
5. The assignment has been scheduled for a period of 42 Months for the Construction Period and 12 Months for Defect Liability Period. Expected date of commencement of the assignment is 30-10-2020.
6. A Consultant will be selected in accordance with the QCBS method.
7. Expression of Interest should contain following information:
 - (i) A covering letter addressed to the representative of the client on the official letter head of company duly signed by authorized signatory.
 - (ii) Applicants shall provide the following information in the respective formats given in the EOI document:
 - EOI Form: Letter of Application (Form 1)
 - EOI Form: Applicant's Information (Form 2)
 - EOI Form: Work Experience Details (Form 3(A), 3(B) & 3(C))
 - EOI Form: Capacity Details (Form 4)
 - EOI Form: Key Experts List (form 5).
8. Applicants may submit additional information with their application but shortlisting will be based on the evaluation of information requested and included in the formats provided in the EOI document.
9. The Expression of Interest (EOI) document must be duly completed and submitted in sealed envelope and should be clearly marked as "EOI Application for Short-listing for the Procurement of Consulting Service for the Construction Supervision of Posta Bahadur Bogati Tunnel Project (Bhimphedi Kulekhani), Makawanpur. The Envelope should also clearly indicate the name and address of the Applicant. Alternatively, applicants can submit their EOI application through e-GP system by using the forms and instructions provided by the system.
10. The completed EOI document must be submitted on or before the date and address mentioned in the "Request for Expression of Interest". In case the submission falls on public holiday the submission can be made on the next working day. Any EOI Document received after the closing time for submission of proposals shall not be considered for evaluation.

C. Objective of Consultancy Services or Brief TOR

Objective of Consultancy Services or Brief TOR

Road transportation is the major mode of transportation in Nepal. Road should be short, easy, safe and economic. Normally, people prefer to use the shortest route of travelling. This saves travel time and transportation cost. Regarding the connectivity, Kathmandu, the Capital City with Hetauda, Provincial Capital and also with Terai region, there are many all-weather and seasonal roads. Mainly, Hetauda – Narayanghat – Muglin – Kathmandu (210 km), Tribhuvan Rajpath (141 km) and Kanti Lokpath (92 km). However, mostly traveled shortest route preferred is **Madan Bhandari Marga** (Hetauda – Bhainse – Bhimphedi – Kulekhani – Sisneri – Dakshinkali – Kathmandu Road) (78 km) that runs along the ascending and descending gradient of the mountains linking Hetauda with Kathmandu valley. The ascending and descending road alignment with numerous sharp bends have made these road alignments risky and uncomfortable mainly at the Bhimphedi to Kulekhani section. It is essential to upgrade the most preferred route by inserting a tunnel from Bhimphedi to Kulekhani section, which will reduce the distance from Hetauda to Kathmandu by 13 km leading to the total travel distance of 65 km. And eventually, it will be the most economic and shortest travel distance from Hetauda to Kathmandu valley in future.

The Bagmati Province Government has announced Bhimphedi Kulekhani Tunnel Project as **Posta Bahadur Bogati Tunnel**. By constructing this tunnel it saves travel time, vehicle operating cost, accident cost and environmental cost. Large population of Kathmandu Valley is dependent on Terai region for basic supply of food, fuel and other trading activities. Hence, as a suitable alternative of the existing transportation and in order to ease the traffic problem of other highways in future, Bagmati Province Government has initiated for the construction of Bhimphedi Kulekhani Road Tunnel along Kathmandu Hetauda route and committed to:

1. Improvement in transport mobility from Kathmandu to Hetauda and other part of Nepal;
2. Reduce traffic congestion at difficult topography and high gradient;
3. Enhance the economic activities and act as the growth initiator of the Province and Country considering the development of Trade, Industry, Commerce, Agriculture and Tourism;
4. Further, the tunnel will accommodate petroleum, gas and other utilities pipeline through its conduit.

The Bagmati Province Government intends to engage a firm of international consultants (the Consultant) to provide engineering supervision for construction of the Road Tunnel along with approach road and bridge. The Ministry of Physical Infrastructure Development (MoPID), Bagmati Province, is the Executing Agency and the MoPID/Project Implementation Office is the Implementing Agency (the Employer/Employer) for the Project.

This consulting service assignment will broadly include design review, project management, supervision and monitoring, quality assurance, contract management and furnishing engineering

decisions, verification of quantity, recording of measurements and certifications of those measurement and bills of the Contractor during construction and maintenance period. The construction supervision will be carried out under Contract of Tunnel along with approach road and bridges. The Consultant shall need to administer the project implementation to ensure successful and timely completion of the Contract. The consultant shall assist the Employer to administer the Contractor to Complete the Project efficiently and effectively.

The following Terms of Reference broadly describe the Consultant's scope of services, team composition, and qualification requirements of its personnel.

Objectives and Scope of Services

The objective of this consulting service is to assist the Employer with the supervision of construction and maintenance of Bhimphedi Kulekhani Tunnel Project consisting of similar types of 2 tube tunnels with approach road, bridges and other components, and to ensure that high quality construction is achieved in scheduled time period, within budget and that the work is carried out in full compliance within the terms and condition of the contract documents and sound engineering practices.

The Consultant shall carry out the Engineering Services of the Project throughout the entire contract period in close coordination with the Employer. The Consultant shall act as Employer's representative for contract. The main scope of the Consulting services is as follows:

- a) The Consultant shall review, check and assess the design documents submitted by the Contractor, and recommend for approval accordingly;
- b) The Consultant shall assist the Employer in the implementation of the works by providing a comprehensive project management service;
- c) The Consultant shall perform the assigned task to ensure smooth completion of the Project in accordance with the Contract agreement between the Employer and Contractor and in conformity with internationally accepted standards and procedures as well as state-of-the-art technology prevailing in the tunnel road projects;
- d) The Consultant shall carry out the Construction Supervision and Contract Administration of the proposed project ensuring full compliance with the design drawings and technical specifications;
- e) The Consultant shall monitor the environmental and social compliance accordance with the environmental and social safeguard requirements for the project;
- f) The Consultant shall verify/certify the Interim Payment Certificate (IPC) submitted by the Contractor and recommend to the Employer for payment.

The estimated requirement of the consulting service is tabulated below:

SN	Position	Total Input (Man Months)
A	International Staff	
1	Team Leader (TL)	39
2	Chief Tunnel Design Engineer	12
3	Tunnel Facility Engineer(Electrical/Communications)	6
4	Tunnel Ventilation Engineer	6
5	Sr. Geologist	6
6	Tunnel Engineer (Operation/Maintenance)	3
7	Sr. Contract Specialist	6
8	Sr. Structure Engineer	6
	Total International	84
B	National Staff (Key)	
1	Deputy Team Leader (DTL)	45
2	Resident Engineer	36
3	Quality Control/Material Engineer	38
4	Geologist	38
5	Quantity Survey Engineer	36
6	Electrical Engineer	6
7	Structure Engineer	26
8	Geotechnical Engineer	25
9	Drainage Engineer	6
10	Road Safety Specialist	6
11	Contract Specialist	38
12	Environmental Engineer	9
13	Social/Resettlement Specialist	9
	Total National Key Staff	318

D. Evaluation of Consultant's EOI Application

Evaluation of Consultant's EOI Application

Consultant's EOI application which meets the eligibility criteria will be ranked on the basis of the Ranking Criteria.

i) Eligibility & Completeness Test

Sl. No.	Criteria Title	Compliance
1	Corporate Registration	
2	Tax Clearance for upto the fiscal year 2075/76 (For Local Consultants Only)	
3	VAT/PAN Registration (For Local Consultants Only)	
4	EOI Form 1: Letter of Application	
5	EOI Form 2: Applicant's Information Form	
6	EOI Form 3: Experience (3(A) and 3(B))	
7	EOI Form 4: Capacity	
8	EOI Form 5: Qualification of Key Experts	
9	In case of a natural person or firm/institution/company which is already declared blacklisted and ineligible by the GoN, any other new or existing firm/institution/company owned partially or fully by such Natural person or Owner or Board of director of blacklisted firm/institution/company; shall not be eligible consultant.	
10	If the corruption case is being filed to Court against the Natural Person or Board of Director of the firm/institution /company or any partner of JV, such Natural Person or Board of Director of the firm/institution /company or any partner of JV shall not be eligible to participate in procurement process till the concerned Court has not issued the decision of clearance against the Corruption Charges.	

ii) EOI Evaluation Criteria

A. Qualification

Sl. No.	Criteria	Minimum Requirement
1	Qualification of Firm/Resource Personnel	Refer attached EOI Evaluation Criteria

Score: 40.0

B. Experience

Sl. No.	Criteria	Minimum Requirement
1	General Experience of consulting firm	Refer attached EOI Evaluation Criteria
2	Specific experience of consulting firm within last 7 years. In case of person, specific experience of the person within last 4 years.	Refer attached EOI Evaluation Criteria

Score: 50.0

C. Capacity

Sl. No.	Criteria	Minimum Requirement
1	Financial Capacity	Refer attached EOI Evaluation Criteria

Score: 10.0

Minimum score to pass the EOI is: 60.00

Minimum score to pass the EOI is: 60.00

Note : If the corruption case is being filed to Court against the Natural Person or Board of Director of the firm/institution /company or any partner of JV, such Natural Person or Board of Director of the firm/institution /company or any partner of JV such consultant's proposal shall be excluded during the evaluation.

E. EOI Forms & Formats

E. EOI Forms & Formats

Form 1. Letter of Application

Form 2. Applicant's information

Form 3. Experience (*General, Specific and Geographical*)

Form 4. Capacity

Form 5. Qualification of Key Experts

Standard EOI Document

1. Letter of Application

(Letterhead paper of the Applicant or partner responsible for a joint venture, including full postal address, telephone no., fax and email address)

Date:

To,

Full Name of Client: _____

Full Address of Client: _____

Telephone No.: _____

Fax No.: _____

Email Address: _____

Sir/Madam,

1. Being duly authorized to represent and act on behalf of (hereinafter "the Applicant"), and having reviewed and fully understood all the short-listing information provided, the undersigned hereby apply to be short-listed by **[Insert name of Client]** as Consultant for **[Insert brief description of Work/Services]**.
2. Attached to this letter are photocopies of original documents defining:
 - a) the Applicant's legal status;
 - b) the principal place of business;
3. **[Insert name of Client]** and its authorized representatives are hereby authorized to verify the statements, documents, and information submitted in connection with this application. This Letter of Application will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by yourselves to verify statements and information provided in this application, or with regard to the resources, experience, and competence of the Applicant.
4. **[Insert name of Client]** and its authorized representatives are authorized to contact any of the signatories to this letter for any further information.¹
5. All further communication concerning this Application should be addressed to the following person,

[Person]

[Company]

[Address]

[Phone, Fax, Email]
6. We declare that, we have no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or

¹ Applications by joint ventures should provide on a separate sheet, relevant information for each party to the Application.

Standard EOI Document

business and our Company/firm has not been declared ineligible.

7. We further confirm that, if any of our experts is engaged to prepare the TOR for any ensuing assignment resulting from our work product under this assignment, our firm, JV member or sub-consultant, and the expert(s) will be disqualified from short-listing and participation in the assignment.
8. The undersigned declares that the statements made and the information provided in the duly completed application are complete, true and correct in every detail.

Signed :

Name :

For and on behalf of (name of Applicant or partner of a joint venture):

Standard EOI Document

2. Applicant's Information Form

(In case of joint venture of two or more firms to be filled separately for each constituent member)

1. Name of Firm/Company:
2. Type of Constitution (*Partnership/ Pvt. Ltd/Public Ltd/ Public Sector/ NGO*)
3. Date of Registration / Commencement of Business (*Please specify*):
4. Country of Registration:
5. Registered Office/Place of Business:
6. Telephone No; Fax No; E-Mail Address
7. Name of Authorized Contact Person / Designation/ Address/Telephone:
8. Name of Authorized Local Agent /Address/Telephone:
9. Consultant's Organization:
10. Total number of staff:
11. Number of regular professional staff:

(Provide Company Profile with description of the background and organization of the Consultant and, if applicable, for each joint venture partner for this assignment.)

Standard EOI Document

3. Experience

3(A). General Work Experience

(Details of assignments undertaken. Each consultant or member of a JV must fill in this form.)

S. N.	Name of assignment	Location	Value of Contract	Year Completed	Client	Description of work carried out
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Standard EOI Document

3(B). Specific Experience

Details of similar assignments undertaken in the previous seven years

(In case of joint venture of two or more firms to be filled separately for each constituent member)

Assignment name:	Approx. value of the contract (in current NRs; US\$ or Euro) ² :
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total No. of person-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in current NRs; US\$ or Euro):
Start date (month/year): Completion date (month/year):	No. of professional person-months provided by the joint venture partners or the Sub-Consultants:
Name of joint venture partner or sub-Consultants, if any:	Narrative description of Project:
Description of actual services provided in the assignment: Note: Provide highlight on similar services provided by the consultant as required by the EOI assignment.	

Firm's Name: _____

² Consultant should state value in the currency as mentioned in the contract

Standard EOI Document

3(C). Geographic Experience

Experience of working in similar geographic region or country

(In case of joint venture of two or more firms to be filled separately for each constituent member)

No	Name of the Project	Location (Country/ Region)	Execution Year and Duration
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Standard EOI Document

4. Capacity

4(A). Financial Capacity

(In case of joint venture of two or more firms to be filled separately for each constituent member)

Annual Turnover	
Year	Amount Currency

- **Average Annual Turnover**

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(Note: Supporting documents for Average Turnover should be submitted for the above.)

Standard EOI Document

4(B). Infrastructure/equipment related to the proposed assignment³

No	Infrastructure/equipment Required	Requirements Description
1.		
2.		
3.		
4.		
5.		

³ Delete this table if infrastructure/equipment for the proposed assignment is not required.

Standard EOI Document

5. Key Experts *(Include details of Key Experts only)*

(In case of joint venture of two or more firms to be filled separately for each constituent member)

SN	Name	Position	Highest Qualification	Work Experience (in year)	Specific Work Experience (in year)	Nationality
1						
2						
3						
4						
5						

(Please insert more rows as necessary)

**TERMS OF REFERENCE FOR
CONSTRUCTION SUPERVISION CONSULTANT
FOR POSTA BAHADUR BOGATI TUNNEL
(BHIMPHEDI KULEKHANI TUNNEL PROJECT)**

A. Background

Road transportation is the major mode of transportation in Nepal. Road should be short, easy, safe and economic. Normally, people prefer to use the shortest route of travelling. This saves travel time and transportation cost. Regarding the connectivity, Kathmandu, the Capital City with Hetauda, Provincial Capital and also with Terai region, there are many all-weather and seasonal roads. Mainly, Hetauda – Narayanghat – Mugling – Kathmandu (210 km), Tribhuvan Rajpath (141 km) and Kanti Lokpath (92 km). However, mostly traveled shortest route preferred is **Madan Bhandari Marga** (Hetauda – Bhainse – Bhimphedi – Kulekhani – Sisneri – Dakshinkali – Kathmandu Road) (78 km) that runs along the ascending and descending gradient of the mountains linking Hetauda with Kathmandu valley. The ascending and descending road alignment with numerous sharp bends have made these road alignments risky and uncomfortable mainly at the Bhimphedi to Kulekhani section. It is essential to upgrade the most preferred route by inserting a tunnel from Bhimphedi to Kulekhani section, which will reduce the distance from Hetauda to Kathmandu by 13 km leading to the total travel distance of 65 km. And eventually, it will be the most economic and shortest travel distance from Hetauda to Kathmandu valley in future.

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1. Improvement in transport mobility from Kathmandu to Hetauda and other part of Nepal;
2. Reduce traffic congestion at difficult topography and high gradient;
3. Enhance the economic activities and act as the growth initiator of the Province and Country considering the development of Trade, Industry, Commerce, Agriculture and Tourism;
4. Further, the tunnel will accommodate petroleum, gas and other utilities pipeline through its conduit.

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This consulting service assignment will broadly include design review, project management, supervision and monitoring, quality assurance, contract management and furnishing engineering decisions, verification of quantity, recording of measurements and certifications of those measurement and bills of the Contractor during construction and maintenance period. The construction supervision will be carried out under Contract of Tunnel along with approach road and bridges. The Consultant shall need to administer the project implementation to ensure successful and timely completion of the Contract. The consultant shall assist the Employer to administer the Contractor to Complete the Project efficiently and effectively.

The following Terms of Reference broadly describe the Consultant's scope of services, team composition, and qualification requirements of its personnel.

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The objective of this consulting service is to assist the Employer with the supervision of construction and maintenance of Bhimphedi Kulekhani Tunnel Project consisting of similar types of 2 tube tunnels with approach road, bridges and other components, and to ensure that high quality construction is achieved in scheduled time period, within budget and that the work is carried out in full compliance within the terms and condition of the contract documents and sound engineering practices.

The Consultant shall carry out the Engineering Services of the Project throughout the entire contract period in close coordination with the Employer. The Consultant shall act as Employer's representative for contract. The main scope of the Consulting services is as follows:

- a) The Consultant shall review, check and assess the design documents submitted by the Contractor, and recommend for approval accordingly;
- b) The Consultant shall assist the Employer in the implementation of the works by providing a comprehensive project management service;
- c) The Consultant shall perform the assigned task to ensure smooth completion of the Project in accordance with the Contract agreement between the Employer and Contractor and in conformity with internationally accepted standards and procedures as well as state-of-the-art technology prevailing in the tunnel road projects;
- d) The Consultant shall carry out the Construction Supervision and Contract Administration of the proposed project ensuring full compliance with the design drawings and technical specifications;
- e) The Consultant shall monitor the environmental and social compliance accordance with the environmental and social safeguard requirements for the project;
- f) The Consultant shall verify/certify the Interim Payment Certificate (IPC) submitted by the Contractor and recommend to the Employer for payment.

C. Detailed Description of the Consulting Services

1. Review of Engineering Design

The Consultant's scope of services shall be but not limited to the following:

- Prepare Project Management & Contract Administration procedures for Communications & Meetings to the satisfaction of the Employer;
- Review of all the design, drawings and technical documents submitted by the Contractors. The Consultant shall analyze the adequacy of such designs, and shall advise in writing to Employer for approval or any changes which the consultant feels necessary as per Contract Requirements. Copies of all reviewed drawings shall be retained by the Employer for information and records;
- Assist the Employer in writing contractual letters to the Contractor in case the design does not comply with the Employer's requirements;
- Review design and drawings submitted by the Contractors and recommend the Employer for their approval;
- Review of quality assurance plan and procedures developed and submitted by the Contractors;

2. Assistance for Procurement Works

The Consultant shall be responsible for the assistance in the bidding procedure. The scope of service shall be but not limited to the following:

- Assist the Employer in evaluation of bids in accordance with the approved criteria. In such evaluation, the Consultant shall carefully confirm that the bidders' submissions in their technical proposal including, but not limited to, site organization, mobilization schedule, method statement, construction schedule, safety plan, have been prepared in harmony each other and will meet such requirements set forth in applicable laws and regulations, the specifications and other parts of the bidding documents in consultation with the Employer;
- Assist Employer to prepare bid evaluation reports for approval of the bid evaluation committee;
- Assist the Employer in contract negotiation by preparing agenda and facilitating negotiations including preparation of minutes of negotiation meeting; and
- Prepare a draft and final contract agreement.

3. Supervision of Construction Activities

The Consultant shall be responsible for monitoring and supervising construction activities to ensure that the work is carried out in accordance with the Contract, the quality of workmanship and the materials in all works conform to the Employer's requirements and specifications. The Consultant shall ensure that the work is carried out in a healthy, safe and appropriate manner in accordance to international standards. Scope of services shall be but not limited to the following:

-
- I. Construction supervision and contract administration for the proposed project ensuring full compliance with the design, drawings, specification of the works as per contract document;
 - II. Implementation and monitoring of social and environment aspects, which includes (1) support to implementation of resettlement process and (2) monitoring and supervision of social and environmental monitoring and management measures in accordance with the requirements of Resettlement Action Plan, Environmental Management Plan and Social Action Plan.
 - a) The Consultant shall act as the “Engineer” for the contract to supervise the execution and implementation of all works in accordance with the conditions of contract. The construction period will be about 42 months.
 - b) As the Consultant’s representative, Team Leader shall administer the work as per the contracts and ensure that the works are constructed in accordance with its provisions. The Consultant will have all of those powers which are defined as being the Engineer of contract, however the Consultant shall seek and obtain the Employers specific approval prior to undertaking the following;
 - Issuing variation orders which have financial implications or significant in quantities;
 - Revising the Time for Completion of the works;
 - Approving any subcontracting of any parts of the works;
 - Fixing rates or prices;
 - Issuance of Taking over Certificate;
 - Issuance of Defect Liability Certificate;
 - Any other as mentioned in the Contract Documents.
 - c) The Consultant’s responsibilities shall include, but not necessarily be limited to, the following;
 - Act as the Engineer to execute construction supervision and contract administration services in accordance with the power and authority to be delegated by the Employer;
 - Check and approve the Contractor’s method of work, including site organization, program of performance, quality assurance system, safety plan, method statements of safety, and environmental monitoring plan so that the requirement set forth in the applicable laws and regulation, the specifications or other parts of the contract are to be duly respected;
 - Regularly monitor physical and financial progress, and take appropriate action to expedite progress if necessary, so that the time for completion set forth in the contract will be duly respected by the Contractor;
 - Explain and/or adjust ambiguities and/or discrepancies in the Contract Documents and issue any necessary clarifications or instructions. Issue further drawings and give instructions to the Contractor for any works which may not be sufficiently detailed in the contract documents, if any;
 - Review and approve the Contractor’s working drawings, shop drawings and give drawings for temporary works. Also review and approve, if any, design prepared by the Contractor for any part of the permanent works;

- Liaise with the appropriate authorities to ensure that all the affected utility service is promptly relocated;
- The Consultant shall review, assess, analyze and recommend to the Employer about a detailed program of all the activities related to the execution of the Work submitted by the Contractors from time to time;
- Carryout and maintain effective contract management and claim control;
- The Consultant shall monitor contract Costs and shall update the cost of contract works every 6 months incorporating actual and projected expenses including costs of Variation Orders, potential costs of claims and provisional sums. The estimated cash flow for the completion of the project Contracts shall also be projected based on the revised Contract Costs;
- Organize, as necessary, management meetings with the Contractor to review the arrangements for future works. Prepare and deliver minutes of such meetings to the Employer and the Contractor;
- Carry out field inspections on the Contractor's setting out of the works in relation to original points, lines and levels of reference specified in the contract;
- Supervise the works so that all the contractual requirements are met by the Contractor, including those in relation to i) quality of the works, ii) safety and iii) protection of the environment. Confirm that an accident prevention officer proposed by the Contractor is duly assigned at the project site. Require the Contractor to take appropriate remedies if any questions are recognized regarding the safety measures;
- Supervise and ensure field tests, sampling and laboratory test to be carried out by the Contractor;
- Inspect the construction method, equipment to be used, workmanship at the site, and attend shop inspection and manufacturing tests in accordance with the specifications;
- Survey and measure the work output performed by the Contractor, verify statements submitted by the Contractor and issue payment certificate such as interim payment certificates and final payment certificates as specified in the contract with status of environmental mitigation works and EMP provisions;
- Modify the designs, technical specifications and drawings, relevant calculations and cost estimated as may be necessary in accordance with the actual site conditions, and issuance for variation orders on prior approval of Employer;
- Perform the inspection of the works, including Test on Completion, and to issue certificates such as the Taking over Certificate, Performance Certificate as specified in the contract;
- Supervise commissioning and carry out test during the commissioning, if applicable;
- Provide periodic and/or continuous inspection services during defects notification period and if any defects are noted, instruct the Contractor to rectify;

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- Prepare supervision procedures/Manual for supervision staff;
 - Monitor progress of works against baseline work plan and advice on measures to be taken to improve progress and quality;
 - Supervise the Contractor in all matters concerning safety, Traffic Management and care of works including provision of necessary lights, guardrails, fencing and security;
 - Conduct measurement of the completed works and keep detailed records of the measurements;
 - Undertake independent field and laboratory testing as may be required to verify;
 - Ensure at all times the Contractor works in strict compliance with the Contractor's quality management plan, work plan, and contract specification, including instruction issued as per contract and non-compliance notification, approve and issue working drawings;
 - Conduct measurement of the completed works and keep detailed records of the measurements;
 - If and where required develop and monitor Resettlement Action Plan Implementation;
 - Process and assist the Employer concerning variations and claims which are to be ordered/issued;
 - Issue instructions, approvals and notices as appropriate;
 - Provide recommendation to the Employer for acceptance of the Contractor's performance security, advance payment security and required insurances;
 - Provide commencement order to the Contractor;
 - Assess adequacy of all inputs such as material, labour and equipment provided by the Contractor;
 - Maintain records, correspondence, detailed dairies, photographs and other documents concerning relevant events and activities to assist the Employer to process contractor's claims/disputes, if any;
 - The Consultant shall monitor the actual progress of work based on the base line programme submitted by the Contractor(s). The monthly updates of the Contractor's program shall be monitored against the approved program and all variations shall be noted. The future impact of major variations and necessary corrective measures shall be determined and analysed, and the Employer shall be provided with necessary recommendation;
 - Assess the Contractor's equipment and verify that it has adequate capacity to perform the Works in accordance with the Contract;
 - Prepare and recommend the Employer for issuance of instructions and day to day correspondences to be made to the Contractors in writing;
 - Maintain records of all field instructions;
 - Periodic checking of contract quantities and a constant check on the cost variation including a quarterly updating of monthly cash flow projections;

- Assist the Employer to provide onsite training where required Employer field staff on quality assurance and contract administration;
- Maintain a Master diary, including Contractor's daily records of labour and equipment employed, work in progress, weather conditions, instruction issued etc.;
- Carry out timely reporting to the Employer for any inconsistency in executing the works and suggesting appropriate corrective measures to be applied;
- Prepare suitable standard formats and establish effective and efficient documentation and reporting procedure for contract administration, monitoring of schedules and quality assurance of the construction works;
- Prepare and issue monthly and quarterly progress reports for the contracts and the project in the form acceptable to employer. These reports shall include details of the physical and financial status of the contract, details of delays and consequences if any, comments and solution on the quality of works in accordance with the contract. These reports shall also include updated status of all imported items in the contract. The report shall include details regarding items imported, items used and items remaining;
- The Consultant shall carry out budget and cost forecast (BCF) reports at intervals of not more than 6 months or when major changes occur. The estimated cash flow to completion of the Contracts shall also be prepared based on the revised Contract costs;
- The Consultant shall also prepare a coordinated schedule in consultation with the Contractors based on the detail schedule submitted by the Contractors;
- Assist the Employer in maintaining the consolidated project accounts with preparation of financial statements;
- Comply with the audit requirements of the Government;
- Inspect, verify and fairly determine claims issued by the parties to the contract (i.e. the Employer and Contractor) in accordance with the contract;
- In the event of variations to the works being required, prepare the necessary documents, negotiate these with contractor, determination of rates of works, advise the Employer alternatives and recommend these for approval;
- In the event the Contractor's programme fails to comply with the Contract works or the actual progress is inconsistent with the Contractor's stated intentions, the Consultant shall inform and advise the Employer of the situation in time and act accordingly with the Contract provisions. The Consultant shall also review and assess the revised program submitted by the Contractor and take necessary actions as needed;
- Promptly notify the Employer of any unusual events leading to Claims and Disputes;
- Provide available information and support in assisting the Employer in the assessment and resolution of claims of the Contractor and provide necessary determinations thereof as per the Contract;

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- The Consultant shall ensure that the Employer is well advised in advance of any additional funds required for completion of works;
 - Assist the Employer on the preparation of Employers' claims for compensation, and any other matters, based on the Engineers interpretation of the contract as per Contractors detailed submissions;
 - Assist the Employer on preparation of documentation in case of on disputes with the Contractor;
 - Advise the Employer on resolution of any disputes with the Contractor;
 - Check and certify as-built drawings for the parts of the works constructed by the Contractor as per the contract;
 - Check and review the detailed "Operation & Maintenance Manuals and As Built Drawings" prepared and submitted by the Contractors for use of the Employer in the operation of the works;
 - Ensure that all submittals / deliverables of the Contractors, upon completion of the Works, in the forms and numbers set out in the Contract, are well received by the Employer;
 - Prepare a "Completion Report" for the works under the Contract, including a summary of final costs to the Employer for future reference;
 - Inspect the works at appropriate intervals during the defects liability period;
 - Recommend and report to the Employer regarding any appeal to Dispute Resolution Board, Adjudication, Arbitration or Litigation related to the works;
 - At the completion of the works, undertake Project monitoring and evaluation in the format acceptable to the Employer and assist in preparing Project Completion Report;
 - Compile a Final Report highlighting any residual environmental impacts following the completion work, and recommend actions, responsibilities and timeline to mitigate, manage or monitor these impacts;
- d) For Review of encountered conditions and comparison of GBR during construction, the Consultant shall include, but not necessarily be limited to, the following;
- Regular review of the encountered geotechnical conditions and comparison to the conditions presented in the Geotechnical Baseline Report (GBR) as a proactive practice to identify potential claims for differing site conditions;
 - Prepare monthly and quarterly update reports for the Employer, with a comparison of the encountered conditions as compared to the GBR; rock mass quality mapping graphics and any laboratory testing results of GBR values/distributions shall be included in these reports.

The Consultant shall particularly observe and supervise the following in connection with the tunnel construction:

- Geological conditions shall be carefully monitored based on information obtained by the advance boring, actual excavation, water leakage conditions, deformation of arch dimensions, etc., in order to assure safe construction of a tunnel;

- If unexpected geological conditions are observed, agree with the Employer for remedial measures and when these are justifiable, prepare changes order;
- Water sources located within 200 m each side of the tunnel centre line or a total width of 400 m shall be measured two (2) times a month during construction. If unusual decrease of water sources is observed, causes shall be evaluated and proper counter measures shall be proposed. Such water sources shall be carried out during the detailed design;
- Excavation materials from a tunnel shall be properly disposed at the designated disposal area. The Consultant shall monitor the disposed material is properly managed;
- Check that the facilities provided both inside and outside the tunnel such as air ventilation system, lights, communication facilities, cameras, traffic signals etc., operate (work) properly;
- The Consultant shall prepare video coverage of tunnel construction process for reference of tunnel construction.

4. **Project Management**

Contract Procedures

The Consultant shall formulate and establish procedures for the proper management, administration and quality assurance/control of the contract as well as the Consultant's own services, and shall effect monitoring and control of these procedures. The Consultant shall provide Project Procedures Manual within 90 days from the date of signing of the Consulting Services Contract.

Reports

All original drawings, work sheets, field notes, computer programs, reports, and other related documents of the project execution shall become the property of the Bagmati Province Government. The Consultant shall prepare the following reports which shall be in a format agreed with the Employer and which shall be submitted in number of copies as mentioned below:

- Within one month of Consultant's mobilization date 6 hard copies along with electronic copies of Inception Report;
- 2 copies of Daily and shift reports by inspectors, etc., within four working days, recording weather conditions, crews and equipment working, areas being worked on, production, resource allocation, compliance with approved procedures, any special or unusual occurrence, etc.;
- 2 copies of Weekly reports by Resident Engineer, within one week of the end of the report period, recording progress during the month on a quantity and cost basis with appropriate graphical presentations comparing progress with program and giving reasons for any discrepancies if any;
- Daily records of probing, face mapping, rock classification, support types, over breakages shall be compiled and submitted each month summarizing the impacts on time and cost of the contract;

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- Separate report on the implementation of EMP, and OHSP (Occupational Health and Safety Plan) by the contractor shall be submitted each Quarter. The Social Development Specialist shall supervise implementation of the Resettlement Action Plan (RAP);
 - 6 copies of Monthly report comprising the work progress including electronic copies;
 - 6 copies of Quarterly Report including electronic copies;
 - 6 copies of Annual Report including electronic copies;
 - 12 copies of Project Completion Reports including electronic copies for all major structures or elements of the contract works, incorporating design calculations, as-built records and drawings submitted by the Contractors, within 60 days of issue of any Taking-Over Certificate.

Monitor Environmental Requirements

The Consultant shall be responsible for monitoring all the activities of the Project, according to the Environmental Impact Assessment/ Initial Environmental Examination Report, Contract Documents and the prevailing laws in Nepal.

Project Relations

The Consultant shall promote good project relations and in doing so shall monitor project labor relations, living conditions, and health and safety programs to identify potential problems and assist the Employer to resolve them promptly. Problems that cannot be resolved promptly by the Consultant shall be reported forthwith to the Employer for action.

Monitor Health and Safety

The Consultant shall monitor, inspect and ensure himself that Contractors comply with the requirements of the working conditions for laborers as directed in the construction Contract and specified in the Nepali labor code. The Consultant shall assist the Employer to take initiative to address and correct any deleterious effects arising from the implementation of the Contract.

Commissioning of the Works

The Consultant shall be responsible for supervising the commissioning of all Works/structures of the Project. The Consultant shall:

- Liaise with the Employer when establishing the overall requirements for project commissioning, coordinate testing and commissioning programs;
- Establish specific commissioning requirements in relation to the overall requirements for the project;
- Submit, with prior approval with the Employer, the commissioning requirements to the Contractor to enable him to prepare his detailed commissioning procedures;
- Liaise with the Employer to achieve the desired level of involvement by the Employer's operating staff and other personnel assigned;

- Review commissioning procedures prepared by the Contractor(s) to provide assurance that design requirements are complied with, that all necessary observations will be made, that the proposed methods are adequate to maintain control of the operation and that the Contractor is fully cognizant of any criteria which may require the commissioning to be discontinued;
- Carry out/check evaluations of observed data during the course of commissioning and advise the Contractor accordingly;
- Review and approve commissioning reports to be prepared by the Contractor as required by the construction Contracts.

Review Operation and Maintenance Manuals

The Consultant shall check and review the detailed Operation and Maintenance (O & M) manuals for structures and plants submitted by the Contractors. The Consultant shall ensure that uniform, complete, high quality O & M manuals are prepared by the Contractors for the whole Project. The Consultant shall ensure that the O&M manual shall include, among others:

- References to all relevant design and other reports, in order to provide a complete bibliography on the structures and plant;
- Specifications, data and statements on design for operation and maintenance staff to understand the basis of their functions;
- Drawings, diagrams, charts, etc. to facilitate understanding of the O&M requirements;
- Complete list of components particularly instrument parts and spares;
- Standard forms for O&M functions and step-by-step instruction;
- As a part of post construction support, consultant shall provide services intermittently during the 12 months defect liability period.

5. Technology Transfer

The Consultant shall involve the Employer's Engineers in various activities including current practices and developments on construction techniques, advanced contract management, Dispute resolution etc., to the Employer personnel on Contracts. The Consultant shall carry out the technology transfer as an important aspect in tunnel planning, tunnel design and construction supervision works. The Consultant shall provide the opportunity to the Employer's officers and staffs to be involved in the working team of the Consultant during the design verification, contract administration and supervision works for their capacity building wherever possible. As per the request of the Employer, the Consultant shall brief and demonstrate the survey and design procedure, the construction supervision and contract management process and procedures. The Consultant shall assist Employer and its staff to build their capacity as a part of on the job training under the project.

The Consultant shall propose the national and international training for enhancing the knowledge in tunnel design, supervision and operation and maintenance.

6. **Capacity Development of Tunnel for O & M**

The Consultant shall prepare the capacity development program for tunnel operation and maintenance (O&M) for the staff of Employer. The capacity development program shall cover among other the following:

- a) Standard Protocols in relation to Tunnel O & M
 - Strict execution for traffic rules to the vehicle (coordinate with traffic police);
 - Handling traffic accidents (coordination with traffic police);
 - Fire fighting (with Fire Department of Local Government);
 - Controlling hazardous (tankers carrying inflammable materials), overloaded and oversized vehicles (coordination with Department of Transport Management and Police Department).
- b) Inspection of Maintenance Work
 - Responsibilities of the Maintenance Section and Coordination with other sections;
 - Inspection frequency;
 - Inspection Procedure and Recording methodology;
 - Preparation of Inspection and Maintenance Manual;
 - Traffic Control/Management during maintenance work.
- c) Traffic Monitoring and Information Provision
 - Responsibilities of Patrol Teams and Traffic Control Centre;
 - Kinds of equipment installed and functions of each equipment;
 - To be monitored by Traffic Control Centre and Patrol Teams;
 - Information to be collected and to be provided to tunnel users;
 - Actions to be made when some irregularities are found;
 - Coordination with other sections/teams and traffic police/fire department of Local Government;
 - Communication system to be established with other section, traffic police, concerned Local Government.
- d) Tariff Collection
 - Assist to establish the tariff collection system.
- e) Actions to be taken during emergencies
 - Working procedures during emergencies (traffic accident, fire incident, vehicle breakdown, obstacle dropped from vehicles and parked/stopped vehicles);
 - Coordination required with other sections, traffic police and Local Government Unit.
- f) Safety Driving Campaign to Drivers
 - Safety driving campaign inside a tunnel for private car drivers, bus drivers and truck drivers;
 - Public Awareness Campaign.
- g) Drills for Emergency Cases
 - Drills for emergency cases to be undertaken prior to opening of a tunnel.

7. **Other Assistance to the Employer**

As directed by the Employer from time to time, the Consultant shall assist the Employer in carrying out specific tasks directly or indirectly related to the project, such as, but not limited to, the following:

- Assist in conducting meetings and site visit for dignitaries, representatives of financial institutions, etc..

D. Team composition and Qualification Requirements for the Key Experts

1. Team Composition

The consulting services will be carried out by an international consulting firm. Firms may associate with national consultants. The firms will have extensive experience in the supervision and maintenance of Road Tunnel works and will nominate personnel who have similar experience. The consultant should have experience in the fields of tunnel/highway and bridge design, planning, construction.

It is anticipated that the Consultant's organization will be as set out in Staffing Input, although in preparing their proposals the consultants may propose alternative arrangements which in their opinion, will provide supervision services of an equivalent quality.

Minimum 84 person-months of international key experts in association with about 318 person-months of national key experts and 589 person-months of technical support staffs will be required to carry out construction supervision and maintenance services. The person-month required for assignment is enumerated under TABLE-1, Staff Input. The qualification requirement for evaluation of key experts is set out in TABLE- 2.

TABLE- 1: International Key Staff Input

A. International Key Experts

S.N.	Position Title	No. Of Person	P.M. Requirement During		Total P.M.
			Construction	DLP	
1	Team Leader (TL)	1	37	2	39
2	Chief Tunnel Design Engineer	1	12		12
3	Tunnel Facility Engineer (Electrical/Communications)	1	6		6
4	Tunnel Ventilation Engineer	1	6		6
5	Sr. Geologist	1	6		6
6	Tunnel Engineer (Operation/Maintenance)	1	1	2	3
7	Sr. Contract Specialist	1	6		6
8	Sr. Structural Engineer	1	6		6
			80	4	84

Total International Key Experts in P.M. = 84

TABLE- 2: Total National Key Staffs Input**B. National Key Experts**

S.N.	Position Title	No of Persons	P.M. Requirement During		Total P.M.
			Construction	DLP	
1	Deputy Team Leader (DTL)	1	41	4	45
2	Resident Engineer (RE)	1	36	0	36
3	Quality Control/Material Engineer	1	38	0	38
4	Geologist	1	38	0	38
5	Quantity Survey Engineer	1	36	0	36
6	Electrical Engineer	1	6	0	6
7	Structure Engineer	1	26	0	26
8	Geotechnical Engineer	1	25	0	25
9	Drainage Engineer	1	6	0	6
10	Road Safety Specialist	1	6	0	6
11	Contract Specialist	1	38	0	38
12	Environmental Engineer	1	9	0	9
13	Social/Resettlement Specialist	1	9	0	9
			314	4	318

Total National Key Experts in P.M. = 318

C. National Non Key Experts

S.N.	Position Title	No of Persons	P.M. Requirement During		Total P.M.
			Construction	DLP	
1	Assistant Resident Engineer (ARE)	3	37	2	117
2	Senior Surveyor	1	36	0	36
3	Surveyor	2	36	0	72
4	CAD Operator	2	37	0	74
5	Senior Inspector of Works (SIoW)	1	36	0	36
6	Inspector of Works (IoW)	2	36	0	72
7	Senior Lab Technician	1	36	0	36
8	Lab Technician	1	36	0	72
9	Social Mobiliser	2	37	0	74
			587	2	589

Total National Non Key Experts in P.M. = 589

2. Qualification Requirement for Key Experts:

Table -3 shows the qualification and experience requirement of Key Experts.

TABLE-3: Qualification and Experience Requirement of Key Experts

INTERNATIONAL KEY EXPERTS

Team Leader (TL)

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Transport Engineering/Highway Engineering/Geotechnical Engineering/ Engineering Geology/Construction Management or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum experience of working in Design/Construction Supervision of 2 road tunnel project with at least 3 km in length in 1 project and Experience of working as Team Leader or Deputy Team Leader for minimum 5 years in any infrastructure projects. • Experience of working in construction projects outside the home country. • Experience in FIDIC contract is desirable.
Language	
	<p>Communicate fluently in English Language</p> <ul style="list-style-type: none"> • Skills in communicating with authorities and other stakeholders, and demonstrated capabilities in report writing. • Demonstrated capability in cost and time overrun controls of major projects.

Indicative Tasks

The Team Leader (TL) shall be responsible for the overall management of the consultancy services and to ensure that the design and supervision of the construction of the road tunnel and other related works are carried out smoothly without undue time and cost overruns. The TL will undertake, but not limited to, the following:

- Set up an effective organizational structure. Prepare and implement all administrative systems and procedures needed to ensure the effective design and supervision of the contract works in accordance with the scope of work and with acceptable international standards;
- Maintain proper filing and reporting systems. Coordinate with the Employer on Management Information System (MIS) procedures, website information, and records maintenance;
- Liaise with the Employer and Contractor as well as line agencies with respect to the matters related to the Project and advise the employer in a timely manner;
- Review, with the help of the related experts, the designs and carry out necessary adjustments, revisions specific to the site conditions, without increase in the overall cost as far as practicable, in coordination with the Employer;
- Plan for mobilization of international and national experts such that their

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- availability and the timing of requirements of work are properly matched and the time inputs in the consultancy contract is not exceeded;
- Resolve any discrepancies and omissions in the contract documentation including design drawings and technical specifications;
 - Proactively pursue, evaluate and make recommendations for value engineering initiatives;
 - Attend site/progress/quarterly meetings. Make presentations on progress/problems, remedial actions proposed, interface issues, and any other matters that should be considered in the meetings;
 - Critically review Contractor's work programs based on targeted completion date and ensure that the programs realistically reflect the available resources;
 - Ensure regular supervision of the works; timely instruction to the Contractor; timely submission to the Client monthly, quarterly and other reports; and preparation of manual with procedures for repair, and operation and maintenance manual;
 - Ensure that all experts visit the site regularly, check the quality of works, carry out necessary tests, maintain daily site records, prepare monthly progress reports;
 - Ensure that daily records of rock drilling, probing, rock classification face mapping, over breaks, and decision on support class in the tunnel are duly verified and signed;
 - Ensure that Risk Workshops are regularly organized, and resulting in updates to the Risk Register and report submitted to the Employer;
 - Ensure that the activities under the Environmental Management Plan (EMP) are included in the contracts and implemented by the construction contractor;
 - Coordinate the works of other experts in a timely and effective manner;
 - Ensure timely review of the contractor's claim and issue of engineer's decision. Claims not settled and disputes arisen shall be referred to the dispute settlement mechanism provided in the contract without delay;
 - Ensure that all extension of time (EOT) requests are thoroughly analysed by a delay analysis based on Baseline and impacted CPM;
 - Control variations and ensure that the essential variations orders are issued on time with clear indication of impacts on time and cost overruns in the contract;
 - Interact with the concerned authorities in a timely manner to ensure timely handling of grievance;
 - Ensure that as built drawings and maintenance manuals are prepared, concerned representative of the MoPID are given training and the project is handed over in a complete package;
 - Inspect the performance of the constructed facilities in the defects liability period;
 - Review measurements and the Contractor's IPS and issue payment certificates (IPCs) to the Employer and the Contractor;
 - Check the handover documents and 'As Built Drawings' prepared by the Contractor and submit to the Employer;
 - Check the final payment invoice of the contractor;
 - Prepare the DTL to be able to assist him in all his activities and to be able to discharge of similar role in his absence.
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Chief Tunnel Design Engineer

Educational Qualification	
<ul style="list-style-type: none">• Preferred• Required	<ul style="list-style-type: none">• Masters in Tunnel Engineering/Highway Engineering/Geotechnical Engineering/ Engineering Geology or related field.• Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none">• General Experience• Project Related Experience	<ul style="list-style-type: none">• Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects.• Minimum 5 years of experience in the design and construction supervision/construction management of 2 road tunnels with 1 road tunnel project more than 3 km in length.• Experience of working in construction projects outside the home country.
Language	Communicate fluently in English Language

Indicative Task

The Chief Tunnel Design Engineer, in coordination with the Team Leader, shall be responsible for review of the tunnel designs and its improvements as per site conditions during the initial review stage and intermittently during the construction stage. The Chief Tunnel Design Engineer shall prepare guidelines for the Resident Engineers and Geologists relating to the implementation of the designs and carrying out the improvements.

Tunnel Facility Engineer (Electrical/Communications)

Educational Qualification	
<ul style="list-style-type: none">• Preferred• Required	<ul style="list-style-type: none">• Masters in Electrical Engineering/Electronics Engineering/Communication Engineering or related field.• Graduate in Electrical/Electronics/Communication Engineering
Experience	
<ul style="list-style-type: none">• General Experience• Project Related Experience	<ul style="list-style-type: none">• Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects.• Minimum 5 years of experience in the design and construction supervision/construction management of road tunnel as Tunnel Facility Engineer.• Experience of working in construction projects outside the home country.
Language	Communicate fluently in English Language

Indicative Task

The Tunnel Facility Engineer, in coordination with the TL, shall be responsible for review of the tunnel facilities and its improvements during initial review stage and intermittently during the construction stage. The Tunnel Facility Engineer shall prepare guidelines and ensure the specification specified in the contract relating to the implementation of the facility services during and after construction of the tunnel project.

Tunnel Ventilation Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Tunnel Engineering/Highway Engineering/Geotechnical Engineering/ Engineering Geology or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/construction management of road tunnel as Tunnel Ventilation Engineer. • Experience of working in construction projects outside the home country.
Language	
Communicate fluently in English Language	

Indicative Task

The Tunnel Ventilation Engineer, in coordination with the TL/DTL, shall be responsible for review of the tunnel ventilation and its improvements as per site conditions during the initial review stage and intermittently during the construction stage. He/She shall prepare guidelines and ensure the specification specified in the contract relating to the implementation of the ventilation facility services during and after construction of the tunnel project.

Sr. Geologist

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Geology/Engineering Geology/ Geotechnical Engineering or related field. • Graduate in Civil Engineering/Geology/ Engineering Geology
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of road tunnel as Geologist. • Experience of working in construction projects outside the home country.
Language	
Communicate fluently in English Language	

Indicative Tasks

The Senior Geologist shall assist the TL/DTL in all matters relating to the tunnel design/design review, quantity takeoff, determination of permanent support class and over break quantities.

He/She shall:

- Provide continuous representation during tunneling and structural works, monitor the underground excavations, tunnel support progress and ensure selection of supports based on actual site conditions;
- Advise the Tunnel Design Expert and Geotechnical Engineer on progress status and obtain assistance when needed;
- Be responsible, in coordination with the TL and tunnel design expert, for the design of the permanent support for all underground excavations;
- Review and report on any Contractor initiated proposals for design modifications;
- Check working drawings for conformity with the approved designs;
- Prepare progress reports, VO and EOT reports, and IPC payment certificates;
- Ensure that safety and environmental measures are strictly followed by the Contractor;
- Coordinate with site staff and report accordingly;
- Review works to confirm that the quality of the performed works is according to the contractual specifications;
- Maintain accurate daily records on measurement of the quantity of different items of tunnel works;
- Maintain daily records of equipment showing hours of use against corresponding work, and reasons for idle hours;
- Monitor the progress of work against the baseline schedule and review the updated schedules and report to TL/DTL;
- Prepare the Resident Engineers/Experts to be able to assist him in all his activities and to be able to discharge of similar role in his absence;
- Provide training to the local staff on matters related to tunnel construction, to include safety, QA/QC, risk management, selection of rock support techniques, monitoring performance, etc.

Tunnel Engineer (Operation/Maintenance)

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Tunnel Engineering/Highway Engineering/Geotechnical Engineering/Engineering Geology or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of road tunnel as Tunnel Engineer (Operation/Maintenance). • Experience of working in construction projects outside the home country.
Language	Communicate fluently in English Language

Indicative Task

The Tunnel Engineer (Operation and Maintenance), in coordination with the TL/DTL and Chief Tunnel Design Engineer shall be responsible for review of the tunnel designs and construction supervision during the construction stage and during defect liability period as per the specification in the contract.

Sr. Contracts Specialist

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Civil Engineering/Construction Management or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience as a Contract Specialist/ Procurement Expert with knowledge of EPC Contract/ Design & Built Contract of any tunnel projects. • Experience of working in construction projects outside the home country. • Good knowledge of FIDIC contracts.
Language	
Communicate fluently in English Language	

Indicative Tasks

- Responsible for establishing a contract management system and guiding TL/DTL and Chief Tunnel Design Engineer in adopting a systematic procedures and systems in managing the contract;
- Provide advice the TL and the Resident Engineers in contractual matters including price variations, claims and dispute; preparation of monthly, quarterly and other reports, maintenance of complete up to date file on all contractual issues including submittals, securities, insurance, and related documents.;
- Assist the TL/DTL and Resident Engineers in the preparation of monthly and quarterly reports, EOTs, VO & EOT; Safeguards reports; and all matters relating to schedules, delay analysis, EOT, VO, analysis of claim, settlement of dispute.

Sr. Structure Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Structural Engineering or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the Design and

	construction supervision/ construction management of road tunnel as Structure Engineer. <ul style="list-style-type: none"> • Experience of working in construction projects outside the home country.
Language	Communicate fluently in English Language

Indicative Tasks

The Sr. Structure Engineer shall be responsible for design reviews of civil engineering structures. He/She shall:

- Be responsible for the design review of the permanent works at the construction sites and other civil engineering works;
- Provide on-site assistance when required during construction works of tunnel structures and other structures;
- Assist in the preparation of reports; quality assurance; monitoring of the environmental and safeguards and OHS activities, certification of progress payments, etc.;
- Participate as a resource person in the training organized by the project to the local staff on matters related to structural safety and risks;
- Prepare the Structural Engineer to be able to assist him in all his activities and to be able to discharge of similar role in his absence.
- Assist the TL/DTL, Chief Tunnel Design Engineer and the resident engineers on all matters relating to the tunnel structures and other civil structures.

NATIONAL KEY EXPERTS

Deputy Team Leader(DTL)

Educational Qualification	
<ul style="list-style-type: none"> • Preferred 	<ul style="list-style-type: none"> • Masters in Transport Engineering/Highway Engineering/Geotechnical Engineering/ Engineering Geology/Construction Management or related field.
<ul style="list-style-type: none"> • Required 	<ul style="list-style-type: none"> • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum experience of working in Design/Construction Supervision of 2 tunnel projects and Experience of working as Team Leader or Deputy Team Leader for minimum 5 years in any infrastructure projects. • Experience of working with international organizations. • Experience in FIDIC contract is desirable.
Language	Communicate fluently in English Language

Indicative Task

Deputy Team Leader is to assist Team Leader and coordinate all other expert on behalf of Team Leader. The Deputy Team Leader (DTL) shall be responsible for the overall management of the consultancy services and to ensure that the design and supervision of the construction of the road tunnel and other related works are carried out smoothly without undue time and cost overruns. The Deputy Team Leader will undertake all the work similar to Team Leader on behalf of him.

Resident Engineer (RE)

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Transport Engineering/Highway Engineering/ Bridge Engineering/ Construction Management/Tunnel Engineering or related field. • Graduation in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Experience Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of tunnel as Resident Engineer or Assistant Resident Engineer. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Resident Engineer shall assist the TL/DTL and Chief Tunnel Design Engineer in the review of designs and construction supervision of tunnel and other construction activities. The Resident Engineer shall be responsible for the inspection of the performance of the constructed facilities during construction stages and defects notification period, checking handover documents and as built drawings, and checking the final payment invoice of the contractor.

Quality Control/Material Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Highway Engineering/ Geotechnical Engineering/ Engineering Geology or related field. • Graduation in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects.

<ul style="list-style-type: none"> • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of experience in the construction supervision/ construction management of tunnel as Quality Control or Material Engineer. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Quality Control/Material Engineer shall assist TL/DTL and other experts in the review of materials planning, field and laboratory tests and quality assurance systems; monitoring of the quarrying, spoils disposal; and ensuring overall quality assurance relating to the materials use. He/She shall:

- Verify the construction material sources and ensure that the materials are in accordance with the specifications;
- Review the Contractor's quality assurance plans;
- Ensure that the materials testing procedures are in conformity with the specifications;
- Regularly check the material testing equipment calibration procedures;
- Regularly inspect the laboratory as well as field testing and ensure that the materials and workmanship are in accordance with the specifications;
- Instruct the Contractor immediately for the removal of materials in case of non-compliance with the specifications; and
- Report to other team members on the conformity/non-conformity of the test results, materials and workmanship.

Geologist

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Geology/Engineering Geology or related field. • Graduate in Civil Engineering/Geology/Engineering Geology
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of tunnel as Geologist. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Geologist shall assist the Sr. Geologist along with TL/DTL in all matters relating to the geological aspects of tunnel design/design review, quantity takeoff, determination of permanent support class and over break quantities. The Geologist will undertake all the work similar to Sr. Geologist on behalf of him.

Quantity Survey Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Civil Engineering/Highway Engineering/Bridge Engineering/Construction Management or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of tunnel as Quantity Survey Engineer. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Quantity Survey Engineer, in coordination with the TL/DTL, shall review contractor's survey, and ensure the accuracy of survey control points, laser equipment use and calibrations procedure.

Electrical Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Electrical or related field. • Graduate in Electrical Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of tunnel as Electrical Engineer. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Electrical Engineer shall review the planning and design of electrical equipment and facilities including electrical power, lighting, ventilation, communication and online integrated monitoring system for the project. He/she shall apply the procedure and systems established and assist the TL/DTL in all matters relating to electrical facilities and equipment.

Structure Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Structural Engineering or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the design, construction supervision/ construction management of tunnel as Structure Engineer. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Structure Engineer shall be responsible for assist Sr. Structure Engineer in design or design reviews of Tunnel Structures and other civil engineering structures. He/She shall:

- Be responsible for the design review of the permanent works at the Tunnel Structures, including other works;
- Provide on-site assistance when required during construction works of Tunnel Structures and other structures;
- Assist in the preparation of reports; quality assurance; monitoring of the environmental and safeguards and OHS activities, certification of progress payments; etc.
- Participate as a resource person in the training organized by the project to the local staff on matters related to structural safety and risks; and
- Assist the TL/DTL, Chief Tunnel Design Expert and Sr. Structural Engineer on all matters relating to the Tunnel and other civil structures;
- The Structure Engineer will undertake all the work similar to Sr. Structure Engineer on behalf of him.

Geotechnical Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Geotechnical Engineering or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of tunnel as Geotechnical Engineer. • Experience of working with international

	organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Geotechnical Engineer shall be responsible for review, investigations and analysis of geotechnical data and shall assist the Chief Tunnel Design Engineer, Sr. Geologist and other experts in the review of geotechnical data, Geotechnical baseline report (GBR) Geotechnical Data Report (GDR).

He/She shall:

- Assist the Structure Engineer in the design of permanent ground support and review of the Contractor initial temporary support proposals;
- Assess and record rock and soil conditions as the work progresses;
- Inspect the probing and exploratory drilling works. Advise on the need for and scope of grouting works;
- Monitor all instrumentation and permeability testing activities, review the results and the degree of structural dilation, as required;
- Monitor the in-situ as well as laboratory test results;
- Carry out geological and geotechnical mapping and analysis;
- Ensure regular review by the REs the geological/geotechnical conditions at the site;
- Advise the Chief Tunnel Design Expert and REs on proper support and lining methods as well as drainage/seepage issues;
- Report or ensure report to other team members on the observance of any unforeseen underground and geological conditions;
- Advise and monitor on safety measures to be adopted by the Contractor;
- Provide training to the local counterpart staff on matters related to geotechnical engineering in tunnel construction.

Drainage Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Civil Engineering/Water Resource Engineering/Highway/Engineering or related field. • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Minimum 5 years of experience in the construction supervision/ construction management of tunnel as drainage Engineer. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

The Drainage Engineer shall be responsible for review, investigations and analysis of surface and sub surface drainage along with design review and implementation of those during construction. He shall assist the Chief Tunnel Design Engineer and other experts in the review of the design provided by the contractor.

Road Safety Specialist

Educational Qualification	
<ul style="list-style-type: none">• Preferred• Required	<ul style="list-style-type: none">• Masters in Transport Engineering/ Highway Engineering/ Traffic Engineering or related field.• Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none">• General Experience• Project Related Experience	<ul style="list-style-type: none">• Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects.• Minimum 5 years of experience in the construction supervision/ construction management of tunnel or Highway as Road Safety Specialist or Road Safety Specialist.• Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

- Develop Operational Health and Safety Plan for the project, building on the mitigation measures in the EMP;
- Ensure the Contractor prepares and adopts a Health and Safety Plan;
- The Road Safety Specialist shall in coordination with the TL/DTL and other experts carry out monitoring of health and safety aspects of the EMP, the contractors' Health and Safety plans and supervise the implementation of the occupational health and safety plan during the construction of the tunnel and other structures;
- Ensure that Contractor's OHS officers are on site and monitoring compliance on a daily basis;
- Report monthly on OHS compliance for monthly progress reports;
- Conduct training on OHS as needed.

Contract Specialist

Educational Qualification	
<ul style="list-style-type: none">• Preferred• Required	<ul style="list-style-type: none">• Masters in Civil Engineering/Construction Management or related field.• Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none">• General Experience	<ul style="list-style-type: none">• Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in

<ul style="list-style-type: none"> Project Related Experience 	<ul style="list-style-type: none"> construction projects. Minimum 5 years of experience as a Contract Specialist/ Procurement Expert of any infrastructure projects. Experience of working with international organizations. Good knowledge of FIDIC contracts.
Language	Communicate fluently in English Language

Indicative Tasks

He/She shall assist the Sr. Contract Management Specialist and the TL/DTL in applying a systematic contract management system and resolving disputes in a timely and effective manner.

Environment Engineer

Educational Qualification	
<ul style="list-style-type: none"> Preferred Required 	<ul style="list-style-type: none"> Masters in Environmental Engineering or related field. Graduate in Civil Engineering or Environment related field
Experience	
<ul style="list-style-type: none"> General Experience Project Related Experience 	<ul style="list-style-type: none"> Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. Experience in the construction supervision/ construction management of tunnel or Highway as Environment Engineer for minimum 5 years. Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

He/She shall supervise the proper implementation of the Environmental Management Plan(EMP) and social safeguards plans and assist the TL/DTL and other experts in resolving all issues relating to the EMP, SS and RAP, including:

- Ensure that all the works are carried out in an environmentally sound manner;
- Maintain photographic records of construction activities and assess environmental impacts;
- Ensure compliance with the approved Environmental Management Plan;
- Ensure the Contractor has prepared and adopted a site-specific Environmental Management Plan (S-EMP);
- Instruct the Contractor on needed actions and corrective measures to comply with the Environmental Management Plan;
- Report on the implementation of environmental mitigation measures;
- Liaise and coordinate with other components of the Project works;
- Conduct training on environmental compliance as needed;
- Report monthly on EMP compliance for monthly progress reports (MPRs that do not report on safeguard compliance will be rejected by the Employer).

Social/Resettlement Specialist

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Social Science/ Sociology or related field. • Graduate in Social Science
Experience	
<ul style="list-style-type: none"> • General Experience • Project Related Experience 	<ul style="list-style-type: none"> • Minimum 5 years of general experience with Master's Degree or Minimum 9 years of general experience with Bachelor's Degree in construction projects. • Experience in the construction supervision/ construction management of any infrastructure projects as Social Development Specialist or Resettlement Development Specialist for minimum 5 years. • Experience of working with international organizations.
Language	Communicate fluently in English Language

Indicative Tasks

He/She shall assist the TL/DTL in applying a systematic contract management system on behalf of social development and resettlement activities and resolving disputes in a timely and effective manner.

Note: Personnel Evaluation of International and National Key Experts shall be done in Pro-rata basis.

NATIONAL NON-KEY EXPERTS

Assistant Resident Engineer

Educational Qualification	
<ul style="list-style-type: none"> • Preferred • Required 	<ul style="list-style-type: none"> • Masters in Transport Engineering/ Highway Engineering/ Bridge Engineering/ Construction Management • Graduate in Civil Engineering
Experience	
<ul style="list-style-type: none"> • Total Experience • Experience in Related Field • Experience in the Proposed Field of Expertise 	<ul style="list-style-type: none"> • 8 years • 4 years in Road Works • 2 years as an Assistant Resident Engineer or 4 Years as SLOW (after completion of Graduation in Civil Engineering) in Road Projects. • Experience with International Organization in infrastructure projects.
Language	Communicate fluently in English Language

Senior Surveyor

Educational Qualification	
<ul style="list-style-type: none"> Required 	<ul style="list-style-type: none"> Graduate in Civil Engineering/ or Geometric or Survey Course
Experience	
<ul style="list-style-type: none"> Total Experience Experience in Related Field Experience in the Proposed Field of Expertise 	<ul style="list-style-type: none"> 15 years 10 years in Road/Bridge/Hydro/Tunnel Works 2 years in Tunnel Works
Language	Communicate fluently in English Language

Surveyor

Educational Qualification	
<ul style="list-style-type: none"> Required 	<ul style="list-style-type: none"> Graduate in Civil Engineering/ or Geometric or Survey Course
Experience	
<ul style="list-style-type: none"> Total Experience Experience in Related Field Experience in the Proposed Field of Expertise 	<ul style="list-style-type: none"> 10 years 5 years in Road/Bridge/Hydro/Tunnel Works 1 years in Tunnel Construction Works
Language	Communicate fluently in English Language

CAD Operator

Educational Qualification	
<ul style="list-style-type: none"> Required 	<ul style="list-style-type: none"> Diploma in Civil Engineering
Experience	
<ul style="list-style-type: none"> Total Experience Experience in Related Field Experience in the Proposed Field of Expertise 	<ul style="list-style-type: none"> 8 years 4 years in Road Works 2 years as CAD Operator in Road/Tunnel Projects. Experience with International Organization in infrastructure projects.
Language	Communicate fluently in English Language

Sr. Inspector of Works (SIoW)

Qualification	
<ul style="list-style-type: none"> Preferred Required 	<ul style="list-style-type: none"> Bachelor's degree in civil engineering or its related field with 2 years' experience in road works Diploma in civil engineering with 5 years' experience in road works Experience with International Organization in infrastructure projects.
Language	Communicate fluently in English Language

Inspector of Works (IoW)

Qualification	
<ul style="list-style-type: none">• Preferred• Required	<ul style="list-style-type: none">• Bachelor's degree in civil engineering or its related field with 1 years' experience in road works• Diploma in civil engineering with 3 years' experience in road works
Language	Communicate fluently in English Language

Senior Lab. Technician

Qualification	
<ul style="list-style-type: none">• Required	<ul style="list-style-type: none">• Diploma in Civil Engineering with 5 years' experience in quality Control Works in road project• or Certificate in any discipline with 15 Years of experience in quality Control Works• Experience with International Organization in infrastructure projects.
Language	Communicate fluently in English Language

Lab Technician

Qualification	
<ul style="list-style-type: none">• Required	<ul style="list-style-type: none">• Diploma in Civil Engineering with 3 years' experience in quality Control Works in road project• or Certificate in any discipline with 10 Years of experience in quality Control Works
Language	Communicate fluently in English Language

Social Mobilizer

Educational Qualification

<ul style="list-style-type: none">• Preferred• Required	<ul style="list-style-type: none">• Masters in Social Science/ Sociology or related field.• Graduate in Social Science or related field.
Experience	
<ul style="list-style-type: none">• Total Experience• Experience in Related Field• Experience in the Proposed Field of Expertise	<ul style="list-style-type: none">• 5 years• 2 years in Road Works• 2 years in Resettlement activities.• Experience with International Organization in infrastructure projects.
Language	Communicate fluently in English Language

On the Job Trainee Engineer

Qualification	
<ul style="list-style-type: none">• Preferred• Required	<ul style="list-style-type: none">• Freshly pass-out Civil Engineers.• Appeared in final exam of BE Civil without any backlogs in previous semester/year's exams
Language	Communicate fluently in English Language

E. Provisions for Office Space, Office Equipment, Utilities and Vehicles, Laboratory and Testing Facilities

The office space will be provided by the Employer and maintained by Consultant. There will be two offices, each at north and south portal. The duty station of Consultant's personnel including international experts will be at these 2 sites at different locations based on their work jurisdictions so as to facilitate more effective supervision work.

The Consultant shall manage all office stationeries including computers with all required software, printers, photo copiers, papers, communications, etc. for day to day office work and for production of all required drawings, designs, progress reports, bidding and contract documents etc. The payments of these logistic supports shall be made as per actual by the Employer.

The Consultant shall be responsible for managing vehicles and motorbikes for supervision of works. Minimum requirement of the supervision vehicles including specifications will be outlined in Request for Proposal. The consultants should provide the facilities and requirements for construction supervision and maintenance during DLP period themselves. These will include support staff and accommodation facilities vehicles, for respective site offices. The specification of the facilities and vehicles are set out in annex 1 and 2. The Consultant will set out these requirements in the technical proposal and provide estimated costs in the financial proposal.

Survey Equipment, Laboratory facilities and testing equipment required for contracts that include equipment for all works shall be included in the bidding documents under the scope of the contractor.

F. Inputs Provided by the Employer

- Office space in Kulekhani sites and Bhimphedi sites.
- Facilitates to obtain visas, residence permits, exchange permits and any other documents required for the stay of the foreign Consultant and the family in Nepal;
- Assistance in the import of any materials and equipment required for Project purposes;

G. Inputs Provided by the Consultant

- Transport from site office to Kathmandu and back;
- Local transport, including vehicles, drivers and fuel as required;
- Project offices other than that provided by the Employer;
- Accommodation as required in Kathmandu, if any;
- The required insurances other than insured by the Contractor.

H. Time for Commencement and Completion

The expected date for the commencement of Consulting Service is **September 2020**. The duration for this assignment will be 42 months and additional 12 months for Defect Liability Period (DLP).

ANNEX 1 OF TOR

Vehicles for the Engineer

The consultant shall provide themselves, all necessary vehicles for implementation of the service including driver, fuel, Maintenance etc. The type of vehicles the Consultant is required to provide for their use shall be as shown below: -

SN	Vehicle Type	Minimum Number Required	Remarks
1	Vehicle Type-1	2	
2	Vehicle Type-2	3	
3	Vehicle Type-3	6	

The consultant may propose for additional vehicles if necessary in their financial proposal.

Vehicle Type 1

Five or six door Station Wagon (including one/two rear doors) with a diesel engine of at least 2.2 liter capacity, four-wheel drive, high and low ratio gear box with differential lock, a minimum ground clearance (unladen) of 180mm, Air bags, Air Conditioner, cloth seats, seat belts, locking fuel cap, spare wheel, tool kit, tow rope, jump leads, fire extinguisher and first aid kit.

Vehicle Type 2

“Double Cab“ Pick-Up with a diesel engine of at least 2.0 liter capacity, four wheel drive, a minimum ground clearance (unladen) of 180mm, Air Bags, Air Conditioner, cloth seats, seat belts, locking fuel cap, spare wheel, tool kit, tow rope, jump leads, fire extinguisher and first aid kit.

Vehicle Type 3 (Motor cycle)

New “Off Road” motor cycle with a 4-stroke engine of at least 150 c.c. equipped with panniers and spare tool kit. Included shall be a motor cycle safety helmet meeting the Nepal Road Safety specifications.



Ministry of Physical Infrastructure Development

Bagmati Province

Hetauda, Makawanpur, Nepal

[Handwritten Signature]
Secretary

Name of Project: Posta Bahadur Bogati (Bhimphedi Kulekhani) Tunnel Project

Name of Consulting Service: Procurement of Consulting Service for Construction Supervision

Contract Identification No.: MoPID/BAG/ICB/CS/01/2077/78

Eligibility Criteria

S.N	Eligibility Criteria	Compliance	Status
1	Corporate Registration	Yes/No	Pass/Fail
2	Tax Clearance for upto the fiscal year 2075/76 (For Local Consultants Only)	Yes/No	Pass/Fail
3	VAT/PAN Registration (For Local Consultants Only)	Yes/No	Pass/Fail
4	Years of Standing minimum 10 years (At Least One Firm in Case of JV)	Yes/No	Pass/Fail
5	JV Agreement in case of Firms in JV	Yes/No	Pass/Fail
6	Adherence to code of Ethics and Anti Corruption Policy	Yes/No	Pass/Fail

Note 1: Consulting Firms can form a Joint Venture (JV). The EOI of Short List must clearly mention the name of the leading firm with financial liabilities.

Note 2: Maximum no. of JV Firms: **Three (3)**. **Consultant may associate with other consultants to enhance their qualifications. The consultant shall make an association with maximum Three (3) numbers of local consultants. Local consultants shall participate with only one consultant.**

Note 3: The firm/JV shall have to submit separate sealed EOI.

Note 4: The same firm shall not be allowed to submit EOI individually and in JV for same package. ("Example 1: EOI for Firm A and Firm A JV Firm B" - Not Allowed) ("Example 2: EOI for Firm A JV with Firm B and Firm B JV with Firm C" - Not Allowed).

Note 5: The firm and /or JV shall have to submit Notary Public attested Tax Clearance Certificate of each fiscal year, supposed to be counted for EOI evaluation. Submission of Audit report or any other compiled tables shall not be considered for EOI evaluation. Notary signature shall be verified, if required.



Ministry of Physical Infrastructure Development
Bagmati Province
Hetauda, Makawanpur

[Signature]
Secretary

Name of Project: Posta Bahadur Bogati (Bhimphedi Kulekhani) Tunnel Project
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 Contract Identification No.: MoPID/BAG/ICB/CS/01/2077/78

Details of Qualifying Criteria

Description of Criteria	Marks Out of 100
A) Firm's Capacity	10
1) Financial Capacity of Firm	10
B) Qualification of Firm	40
1) Resource of Firm/Resource Personnel	40
C) Experience of Firm	50
1) General Experience of the Firm	10
2) Specific Experience of the Firm	40

A) Firm's Capacity

Maximum 10 Marks

1) Financial Capacity of Firm

Maximum 10 Marks

Average Annual Turnover (AAT) of best 3 year of last seven fiscal year i.e NRs 835 Million or US\$ 6.85 Million Worth which one is greater (Consulting Cost. Including VAT).	Marks
<25% of AAT	1
>=50% of AAT	3
>=75% of AAT	6
>=AAT	10

Note 6: In case of JV business, the firm and /or JV shall have to submit Notary Public attested Tax Clearance Certificate of each fiscal year along with the JV agreement of that business, supposed to be counted for EOI evaluation.

Note 7: In case of JV, average annual turnover of the JV shall be evaluated taking account the % of Financial Liability as stated in the JV Agreement for the EOI. If the JV agreement shall not clear about % of the Financial Liability, the marks for Financial Capacity shall be evaluated to Zero.

Note 8: For the evaluation of Financial Capacity, Inflation Adjustment Factor (Wholesale Price Index: Over all index of NRB) shall be considered. For Conversion of foreign currency to Nepalese Rupees shall be based on exchange rate of Nepal Rastra Bank on the 28th day prior to the submission date of EOI application.



[Handwritten Signature]
Secretary

Ministry of Physical Infrastructure Development
Bagmati Province
Hetauda, Makawanpur

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Details of Qualifying Criteria

B) Qualification of Firm

Maximum 40 Marks

1) Resource Personnel

Maximum 40 Marks

Professional Key Personnel	Max. Marks	Min. Experience After Bachelor	Education Required	Min. Years in Project Related Experience
Key Experts (International)	26.82			
Team Leader (TL)	7.06	9	Master's Degree in Transport Engineering/Highway Engineering/Geotechnical Engineering/Engineering Geology/Construction Management or Related Field.	5
Chief Tunnel Design Engineer	2.82	9	Master's Degree in Tunnel Engineering/Highway Engineering/Geotechnical Engineering/Engineering Geology or Related Field	5
Tunnel Facility Engineer (Electrical Communications)	2.82	9	Master's Degree in Electrical Engineering/Electronics Engineering/Communication Engineer or Related Field.	5
Tunnel Ventillation Engineer	2.82	9	Master's Degree in Civil Engineering or Related Field	5
Sr. Geologist	2.82	9	Master's Degree in Geology/Engineering Geology/Geotechnical Engineering or Related Field	5
Tunnel Engineer (Operation/Maintenance)	2.82	9	Master's Degree in Civil Engineering or Related Field	5
Sr. Contracts Specialist	2.82	9	Master's Degree in Construction Management or Related Field	5
Sr. Structure Engineer	2.82	9	Master's Degree in Structural Engineering or Related Field	5



Ministry of Physical Infrastructure Development
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[Signature]
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Details of Qualifying Criteria

B) Qualification of Firm

Maximum 40 Marks

Key Experts (National)	13.18			
Deputy Team Leader (DTL)	3.29	9	Master's Degree in Transport Engineering/Highway Engineering/Bridge Engineering/Construction Management or Related Field	5
Resident Engineer (RE)	0.94	9	Master's Degree in Transport Engineering/Highway Engineering/Bridge Engineering/Construction Management/Tunnel Engineering or Related Field	5
Quality Control Material Engineer	0.94	9	Master's Degree in Highway Engineering/Geotechnical Engineering/Engineering Geology or Related Field	5
Geologist	0.94	9	Master's Degree in Geology/Engineering Geology/Geotechnical Engineering or Related Field	5
Quantity Survey Engineer	0.94	9	Master's Degree in Civil Engineering/Construction Management or Related Field	5
Electrical Engineer	0.94	9	Master's Degree in Electrical Engineering or Related Field	5
Structure Engineer	0.94	9	Master's Degree in Structural Engineering or Related Field	5
Geotechnical Engineer	0.94	9	Master's Degree in Geotechnical Engineering/Engineering Geology or Related Field	5
Drainage Engineer	0.71	9	Master's Degree in Water Resource Engineering or Related Field	5



Ministry of Physical Infrastructure Development
Bagmati Province
Hetauda, Makawanpur

[Signature]
Secretary

Name of Project: Posta Bahadur Bogati (Bhimphedi Kulekhani) Tunnel Project

Name of Consulting Service: Procurement of Consulting Service for Construction Supervision

Contract Identification No.: MoPID/BAG/ICB/CS/01/2077/78

Details of Qualifying Criteria

B) Qualification of Firm

Maximum 40 Marks

Road Safety Specialist	0.94	9	Master's Degree in Transport Engineering/Highway Engineering/Traffic Engineering or Related Field	5
Contract Specialist	0.94	9	Master's Degree in Construction Management or Related Field	5
Environmental Engineer	0.35	9	Master's Degree in Environmental Engineering or Related Field	5
Social Resettlement Specialist	0.35	9	Master's Degree in Social Science/Sociology or Related Field	5
Total	40.00			

Note 9: CV of each Professional key personnel shall be submitted with signature of professional and authorized representative of the firm/JV.

Note 10: Proposed Professional key personnel shall not be repeated by the same firm/JV and/or another firm/JV. In case of repetition of professional personnel, the office shall ask via letter/email the person for physical presence within Seven days to declare him/herself the firm/JV to whom he/she shall want to be associated.

Note 11: CV of personnels shall clearly mention his/her email address and mobile number.

Note 12: The firm/JV shall have to submit the NIC registration certificate (or similar professional council registration certificate for international experts) for engineering professionals (except Economist/Sociologist)

Note 13: The firm/JV shall also have to submit any certificate as evidence of his/her education (Degree) as required above with Notorized Academic Certificate of manpower.

Clarification 1: The Work Experience in similar nature projects for all Personnel shall be mentioned in following formats:

	Name of Project	Name of Client	Start Date-Completion Date	Name of Firm involved in as (Single/JV)
Scope of Project				
Professional Involved as (Position held)				
Description of Duties				



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Contract Identification No.: MoPID/BAG/ICB/CS/01/2077/78

Details of Qualifying Criteria

C) Experience of Firm/JV **Maximum 50 Marks**

(1) General Experience of the Firm/JV **Maximum 10 Marks**

Work Experience	As Consultant
No. of Infrastructure Development Project that has been supervised by the Consultant as a Management or Supervision Consultant (Service Cost with \geq NRs. 450 Million or US\$ 3.7 Million Worth which one is greater (Consulting Cost, Including VAT)).	2.0 Marks for each Project with maximum 5 Projects

(2) Specific Experience of the Firm/JV **Maximum 40 Marks**

Work Experience	As Consultant
No. of Hydro or Other Utility Service Tunnel Project that has been supervised by the Consultant as a Management or Supervision Consultant (Service Cost with \geq NRs. 450 Million or US\$ 3.7 Million Worth which one is greater (Consulting Cost, Including VAT)).	3.0 Marks for each Project with maximum 5 Projects
No. of Road Tunnel Project that has been supervised by the Consultant as a Management or Supervision Consultant (Service Cost with \geq NRs. 450 Million or US\$ 3.7 Million Worth which one is greater (Consulting Cost, Including VAT)).	5.0 Marks for each Project with maximum 5 Projects

Note 14: The firm and or JV shall have to submit Notary Public attested Experience Certificates. No marks shall be given for the experience of the firm if the certificate of completion is not attached. If the firm has completed more than one job in a single package each job shall be considered.

Note 15: The Consultants Specific Experience as JV partners shall be provided full marks and any specific experience by the firm as "In association with" shall not get any marks.

Note 16: Any sublated services for Nepal Government organization (Fully or Semi/Partially Owned) by a firm or JV from another private firm/JV shall not be evaluated as firm/JV experience for the EOI.

Note 17: Any service experience older than 7 years (counted from the last date of submission of EOI) shall not be evaluated as firm/JV experience for the EOI. Each experience certificate shall clearly indicate the description of service, service amount (In/Excluding VAT) and date of completion.