



भीमेश्वर नगरपालिका  
Bhimeshwar Municipality  
नगरकार्यपालिकाको कार्यालय  
Office of the Municipal Executive

चरिकोट, दोलखा  
Charikot, Dolakha  
बागमती प्रदेश, नेपाल  
Bagmati Province, Nepal

# Request for Proposal & Terms of Reference

for

**Preparation of Detail Project Report**

**(DETAILED ENGINEERING SURVEY, DESIGN AND COST ESTIMATE for Black-topped Standard)**

**RFP No: BMP/SQ/CS/2079-080/E/01**

**Bhadra, 2079**

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## Section 1. Letter of Invitation

भीमेश्वर नगरपालिका  
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Bagmati Province, Nepal

पत्र संख्या/Ref. No:-  
चलानी नं / Dispatch No :-

मिति/Date:

### **INVITATION FOR RFP/ToR**

**Ref No:**

To  
The Consultant,

1. Bhimeshwar Municipality, Office of the Municipal Executive, Charikot, Dolakha, has allocated fund toward the Preparing Detail Project Report (DPR) of municipal roads and intends to apply a portion of this fund to eligible payments under this Contract.
2. Bhimeshwar Municipality, Office of the Municipal Executive, Charikot, Dolakha now invites proposals to provide the consulting services for Detailed Survey, Design, Drawing, Cost Estimate and Report Preparation for the upgrading of municipal roads-black-topped standards as per notice.
3. The Request for Proposal (RFP) has been issued to the all eligible consulting firms.
4. A consultant will be selected under Least Cost based Selection Method and procedures described in this RFP.
5. The RFP includes the following documents:
  - Section 1 - Letter of Invitation
  - Section 2 - Information to Consultants
  - Section 3 - Technical Proposal - Standard Forms
  - Section 4 - Financial Proposal - Standard Forms
  - Section 5 - Terms of Reference
  - Section 6 - Standard Forms of Contract.
6. Please inform us, upon receipt:
  - (a) that you received the letter of invitation; and
  - (b) Whether you will submit a proposal alone or in association.

Yours sincerely,

.....  
**Shishir Paudel**  
**Chief Administrative Officer**

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## Section 2. Information to Consultants<sup>1</sup>

### 1. Introduction

- 1.1 The Client named in the Data Sheet will select a consultant among those listed in the Letter of Invitation, in accordance with the method of selection specified in the Data Sheet.
- 1.2 The consultants are invited to submit a Technical Proposal and a Financial Proposal, for services as specified in the Data Sheet. The proposal will be the basis for contract negotiations and ultimately for a signed contract with the selected consultant.
- 1.3 The consultants must familiarize themselves with local conditions and take them into account in preparing their proposals. To obtain first hand information on the assignment and on the local conditions, consultants are encouraged to visit the Client before submitting a proposal and are advised to attend a pre-proposal conference if one is specified in the Data Sheet.
- 1.4 The Client will provide the inputs specified in the Data Sheet, assist the consultant in obtaining licences and permits needed to carry out the services, and make available relevant project data and reports.
- 1.5 Please note that (i) the costs of preparing the proposal and of negotiating the contract, including a visit to the Client, are not reimbursable as a direct cost of the assignment; and (ii) the Client is not bound to accept any of the proposals submitted.
- 1.6 GoN (or Donor Agency) policy requires that consultants provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflicts with other assignments or their own corporate interests. Consultants shall not be hired for any assignment that would be in conflict with their prior or current obligations to other clients, or that may place them in a position of not being able to carry out the assignment in the best interest of the Client.
  - 1.7.1 Without limitation on the generality of this rule, consultants shall not be hired under the circumstances set forth below:
    - a. A consultant, which has been engaged by the Client to provide goods or works for a project, and any of their affiliates, shall be disqualified from providing consulting services for the same project. Conversely, consultants hired to provide consulting services for the preparation or implementation of a project, and any of their affiliates, shall be disqualified from subsequently providing goods or works or services related to the initial assignment (other than a continuation of the consultant's earlier consulting services) for the same project.
    - b. Consultants or any of their affiliates shall not be hired for any assignment which, by its nature, may be in conflict with another assignment of the consultants.
  - 1.7.2 Any previous or ongoing participation in relation to the assignment by the consultant, its professional staff or affiliates or associates under a contract

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<sup>1</sup> *This Information to Consultants section shall not be modified. Any necessary changes, acceptable to client (GoN) or the Donor, to address specific country and project issues, shall be introduced only through the Data Sheet (e.g., by adding new clauses). Likewise, modifications to the standard Form of Contract should be made only by including clauses outlining the special conditions and not by introducing changes in the wording of the general conditions*

with the GoN may result in rejection of the proposal. Consultants should clarify their situation in that respect with the Client before preparing the proposal.

- 1.8 It is the GoN’s policy to require its implementing agencies, as well as consultants under GoN (or Donor Agency) financed contracts, to observe the highest standard of ethics during the selection and execution of such contracts. In pursuance of this policy, the GoN:
- a. defines, for the purposes of this provision, the terms set forth below as follows:
    - i. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the selection process or in contract execution; and
    - ii. “fraudulent practice” means a misrepresentation of facts in order to influence a selection process or the execution of a contract to the detriment of the Client, and includes collusive practices among consultants (prior to or after submission of proposals) designed to establish prices at artificial, non-competitive levels and to deprive the borrower of the benefits of free and open competition.
  - b. will reject a proposal for award if it determines that the consultant recommended for award has engaged in corrupt or fraudulent activities in competing for the contract in question;
  - c. will cancel the consultant’s contract if it at any time determines that corrupt or fraudulent practices were engaged in by representatives of the consultant or the Client during the selection process or the execution of that contract;
  - d. will debar a consultant for a stated period of time, to be awarded a contract if it at any time determines that the consultant has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract; and
  - e. will have the right to require that, a provision be included requiring consultants to permit the Client inspect their accounts and records relating to the performance of the contract and to have them audited by auditors appointed by the Client.
- 1.9 Consultants shall not be under a debarment for corrupt and fraudulent practices issued by GoN accordance with the above sub para. 1.8 (d).
- 1.10 Consultants shall be aware of the provisions on fraud and corruption stated in the Standard Contract under the clauses indicated in the Data Sheet.

**2. Clarification and Amendment of RFP Documents**

- 2.1 Consultants may request a clarification of any of the RFP documents up to the number of days indicated in the Data Sheet before the proposal submission date. Any request for clarification must be sent in writing by paper mail, cable, telex, facsimile, or electronic mail to the Client’s address indicated in the Data Sheet. The Client will respond by cable, telex, facsimile, or electronic mail to such requests and will send written copies of the response (including an explanation of the query but without identifying the source of inquiry) to all invited consultants who intend to submit proposals.

2.2 At any time before the submission of proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by an invited consultant, amend the RFP. Any amendment shall be issued in writing through addenda. Addenda shall be sent by mail, cable, telex, facsimile, or electronic mail to all invited consultants and will be binding on them. The Client may at its discretion extend the deadline for the submission of proposals.

**3. Preparation of Proposal**

**Technical Proposal**

3.1 Consultants are requested to submit a proposal Sub - Clause 1.2 written in the language(s) specified in the Data Sheet.

3.2 In preparing the Technical Proposal (TP), consultants are expected to examine the documents constituting this RFP in detail. Material deficiencies in providing the information requested may result in rejection of a proposal.

3.3 While preparing the Technical Proposal, consultants must give particular attention to the following:

- i. If a consultant considers that it does not have all the expertise for the assignment, it may obtain a full range of expertise by associating with individual consultant(s) and/or other consultants or entities in a joint venture or sub-consultancy, as appropriate. Consultants may associate with the other consultants invited for this assignment only with approval of the Client as indicated in the Data Sheet. Consultants must obtain the approval of the Client to enter into a joint venture with consultants not invited for this assignment.
- ii. For assignments on a staff-time basis, the estimated number of professional staff-months is given in the Data Sheet. The proposal shall, however, be based on the number of professional staff-months estimated by the consultant. For fixed-budget-based assignments, the available budget is given in the Data Sheet, and the Financial Proposal shall not exceed this budget.
- iii. It is desirable that the majority of the key professional staff proposed be permanent employees of the consultant or have an extended and stable working relationship with it.
- iv. Proposed professional staff must, at a minimum, have the experience indicated in the Data Sheet, preferably working under conditions similar to those prevailing in Nepal.
- v. Alternative professional staff shall not be proposed, and only one curriculum vitae (CV) may be submitted for each position.
- vi. Reports to be issued by the consultants as part of this assignment must be in the language(s) as specified in the Data Sheet.

3.4 The Technical Proposal shall provide the following information using the attached Standard Forms (Section 3):

- i. A brief description of the consultant's organization and an outline of recent experience on assignments (Section 3B) of a similar nature. For each assignment, the outline should indicate, *inter alia*, the client, location and duration of the assignment, contract amount, and consultant's involvement.
- ii. Any comments or suggestions on the Terms of Reference and on the data, a list of services, and facilities to be provided by the Client (Section 3C).

- iii. A description of the methodology and work plan for performing the assignment (Section 3D).
- iv. The list of the proposed staff team by specialty, the tasks that would be assigned to each staff team member, and their timing (Section 3E).
- v. CVs recently signed by the proposed professional staff and the authorised representative submitting the proposal (Section 3F). Key information should include number of years working for the consultant/entity and degree of responsibility held in various assignments during the last ten (10) years.
- vi. Estimates of the total staff input (professional and support staff; staff time) needed to carry out the assignment, supported by bar chart diagrams showing the time proposed for each professional staff team member (Sections 3E and 3G).
- vii. A detailed description of the proposed methodology, staffing, and monitoring of training, if the Data Sheet specifies training as a major component of the assignment.
- viii. Any additional information requested in the Data Sheet.

3.5 The Technical Proposal shall not include any financial information.

**Financial Proposal**

3.6 In preparing the Financial Proposal (FP), consultants are expected to take into account the requirements and conditions outlined in the RFP documents. The Financial Proposal should follow Standard Forms (Section 4). It lists all costs associated with the assignment, including (a) remuneration for staff (, in the field and at headquarters), and (b) reimbursable expenses such as subsistence (per diem, housing), transportation (mobilization and demobilization), services and equipment (vehicles, office equipment, furniture, and supplies), office rent, insurance, printing of documents, communication (Telephone, Fax etc.) surveys, and training, if it is a major component of the assignment. If appropriate, these costs should be broken down by activity.

3.7 The Financial Proposal should include all duties, taxes and other levies , and other charges imposed under the applicable law payable by the Consultant under the Contract or for any other cause.

3.8 Consultants shall express the price of their services in Nepalese Rupees.

3.9 The Data Sheet indicates the required validity period of the proposals. During this period, the consultant is expected to keep available the professional staff proposed for the assignment. The Client will make its best effort to complete negotiations within this period. If the Client wishes to extend the validity period of the proposals, the consultants who do not agree have the right not to extend the validity of their proposals.

**4. Submission, Receipt, and Opening of Proposals**

4.1 The proposal (TP and FP) shall be prepared in indelible ink. It shall contain no interlineations or overwriting, except as necessary to correct errors made by the consultant itself. Any such corrections must be initialled by the persons or person who sign(s) the proposals.

4.2 An authorized representative of the Consultants shall initial all pages of the original Technical and Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal.

4.3 For each proposal, the consultants shall prepare the TP & FP as indicated in the Data Sheet.

4.4 The Technical Proposal shall be placed in a sealed envelope clearly marked

“**Technical Proposal**,” and the Financial Proposal in a sealed envelope clearly marked “**FINANCIAL PROPOSAL**” and warning: “**DO NOT OPEN WITH THE TECHNICAL PROPOSAL.**” Both envelopes shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address and other information indicated in the Data Sheet and be clearly marked, “**DO NOT OPEN, EXCEPT IN PRESENCE OF THE EVALUATION COMMITTEE.**”

- 4.5 The completed Technical and Financial Proposals must be delivered at the submission address on or before the time and date stated in the Data Sheet. Any proposal received after the closing time for submission of proposals shall be returned unopened.
- 4.6 After the deadline for submission of proposals, the Technical Proposal shall be opened immediately by the evaluation committee. The Financial Proposal shall remain sealed and deposited with the Client’s Procurement Unit until all submitted proposals are opened publicly.

**5. Proposal Evaluation**

**General**

- 5.1 From the time the bids are opened to the time the contract is awarded, if any consultant wishes to contact the Client on any matter related to its proposal, it should do so in writing at the address indicated in the Data Sheet. Any effort by the consultant to influence the Client in the Client’s proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the consultant’s proposal.
- 5.2 Evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation, is concluded.

**Evaluation of Technical Proposals (QCBS,QBS,FBS, LCBS))**

- 5.3 The evaluation committee, appointed by the Client as a whole, and each of its members individually, evaluates the proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria and point system specified in the Data Sheet. The evaluation committee shall compute the score obtained by each proposal by taking the average of the scores given by each member to the particular proposal. Each responsive proposal will be given a technical score (St). A proposal shall be rejected at this stage if it does not respond to important aspects of the Terms of Reference or if it fails to achieve the minimum technical score indicated in the Data Sheet.

**Public Opening and Evaluation of Financial Proposals (LCBS Only)**

- 5.4 The financial proposal opened pursuant to Section 34 of PPA 2063, shall be evaluated for least cost method is applied to select proposal as per notice , the proposal of a proponent having the lowest cost out of the proponents having obtained minimum marks prescribed for being successful in the technical proposal be selected as PPA 2063, 35(1)(Gha).
- 5.5. The Financial Proposals shall be opened publicly in the presence of the consultants’ representatives who choose to attend. The name of the consultant and the proposed prices shall be read aloud and recorded. The Client shall prepare minutes of the public opening.
- 5.6 After the evaluation of quality is completed, the Client shall notify those consultants whose proposals did not meet the minimum qualifying mark or were considered non-responsive to the RFP and Terms of Reference, indicating that their Financial Proposals will be returned unopened after completing the selection process. The Client shall simultaneously notify the consultants that have secured the minimum qualifying mark, indicating the



date and time set for opening the Financial Proposals. The opening date shall be 7 days after the notification date. The notification may be sent by registered letter, cable, telex, facsimile, or electronic mail.

- 5.7 The Financial Proposals shall be opened publicly in the presence of the consultants' representatives who choose to attend. The name of the consultant, the technical scores, and the proposed prices shall be read aloud and recorded when the Financial Proposals are opened. The Client shall prepare minutes of the public opening.
- 5.8 The evaluation committee will determine whether the Financial Proposals are complete (i.e., whether they have costed all items of the corresponding Technical Proposals; if not, the Client will cost them and add their cost to the initial price), correct any computational errors.
- 5.9 In case of Fixed Budget Selection (FBS), the consultant's Financial Proposals with cost more than the specified fixed budget ceiling by the Client in Data Sheet shall be rejected.
- 5.10 In case of Least Cost Based Selection (LCBS), the consultant's proposal which has scored the minimum pass mark in the Technical proposal and is of the least cost in the financial proposal shall be invited for negotiation.
- 5.11 In case of QCBS and FBS with financial proposal within specified fixed budget ceiling, the lowest Financial Proposal ( $F_m$ ) will be given a financial score ( $S_f$ ) of 100 points. The financial scores ( $S_f$ ) of the other Financial Proposals will be computed as indicated in the Data Sheet. Proposals will be ranked according to their combined technical ( $S_t$ ) and financial ( $S_f$ ) scores using the weights ( $T =$  the weight given to the Technical Proposal;  $P =$  the weight given to the Financial Proposal;  $T + P = 1$ ) indicated in the Data Sheet:  $S = S_t \times T\% + S_f \times P\%$ . The consultant achieving the highest combined technical and financial score will be invited for negotiations.

## **6. Negotiations**

- 6.1 Negotiations will be held at the address indicated in the Data Sheet. The aim is to reach agreement on all points and sign a contract.
- 6.2 Negotiations will include a discussion of the Technical Proposal, the proposed methodology (work plan), staffing and any suggestions made by the consultant to improve the Terms of Reference. The Client and consultant will then work out final Terms of Reference, staffing, and bar charts indicating activities, staff, periods in the field and in the home office, staff-months, logistics, and reporting. The agreed work plan and final Terms of Reference will then be incorporated in the "Description of Services" and form part of the contract. Special attention will be paid to getting the most the consultant can offer within the available budget and to clearly defining the inputs required from the Client to ensure satisfactory implementation of the assignment.
- 6.3 Unless there are exceptional reasons, the financial negotiations will involve neither the remuneration rates for staff (no breakdown of fees) nor other proposed unit rates in the cases of QCBS methods. For QBS, the consultant should provide the information on remuneration rates described in the Appendix to this information.
- 6.4 Having selected the consultant on the basis of, among other things, an evaluation of proposed key professional staff, the Client expects to negotiate a contract on the basis of the experts named in the proposal. Before contract negotiations, the Client will require assurances that the experts will be actually available. The Client will not consider substitutions during contract negotiations unless both parties agree that undue delay in the selection

process makes such substitution unavoidable or that such changes are critical to meet the objectives of the assignment. If substitution is considered then the proposed alternative candidate shall be evaluated as per the original criteria. The qualification and experience of the substitute candidate shall equal to or higher than the originally proposed candidate. If this is not the case and if it is established that key staff were offered in the proposal without confirming their availability, the consultant may be disqualified.

6.5 The negotiations will conclude with a review of the draft form of the contract. . If negotiations fail, the Client will invite the consultant whose proposal received the second highest score to negotiate a Contract.

## **7. Award of Contract**

7.1 Pursuant to Sub-Clause 6.5, the consultant, with whom agreement is reached following negotiation, shall be selected for approval of his proposal and the Client shall notify its intention to accept the proposal to the selected consultant and other short-listed consultants within 7 days of selection of the winning proposal.

7.2 Any consultant, who has submitted a proposal and is not satisfied with the procurement process or Client's decision provided as per Sub - Clause 7.1 and believes that the Client has committed an error or breach of duty which has or will result in loss to him then the consultant may give an application for review of the decision to the Client with reference to the error or breach of duty committed by the Client. The review application should be given within 7 days of receipt of information regarding the issue of letter by the Client notifying it's intention to accept the winning proposal pursuant to Sub Clause 7.1.

7.3 If the review application is not received by the Client pursuant to Sub-Clause 7.2 then the proposal of the Consultant, selected as per Sub-Clause 7.1 shall be accepted and the successful consultant shall be notified to come for signing the Agreement within 7 days.

7.4 If the Consultant fails to sign an agreement pursuant to Sub-Clause 7.3 then the Client will invite the consultant whose proposal received the next highest score to negotiate a contract.

7.5 If a review application is received by the Client pursuant to Clause 7.1 then the Client will clarify and respond within 5 days of receiving such application

7.6 If the applicant is not satisfied with the decision given by the procuring entity and/ or the decision is not given by the Procuring Entity Chief within 5 days then the applicant can file a complaint to the Review committee within 7 days.

7.7 The Client shall return the unopened Financial Proposals of those consultants who did not pass the technical evaluation.

7.8 The consultant is expected to commence the assignment on the date and at the location specified in the Data Sheet.

## **8. Confidentiality**

8.1 Information relating to evaluation of proposals and recommendations concerning awards shall not be disclosed to the consultants who submitted the proposals or to other persons not officially concerned with the process, until the letter of intention to accept the proposal is not issued to the selected consultant pursuant to Sub- Clause 7.1.

## **9. Conduct of Consultants**

9.1 The Consultant shall be responsible to fulfil his obligations as per the requirement of the Contract Agreement, RFP documents and GoN's Public

Procurement Act and Regulations.

9.2 The consultant shall not carry out or cause to carryout the following acts with an intention to influence the implementation of the procurement process or the procurement agreement :

- a. give or propose improper inducement directly or indirectly,
- b. distortion or misrepresentation of facts
- c. engaging or being involved in corrupt or fraudulent practice
- d. interference in participation of other prospective bidders.
- e. coercion or threatening directly or indirectly to impair or harm, any party or the property of the party involved in the procurement proceedings,
- f. collusive practice among consultants before or after submission of proposals for distribution of works among consultants or fixing artificial/uncompetitive proposal price with an intention to deprive the Client the benefit of open competitive proposal price.
- g. contacting the Client with an intention to influence the Client with regards to the proposals or interference of any kind in examination and evaluation of the proposals during the period after opening of proposals up to the notification of award of contract

**10. Blacklisting Consultant**

10.1 Without prejudice to any other rights of the Employer under this Contract , the Public Procurement Monitoring Office may blacklist a Consultant for his conduct up to three years on the following grounds and seriousness of the act committed by the consultant:

- a) if it is proved that the bidder committed acts pursuant to the Information to Consultants clause 9.2,
- b) if the bidder fails to sign an agreement pursuant to Information to Consultants clause 7.3,
- c) if it is proved later that the bidder/contractor has committed substantial defect in implementation of the contract or has not substantially fulfilled his obligations under the contract or the completed work is not of the specified quality as per the contract
- d) if convicted by a court of law in a criminal offence which disqualifies the consultant from participating in the contract.
- e) if it is proved that the contract agreement signed by the consultant was based on false or misrepresentation of consultant's qualification information,
- f) other acts mentioned in the Data Sheet or SCC

10.2 A Consultant declared blacklisted and ineligible by the Non-Public procurement Office and or concerned Donor Agency in case of donor funded project shall be ineligible to bid for a contract during the period of time determined by the GON and or the concerned donor agency.

## Information to Consultants

### DATA SHEET

**Clause  
Reference**

1.1	The name of the Client is: <b>Bhimeswor Municipality, Office of the Municipal Executive</b> The method of selection is: <b>LCBS</b>
1.2	The name, objectives, and description of the assignment are: <b>As per ToR</b>
1.3	A pre-proposal conference will be held: <b>No</b>  The name(s), address(es), and telephone numbers of the Client's official (s) are:  <b>Name: Mr. Shishir Paudel</b>  <b>Address: Bhimeswor Municipality, Dolakha</b>
1.4	The Client will provide the following inputs: <b>NA</b>
1.10	The clauses on fraud and corruption in the Contract are: <b>The consultant will be Black listed.</b>
2.1	Clarifications may be requested 7 days before the submission date The address for requesting clarifications is: <b>Bhimeswor Municipality, Dolakha</b> Email: <b>ict.bhimeswor@gmail.com</b>
3.1	Proposals should be submitted in the following language(s): <b>English</b>
3.3	(i) Short listed consultants/entity may associate with other short listed consultants: <b>NO</b>  (ii) The estimated number of professional staff-months required for the assignment is: <b>3</b>  (iii) Available Budget for Fixed Budget Assignment: <b>NA</b>  (iv) The minimum required experience of proposed professional staff is: <b>Attached in separate table.</b>  (vi) Reports that are part of the assignment must be written in the following language(s): <b>English</b>
3.4	

	(vii) Training is a specific component of this assignment: <b>No</b> (viii) Additional information in the Technical Proposal includes: <b>NA</b>																																			
3.9	Proposals must remain valid for 90 days after the submission date																																			
4.3	Consultants must submit an original copy of each proposal: <b>Yes</b>																																			
4.4	The proposal submission address: <b>Bhimeshwor Municipality, Dolakha</b> Information on the outer envelope should also include: <b>contract no., Name of firm, date of submission.</b>																																			
4.5	Proposals must be submitted no later than: <b>As per notice.</b>																																			
5.1	The address to send information to the Client is: <b>Bhimeshwor Municipality, Dolakha</b>																																			
5.3	<p>The number of points to be given under each of the evaluation criteria are:</p> <p>(A) Financial capacity (Avg. Annual Turnover of best 3 years of last 5 fiscal years-Twelve lakhs) of firm. <b>[5] Points</b></p> <p>(B) General Experience of firm. <b>[10] Points</b></p> <table border="1"> <thead> <tr> <th>Work Experience</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>Completion of civil engineering consultancy service (service cost minimum of NRs. Twelve Lakhs including VAT)</td> <td>&lt;1=0 2 points for each job</td> </tr> </tbody> </table> <p>Support document of Experience: GoN, Development partners are considered.</p> <p>(C) Specific Experience of firm. <b>[15] Points</b></p> <table border="1"> <thead> <tr> <th>Work Experience</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>Completion of DPR of road (service cost minimum of NRs. Twelve Lakh including VAT)</td> <td>&lt;1=0 2.5 points for each job</td> </tr> </tbody> </table> <p>Support document of Experience: GoN, Development partners are considered.</p> <p>(D) Methodology and service delivery in responding to the Terms of Reference <b>[20] points</b></p> <table border="1"> <thead> <tr> <th>Particulars</th> <th>Maximum points</th> </tr> </thead> <tbody> <tr> <td>Understanding to the TOR</td> <td>3.0</td> </tr> <tr> <td>Description of activities and output of each task</td> <td>9.0</td> </tr> <tr> <td>Relevant Task Schedule</td> <td>4.0</td> </tr> <tr> <td>Schedule of Technical Resources (Manpower and equipment)</td> <td>4.0</td> </tr> <tr> <td><b>Total not to exceed</b></td> <td><b>20</b></td> </tr> </tbody> </table> <p>(E) Qualifications and competence of the key staff for the Assignment <b>[16+24=40] Points</b></p> <table border="1"> <thead> <tr> <th>Key Personnel</th> <th>Score for Academic qualification -16</th> <th>Score for Experience-24 (minimum 2 year, &lt;2yrs=0)</th> </tr> </thead> <tbody> <tr> <td><b>Transportation/Civil Engineer</b></td> <td>M Sc or above-6, BE-4</td> <td>Max. score-8, one mark for each year</td> </tr> <tr> <td><b>Draft person</b></td> <td>B. Arch-4, Diploma In Arch-2</td> <td>Max. score-5, one mark for each year</td> </tr> <tr> <td><b>Sub-engineer</b></td> <td>Diploma in Civil Engineering-2</td> <td>Max. score-6, one mark for each year</td> </tr> <tr> <td><b>Surveyor</b></td> <td>Diploma in Survey Engineering-2</td> <td>Max. score-3, one mark for each year</td> </tr> </tbody> </table>	Work Experience	Score	Completion of civil engineering consultancy service (service cost minimum of NRs. Twelve Lakhs including VAT)	<1=0 2 points for each job	Work Experience	Score	Completion of DPR of road (service cost minimum of NRs. Twelve Lakh including VAT)	<1=0 2.5 points for each job	Particulars	Maximum points	Understanding to the TOR	3.0	Description of activities and output of each task	9.0	Relevant Task Schedule	4.0	Schedule of Technical Resources (Manpower and equipment)	4.0	<b>Total not to exceed</b>	<b>20</b>	Key Personnel	Score for Academic qualification -16	Score for Experience-24 (minimum 2 year, <2yrs=0)	<b>Transportation/Civil Engineer</b>	M Sc or above-6, BE-4	Max. score-8, one mark for each year	<b>Draft person</b>	B. Arch-4, Diploma In Arch-2	Max. score-5, one mark for each year	<b>Sub-engineer</b>	Diploma in Civil Engineering-2	Max. score-6, one mark for each year	<b>Surveyor</b>	Diploma in Survey Engineering-2	Max. score-3, one mark for each year
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Work Experience	Score																																			
Completion of DPR of road (service cost minimum of NRs. Twelve Lakh including VAT)	<1=0 2.5 points for each job																																			
Particulars	Maximum points																																			
Understanding to the TOR	3.0																																			
Description of activities and output of each task	9.0																																			
Relevant Task Schedule	4.0																																			
Schedule of Technical Resources (Manpower and equipment)	4.0																																			
<b>Total not to exceed</b>	<b>20</b>																																			
Key Personnel	Score for Academic qualification -16	Score for Experience-24 (minimum 2 year, <2yrs=0)																																		
<b>Transportation/Civil Engineer</b>	M Sc or above-6, BE-4	Max. score-8, one mark for each year																																		
<b>Draft person</b>	B. Arch-4, Diploma In Arch-2	Max. score-5, one mark for each year																																		
<b>Sub-engineer</b>	Diploma in Civil Engineering-2	Max. score-6, one mark for each year																																		
<b>Surveyor</b>	Diploma in Survey Engineering-2	Max. score-3, one mark for each year																																		

[Type here]

	<b>Computer operator</b>	10+2 pass & Diploma in Computer training-2	Max. score-2, one mark for each year
(E)	Suitability of the transfer of knowledge program (Training)		<b>[10] Points</b>
	<b>Training</b>	<b>Evaluation remarks</b>	<b>Score</b>
	Road design training (min. 5 days)	5 days	5.0
		5-7 days	7.0
		7-10 days or above	10.0
	<b>Total Points: 100</b> <ul style="list-style-type: none"> <li>• Provide bio-data and qualification certificate of the mentioned resource persons. The bio-data shall be signed by respective personnel declaring the correctness of the information. Experience of technical person is taken for evaluation only certified by GoN, authorised institution and development partners.</li> <li>• The firm/JV shall have to submit the NEC registration certificate for engineer professionals where applicable, copies certified by notary public.</li> <li>• The firm/JV shall also have to submit the any certificate as evidence of his/her education(degree) as required above, copies certificate certified by notary public.</li> </ul> <b>A successful firm/JV must secure minimum 80 % of the total score.</b>		
<u>5.8</u>	The fixed Budget Ceiling for the assignment is : <b>NA</b>		
5.10	The selection is based on Least Cost Based Selection (LCBS) method.		
6.1	The address for negotiations is: <b>Bhimeshwor Municipality, Dolakha</b>		
7.6	The assignment is expected to commence within <b>Seven</b> days after signing the Contract.		

Clause ref.3.3 IV & 5.3 III

S. No.	Name of Personnel/Staff	Required no.	Minimum qualification	Minimum Experience	Remarks
1	Transportation Engineer/Designer- Team Leader	1	BE in Civil engineering	Two years experience on related field	
2	Surveyor	1	Must have passed Diploma in Survey Engineering	Two years experience on related field	
3	Civil Sub-engineer	1	Diploma in civil engineering	Two years experience on related field	
4	Draft person	1	Diploma in Architecture	Two years experience on related field	
5	Computer operator	1	10+2 pass & Diploma in Computer training	Two years experience on related field	

## **Section 3. Technical Proposal - Standard Forms**

- 3A. Technical Proposal submission form.
- 3B. Consultant's references.
- 3C. Comments and suggestions of consultants on the Terms of Reference and on data, services, and facilities to be provided by the Client.
- 3D. Description of the methodology and work plan for performing the assignment.
- 3E. Team composition and task assignments.
- 3F. Format of curriculum vitae (CV) for proposed professional staff.
- 3G. Time schedule for professional personnel.
- 3H. Activity (work) schedule.

### 3A. TECHNICAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: [Name and address of Client]

We, the undersigned, offer to provide the consulting services for [Title of consulting services] in accordance with your Request for Proposal dated [Date] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelope.

If negotiations are held during the period of validity of the Proposal, i.e., before [Date] we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

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

We remain,

Yours sincerely,

Authorized Signature:

Name and Title of Signatory:

Name of Consultant:

Address:



### 3B. CONSULTANT’S REFERENCES

#### Relevant Services Carried Out in the Last Five Years That Best Illustrate Qualifications

Using the format below, provide information on each assignment for which your Consultant/entity, either individually as a corporate entity or as one of the major companies within an association, was legally contracted.

Assignment Name:		Country:
Location within Country:		Professional Staff Provided by Your Consultant/Entity(profiles):
Name of Client:		No.of Staff:
Address:		No.of Staff-Months; Duration of Assignment:
Start Date (Month/Year):	Completion Date (Month/Year):	Approx. Value of Services NRs
Name of Associated Consultants, If Any:		No.of Months of Professional Staff Provided by Associated Consultants:
Name of Senior Staff, Designation (Project Director/Coordinator, Team Leader etc.) Involved and Functions Performed:		
Narrative Description of Project: :( Actual assignment, nature of activities performed and location)		
Description of Actual Services Provided by Your Staff:		

Consultant’s Name: \_\_\_\_\_

**3C. COMMENTS AND SUGGESTIONS OF CONSULTANTS ON THE TERMS OF REFERENCE AND ON DATA, SERVICES, AND FACILITIES TO BE PROVIDED BY THE CLIENT**

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On the Terms of Reference:

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

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

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

**3D. DESCRIPTION OF THE METHODOLOGY AND WORK PLAN FOR PERFORMING THE ASSIGNMENT**

### 3E. TEAM COMPOSITION AND TASK ASSIGNMENTS

<b>1. Technical/Managerial Staff</b>		
Name	Position	Task

<b>2. Support Staff</b>		
Name	Position	Task

### **3F. FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF**

Proposed Position: \_\_\_\_\_

Name of Consultant: \_\_\_\_\_

Name of Staff: \_\_\_\_\_

Profession: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Years with Consultant/Entity: \_\_\_\_\_ Nationality: \_\_\_\_\_

Membership in Professional Societies: \_\_\_\_\_

\_\_\_\_\_

Detailed Tasks Assigned: \_\_\_\_\_

\_\_\_\_\_

#### **Key Qualifications:**

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

\_\_\_\_\_

#### **Education:**

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

\_\_\_\_\_

#### **Employment Record:**

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

\_\_\_\_\_

#### **Languages:**

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

\_\_\_\_\_

#### **Certification:**

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

\_\_\_\_\_  
*[Signature of staff member and authorized representative of the consultant]* Date: \_\_\_\_\_  
Day/Month/Year

Full name of staff member: \_\_\_\_\_

Full name of authorized representative: \_\_\_\_\_

**3G. TIME SCHEDULE FOR PROFESSIONAL PERSONNEL**

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

Full-time: \_\_\_\_\_  
 Reports Due: \_\_\_\_\_  
 Activities Duration: \_\_\_\_\_

Part-time: \_\_\_\_\_

Signature: \_\_\_\_\_  
 (Authorized representative)

Full Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

### 3H. ACTIVITY (WORK) SCHEDULE

#### A. Field Investigation and Study Items

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

#### B. Completion and Submission of Reports

Reports	Date
1. Draft Report	
2. Final Report	

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## **Section 4. Financial Proposal - Standard Forms**

- 4A. Financial Proposal Submission form.
- 4B. Summary of costs.
- 4C. Breakdown of price per activity.



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## 4A. FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To: [Name and address of Client]

We, the undersigned, offer to provide the consulting services for [Title of consulting services] in accordance with your Request for Proposal dated [Date] and our Proposal (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of [Amount in words and figures]. This amount is inclusive of the local taxes except Value Added Tax(VAT), which we have estimated at [Amount(s) in words and figures].

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e., [Date].

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

We remain,

Yours sincerely,

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

#### 4B. SUMMARY OF COSTS/BILL OF QUANTITIES

S.No	Work Description	Quantity (km.)	Per km.Rate (NRs.)	Amount (NRs.)
1	Detailed Engineering Survey, Design and Cost Estimate of road, as per ToR			
Total without VAT				
Value Added Tax @ 13%				
Total Amount of financial Proposal				

#### 4C. BREAKDOWN OF PRICE PER ACTIVITY<sup>2</sup>

S.N.	DESCRIPTION	UNIT	NOS	UNIT RATE (RS)	AMOUNT (RS)	REMARKS
<b>A.</b>	<b>Remuneration</b>					
<b>B.</b>	<b>Miscellaneous</b>					

<sup>2</sup>The client may choose to request Forms 4C, 4D, 4E and 4F for the entire assignment, as opposed to each Activity No. as shown. Forms should only be requested for each Activity No. if such detail is essential to the evaluation, bearing in mind it will introduce a substantial level of detail for the client to analyse.

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# Terms of Reference (ToR)

(DETAILED SURVEY AND DESIGN OF ROADS)

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## 1. OBJECTIVE AND SCOPE OF WORK

The objective of the consulting services is to conduct a Detailed Engineering Survey of the proposed road, prepare Detailed Design and Cost Estimates for the construction of the road. The consultant is required to perform the following jobs.

- a. Review existing reports (if any), mainly alignment study standards and specification
- b. Choose economically feasible alignment within the study corridor
- c. Prepare the topographical map of the corridor
- d. Detailed engineering survey of the alignment and its corridor
- e. Design the road detail
- f. Prepare working drawings
- g. Prepare cost estimates with analysis of rates
- h. Prepare detailed engineering (survey and design) report

## 2. EXECUTION OF CONSULTING SERVICES

### 2.1 General

The Consultant shall carry out the necessary field works and engineering surveys along the road corridor. Before mobilization of survey team to the field, the consultant shall have to submit a preliminary report. The alignment, to be surveyed shall be located in available topo map (scale not less than 1:500000), according to the previous report if any, should be referred). The team personnel mobilized for field work & work schedule of field work should be included in the preliminary report. The survey work and survey plotting will be carried out in two stages and follow in principle the guidelines as detailed in Annex 2. The consultant shall be responsible for the analysis and interpretation of the data. General guidelines for the execution of the consulting services are provided in the "Checklist for detail engineering of roads" provided with ToR and consultant is required to follow them.

### 2.2 Engineering Surveys

The methodology for the survey works and survey plotting shall follow the guidelines given in the Annex 2.

### 2.3 Working Team

The working team for field and office works should necessarily consist of the following Key Personnel together with adequate supporting manpower.

- i Transportation/Civil engineer/Design Engineer\*
- ii Surveyor
- iii Civil Sub Engineer
- iv Computer operator
- v Draft person

\*Note: *Civil engineer/Design Engineer need to have experience in all technical aspects of detail survey and design, including alignment selection, with knowledge of geology and geotechnical engineering, design of water management structures and use of software for the design of the roads. Separate professionals could be proposed if the same individual do not possess the capability to fulfill the requirement.*

Note: **A proposal failing to include the above key personnel will be rejected.**

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## 2.4 Engineering Details

### 2.3.1 Horizontal and vertical alignment of the road

The design shall follow the design standard of NRRS as in ToR. The horizontal alignment of the road center line shall be determined within the survey strip of proposed corridor of the optimum alignment between control points specified as a result of the engineering investigation. Points at even increments of length according to the topography (but not less than 20 m and 50 m straight, 10 m and 20 m at curves in plain and hilly areas respectively) along the centre line, Beginning and End of curves and other critical points as may be required should be fully defined relative to the stations of the Intersection points. All points should be coordinated to the grid of the system to which the road shall be referred.

The vertical alignment should also be determined with detailed calculation of earth work quantities. Earth work should be broken down in normal earth work, E/W in road works and drains, E/W in foundation, etc., giving the quantity of E/W as per chainage wise classification of soil type (also specify the percentages of chainage wise types of soils, if applicable).

### 2.3.2 Consideration of environment protection

While designing the horizontal and vertical alignment, the consultant are required to predict damages to the environment and attempt to mitigate or minimise such damages and suggesting appropriate measures in design. The width disturbed due to earth-work (cutting and filling width) should be minimised, providing retaining structure. The consideration should be more specific particularly considering the environment friendly approach for construction that needs to be adopted.

### 2.3.3 Liaison with engineer in-charge

The Consultants are required to maintain close liaison with the Engineer in-charge, Bhimeshwor Municipality. Draft design proposals for alignment, earth work and pavement design, structures and other technical aspects of the design shall be discussed with the Engineer in-charge for approval prior to proceeding with the detailed design and drawings.

### 2.3.4 Engineering drawings

The Consultant will prepare the following plans and working drawings on suitable reproducible materials using the format and title sheets as required by the Engineer in-charge, the original becoming the property of the Bhimeshwor Municipality, Dolakha.

- a. Map of Nepal with district boundaries, showing road located district;
- b. Map of the zone/district demarcation showing the location of the road;
- c. Index plan of topo sheets (1:50000); showing clearly the 100' contours of road corridor (should be traced), controlling / obligatory points, villages, VDC, municipality, district demarcation, name of natural drainage etc;
- d. One sheet map showing complete alignment with kilometer, names of area, land use, markets, grid lines etc;
- e. Location map Showing linkage of road with surrounding road network;
- f. Map showing survey and design status of the completed road;
- g. Plan profile (longitudinal section) and cross section in the following scales

Plan		1:1000
Profile Horizontal		1:1000
Vertical:	For plain and rolling terrain	1:100
	For Mountainous and steep terrain	1:200

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Cross-section:

For plain and rolling terrain	1:100
For Mountainous and steep terrain	1:200

Points (IP) Bench marks (BM) and other reference points

- h. Plans and profiles of the road should contain details of geometric (horizontal alignment with co-ordinate of IP, deflection angle distance IP to TP, curve data, chainage of IP etc.), index (of IP, BM, km post); names of the Municipalities, district, forest, land use pattern, cross-drainage structures, retaining required of as instructed by engineer in-charge)
- i. Hydrological, meteorological and geological maps of the road.
- j. Reference charts of all intersection points (IP), bench marks (BM) and other reference points.
- k. Bridge survey information in crossings.
- l. Standard drawing of mentioned cross drainage structures, retaining/breast wall. Side drain (lined/unlined), typical cross-section of the road (according to type of soil viz. HR, MR, SR, HS, OS etc.) Passing zone (if provided), hairpin bend (if provided).
- m. Plan of the road should contain details of Major intersections (road crossings, village entrances, etc.), green belts, lay byes, bus parks/stands at appropriate intervals along the proposed road alignment.

### **2.3.5 Engineering design calculations**

All engineering design must be shown with calculation. The format should be described properly declaring the meaning and source of variable constants and multiplication factors should be referenced and justified.

## **3. REPORT**

The consultants shall submit copies of the reports as follows:

Draft report	1 (one) copies
Final report	1 (one) copies

The format of the reports shall be broadly in line with the format required by Engineer-in-Charge. However, the consultant must take prior approval of the report format from the engineer in-charge.

## **4. PRESENTATION OF REPORT**

The consultant may be asked to present the report before the committee appointed by the Bhimeshwor Municipality after submission of the draft report with aid of audiovisual interpretation.

## **5. TIME SCHEDULE**

The consultant shall commence the work within the time mentioned in this ToR and shall be submitted to Bhimeshwor Municipality, Dolakha to fit in with the schedule as follows:

Draft report	: within 13 weeks of the commencement date
Final Report	: Within 3 weeks of receipt of Bhimeshwor Municipality Engineer's comments on the draft report with electronic copy.

## **6. MODE OF PAYMENT**

- a) 70% of the contract amount after submission and verification of draft report
- b) 70% of the contract amount after design verification and approval from Bhimeshwor Municipality, Dolakha.

## **7. USE OF COMPUTER**

Consultants are encouraged to use computers and appropriate software. But the software to be used in engineering design works must be approved in advance by the client. Further, the reports should contain adequate information on methodology adopted in the programme, summarized flow diagram, description of formula used in the programme, data required for input and results obtained in output etc. It does not however apply to word processing software, but formula used in spreadsheet must be described. The consultant need to submit the softcopy of the data of alignment; plan, profile & of cross section drawings, detail cost estimate compatible in a format acceptable to the client.

## **8. DEFECT LIABILITY**

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### **8.1 Responsibility for survey and design**

Submission of the final reports does not relieve the consultant from their responsibility to the design. They shall bear full responsibility for:

- i. Authenticity of all the field data including socio-economic, environmental, topographic, and hydrological information;
- ii. Correctness of the design and all the calculations;
- iii. Correctness of the drawings;
- iv. Correctness of any other details related to construction

**8.2 Acceptance of responsibility** The consultants shall submit signed **Statement of Acceptance of Responsibility** as mentioned above in sections 7.1 with the final report.

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**Annex 1.**

**The Design Standard is as specified in Nepal Rural Road Standard (NRRS)**

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## Annex 2

### Engineering Surveys

The purpose of engineering survey is to provide ground data for design and preparation of construction drawings and to establish quantities of construction work. The survey will be carried out with sufficient coverage and details required for construction of EFR. The main requirement of the survey work will be thorough and permanent monumentation of survey with clear and proper documentation to ensure that the entire survey could be retrieved without difficulties during construction period.

#### *(1) Survey Work*

##### Engineering Survey

As this stage the engineering survey will comprise those surveys mainly to provide grade control and details for basic design of road alignment. The following surveys are envisaged.

- i. Fixing gradient between consecutive control points
- ii. Establishment and monumentation of Benchmarks and baseline control points
- iii. Benchmark survey
- iv. Baseline survey
- v. Traverse survey
- vi. Profile or centreline survey
- vii. Cross-section survey

##### *(i) Fixing Gradient Between Consecutive Control Points*

This will be done with the help of Total station, ranging rod and tape. The main objective of the survey will be to provide control of vertical gradient of road alignment between consecutive control points.

##### *(ii) Establishment and Documentation of Bench Marks and Control Points*

Permanent BMs will be established along the road alignment at about 1 km intervals. Monumentation of BMs will be done using concrete pegs mounted with nails at the top. Other permanent objects along the alignment also will be appropriately used for BM documentation. The BMs will be located so that they are not disturbed by construction activities. Similarly, BMs will be located away from the slide zone.

The BMs will provide vertical control points for the survey and also serve as baseline stations and traverse points for horizontal ground control. The position of BMs will be marked by three permanent reference points. Moreover, temporary bench marks (TBMs) will be provided in between permanent BMs, as required. Description cards (D-cards) of all BMs will be prepared to enable all permanent monuments for easy retrieval during construction.

##### *(iii) Bench Mark Survey*

Bench mark survey will be carried out by running a double run, second order split level circuits. All closing errors shall be kept within the acceptable limits of second order accuracy.

##### *(iv) Baseline Survey*

A closed baseline survey will be carried out starting from accepted primary control points using EDM equipment. Reciprocal linear measurements and two sets of angular measurements will be taken between three consecutive baseline stations. Distance between two consecutive baseline points will



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depend upon the visibility. However, this distance will not be more than 750 m. The baseline survey will provide horizontal control for engineering survey works. A single coordinate system will be used.

(v) Traverse Survey

A primary traverse survey will be carried out along the road alignment. The survey will be connected to the baseline survey so that both surveys will have single coordinate system. The survey will cover the right-of-way (ROW) and will record location of existing and proposed centre line, BMs and TBMs, physical and manmade features of permanent nature, which might influence the road alignment.

(vi) Centre Line Survey

The centre line of the proposed road alignment will be carried out at 20 metres intervals by driving wooden pegs. Similar pegs will be driven on 15 metres either sides of centre line to define right-of-way (RoW). The spacing of chainage markings will be adjusted as required for abrupt change in ground profile and horizontal curvature. These chainage marks will provide reference for centre line surveys and other surveys and investigation along the alignment. In case of existing tracks and trails proposed to be upgraded for road, necessary setting out and alignment corrections will be included during centre line survey.

The centre line survey of the road will be carried out at each chainage point by auto level. Any sudden change in gradient will be recorded separately. Levels will be referenced and closed to near by BMs.

(vii) Cross-Section Survey

In case of new alignment sections cross-sections of road alignment will be surveyed at each chainage point. Whereas in sections where existing trails, tracks are to be improved this interval could also be appropriately adjusted with typical cross-sections taken at homogenous stretches covering sufficient details to establish construction quantities with adequate details and accuracy. In general, the cross-section survey will extend to a minimum of 15m on either side of the centreline of the road. However, at places requiring further details the survey will extend beyond 15m to cover these features.

In case of major cross drainage, detail cross-sections will be taken at 50 m along the upstream and downstream of proposed crossing. The cross-sections will appropriately cover area beyond high flood lines.

The cross-section survey will be carried out following tachometric methods, tape and rod or using auto level, as appropriate.

(viii) Fixation of centre-line

After completion of the design the centreline pegging with use of EDM will need to be carried out to mark the centre line of Beginning of Curves, Middle of Curve, and End of Curve and centreline points along straight sections at intervals of 50m. Wooden pegs need to be of minimum 1.5 inch diameter and length 5 inch.

(ix) Correction of centreline & Chainage marking

At the time of field verification if there is the need to correct the centreline, necessary modification to the design will be required. The corrected centre line will need to be marked accordingly. Chainage marking at intervals of 250m will need to be marked neatly at permanent locations along the alignment.

**(2) *Survey Plotting***

**Stage 1 - Survey Work**

The survey plotting will be carried out to prepare centreline plans, longitudinal profile and cross-sections of the road alignment.

The plans will show extent of right of way, name of place, streams and river crossing, chainage, location of bypasses and turning point etc.

The profile survey plot will show existing ground level, soil and rock type, stream and river cross-section and other drainage crossing, name of place, problematic area etc.

The cross-section plots will show slope profile with levels, location of existing structures (e.g. buildings) etc.

### Stage 2 - Survey Work

Plotting of detail survey will be carried out to prepare plan and showing details of right-of-way horizontal alignment including curvature, turning points and bypasses, buildings and other permanent objectives, landslides and problematic areas; contours, topography features, name of places river and stream crossing etc.

The scales of survey plotting and map preparation will be similar to that as specified in the ToR for plan and profiles and cross-section.

### **(3) Assistance to Land and Property Acquisition**

The consultant will assist the users/beneficiaries and Municipality to identify land and other assets to be acquired for the road construction. To the extent possible the alignment will avoid high value lands, single land ownership, buildings and structures.

### **(4) Name of the roads for DPR are as followings,**

#### **Bhimeshwor Municipality**

Charikot, Dolakha

Details of the selected Road for DPR FY 2079/80

S. No.	Road Name	Ward No.	Tentative Length, km	Remarks
1	Deurali-Chadarkha-Dolti Khola Road	1	6.20	Deurali-Chardakha-Dolti Khola Road(2.5km) and Phaselung-Suspa Road(3.7km)
2	Rampa-Dokthali-Dildhunga Road	2	5.60	Single Segment
3	Deurali-Swami ko rukha-Singban Road	3 and 2	6.10	Deurali-Singhan(3.6km) and Pipalbot-Lapsikote-Narayandeu Road(1km)
4	Pipalbot-Krishnahare-Kattike-Japhati Golai Road	4 and 5	6.50	Pipalbot-Krishnahare Road(2.2km) and Dandagaun-Kattike-Japhati Golai Road(4km)
5	Anathalaya-Sunkhani danda-Mathani Road	5	8.00	Jauswara Pipal bot-Sunkhani Bhanjyang-Mathani Road(3.5km) and Anathalaya-Sunkhani Bhanjyang(4.5km)
6	View Tower-Bhangyang Road	6	6.55	Chyan danda-Deurali Road, Deurali-View Tower Road and View Tower-Paani Tanki Road
7	Ghyawopani-Sera- Kupri Road	7 and 6	10.00	Ghyawopani-Sera Road(8km) and Phurlung-Kupri Road(2km)

8	Thalnagi-Mane-Phuyalgaun-Mandra-Karkigaun Road	8	12.50	Thalnagi-Lamidanda(Sidhartha) School-Surke Khola Road(5.7km), Thalnagi-Bhitteri Road(2.5km) and Charnawoti pul-Mandra-Phuyal gaun-Lapse(4km)
9	Bhandare-Ekle Chaur-Chisapani-Halhale Road	9	10.00	Laliguras Marga (6.2km), Bhandare Pani ko mul Segment (1.3km), Bhitteri to Sele Segment (1.3km) and new track (1km)
10	Manamohan Marga (Daregauda-Angheridanda road)	9	6.50	Single Segment
<b>Total length</b>			<b>77.95</b>	<b>km</b>